ODDELEK 1: Identifikacija snovi/zmesi in družbe/podjetja

1.1 Identifikator izdelka

Identifikacija pripravka:

Komercialno ime: FASSA EPOXY 400 COMP.A
Komercialna koda: 1224
UFI: 5SYW-1AG4-900W-5Y0A

1.2 Pomembne identificirane uporabe snovi ali zmesi in odsvetovane uporabe

Priporočena uporaba: Epoksidna smola; Samo za profesionalno uporabo
Odsvetovane uporabe: Ni namenjeno za potrošniško uporabo

1.3 Podrobnosti o dobavitelju varnostnega lista

Dobavitelj FASSA Srl
Via Lazzaris, 3 - 31027 Spresiano (TV) - ITALY
Tel. +39 0422 7222
Fax +39 0422 887509

Odgovorni: laboratorio.spresiano@fassabortolo.it

1.4 Telefonska številka za nujne primere

112 - Center za obveščanje (na voljo 24 ur)

ODDELEK 2: Določitev nevarnosti



2.1 Razvrstitev snovi ali zmesi

Uredba (ES) št. 1272/2008 (CLP)

Skin Irrit. 2	Povzroča draženje kože.
Eye Irrit. 2	Povzroča hudo draženje oči.
Skin Sens. 1A	Lahko povzroči alergijski odziv kože.
Repr. 1B	Lahko škoduje plodnosti.
Aquatic Chronic 2	Strupeno za vodne organizme, z dolgotrajnimi učinki.

Nevarnosti fizikalno-kemijskih lastnosti za zdravje ljudi in za okolje:
Ni drugih tveganj

2.2 Elementi etikete

Uredba (ES) št. 1272/2008 (CLP)

Piktogrami za nevarnost in Opozorilna beseda



Nevarno

Stavki o nevarnosti

H315	Povzroča draženje kože.
H317	Lahko povzroči alergijski odziv kože.
H319	Povzroča hudo draženje oči.
H360F	Lahko škoduje plodnosti.
H411	Strupeno za vodne organizme, z dolgotrajnimi učinki.

Previdnostni stavki

P201	Pred uporabo pridobiti posebna navodila.
P261	Ne vdihavati prahu.
P273	Preprečiti sproščanje v okolje.
P280	Nadenite si zaščitne rokavice/obleke ter zaščitite oči/obraz.

P308+P313 PRI izpostavljenosti ali sumu izpostavljenosti: poiščite zdravniško pomoč/oskrbo.

P391 Prestreči razlito tekočino.

Posebne oznake:

EUH205 Vsebuje epoksidne sestavine. Lahko povzroči alergijski odziv.

Vsebuje:

maščobne kisline, talovo olje, spojine z oleilamin

reakcijska zmes 2,2'-[metilenbis(4,1-fenilenoksimetilen)]dioksiran in 2-({2-[4-(oksiran-2-ilmetoksi)]fenoksi})oksiran in 2,2'-[metilenbis(2,1-fenilenoksimetilen)]dioksiran

bis-[4-(2,3-epoksipropoksi)fenil]propan

1,6-heksandiol diglicidil eter

Posebne določbe v skladu s Prilogo XVII uredbe REACH in poznejše spremembe:

Nobeden

2.3 Druge nevarnosti

Snovi PBT, vPvB ali endokrini motilci v koncentraciji > = 0,1%:

Sestavina	Ident. št.	Količina	Lastnosti:
bis(izopropil) naftalen	CAS: 38640-62-9 - EINECS: 254-052-6	>=0.3 - <0.5 %	PBT, vPvB

Ni drugih tveganj

ODDELEK 3: Sestava/podatki o sestavinah

3.1 Snovi

ni znano

3.2 Zmesi

Identifikacija pripravka: FASSA EPOXY 400 COMP.A

Nevarne sestavine, skladno z Uredbo CLP in njeno razvrstitvijo:

Količina	Ime	Ident. št.	Razvrstitev	Registracijska številka:	Lastnosti:
≥30 - <50 %	bis-[4-(2,3-epoksipropoksi)fenil]propan	CAS:1675-54-3 EC:216-823-5 Index:603-073-00-2	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 Posebne mejne koncentracije: 5% ≤ C < 100%: Skin Irrit. 2 H315 5% ≤ C < 100%: Eye Irrit. 2 H319	01-2119456619-26-xxxx	
≥20 - <30 %	reakcijska zmes 2,2'-[metilenbis(4,1-fenilenoksimetilen)]dioksiran in 2-({2-[4-(oksiran-2-ilmetoksi)]fenoksi})oksiran in 2,2'-[metilenbis(2,1-fenilenoksimetilen)]dioksiran	EC:701-263-0	Skin Irrit. 2, H315; Skin Sens. 1A, H317; Aquatic Chronic 2, H411	01-2119454392-40-xxxx	
≥5 - <10 %	1,6-heksandiol diglicidil eter	CAS:933999-84-9 EC:618-939-5	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Repr. 1B, H360F	01-2119463471-41-xxxx	
≥0.5 - <1 %	titanov dioksid	CAS:13463-67-7 EC:236-675-5 Index:022-006-00-2	Carc. 2, H351	01-2119489379-17-xxxx	
≥0.3 - <0.5 %	bis(izopropil)naftalen	CAS:38640-62-9 EC:254-052-6	Asp. Tox. 1, H304; Aquatic Chronic 1, H410, M-Chronic:1	01-2119565150-48-xxxx	PBT, vPvB
≥0.1 - <0.3 %	2-metoksi-1-metiletil acetat	CAS:108-65-6 EC:203-603-9 Index:607-195-00-7	Flam. Liq. 3, H226; STOT SE 3, H336	01-2119475791-29-xxxx	
≥0.05 - <0.1 %	Kristalni silicijev dioksid, kremen (vdihljiva frakcija)	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372	Izvzeti	

≥0.05 - <0.1 %	maščobne kisline, talovo olje, spojine z oleilamin	CAS:85711-55-3 EC:288-315-1	Eye Dam. 1, H318; Skin Sens. 1A, H317; STOT RE 2, H373	01-2119974148-28-xxxx
≥0.05 - <0.1 %	n-butil acetat	CAS:123-86-4 EC:204-658-1 Index:607-025-00-1	Flam. Liq. 3, H226; STOT SE 3, H336, EUH066	01-2119485493-29-xxxx
≥0.005 - <0.025 %	ksilen	CAS:1330-20-7 EC:215-535-7 Index:601-022-00-9	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Aquatic Chronic 3, H412 Ocena akutne strupenosti: ATE - Dermalno: 1100mg/kg tt ATE - Vdihavanje (Hlapi): 11mg/l	01-2119488216-32-xxxx
≥0.005 - <0.025 %	ksilen	CAS:1330-20-7 EC:215-535-7 Index:601-022-00-9	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304 Ocena akutne strupenosti: ATE - Dermalno: 1100mg/kg tt ATE - Vdihavanje (Hlapi): 11mg/l	01-2119488216-32-xxxx
≥0.005 - <0.025 %	etilbenzen	CAS:100-41-4 EC:202-849-4 Index:601-023-00-4	Flam. Liq. 2, H225; Acute Tox. 4, H332; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 3, H412	01-2119489370-35-xxxx
≥0.005 - <0.025 %	etilbenzen	CAS:100-41-4 EC:202-849-4 Index:601-023-00-4	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 Asp. Tox. 1, H304 Ocena akutne strupenosti: ATE - Vdihavanje (Hlapi): 11mg/l	01-2119489370-35-xxxx
≥0.005 - <0.025 %	butanon	CAS:78-93-3 EC:201-159-0 Index:606-002-00-3	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	01-2119457290-43-xxxx

ODDELEK 4: Ukrepi za prvo pomoč

4.1 Opis ukrepov za prvo pomoč

V primeru stika s kožo:

Kontaminirana oblačila takoj slecite in jih na varen način odstranite.

V primeru stika s proizvodom in tudi v primeru suma morebitnega stika, dele telesa takoj umijte z veliko količino tekoče vode in milom.

Umijte celotno telo (tuširanje ali kopel).

V primeru stika z očmi:

V primeru stika z očmi dovolj dolgo in z odprtimi očesnimi vekami izpirajte z obilo vode, nato poiščite pomoč zdravnika oftalmologa.

Poškodovano oko zaščitite.

V primeru zaužitja:

Po zaužitju ne izzivati bruhanja, takoj poiskati zdravniško pomoč in pokazati varnostni list in nalepko.

V primeru vdihavanja:

Prizadeto osebo umaknite na svež zrak in pustite počivati na toplem.

4.2 Najpomembnejši simptomi in učinki, akutni in zapozneli

Simptomi in ucinki so taki, kot je pricakovano glede na nevarnosti, kar je prikazano v 2. razdelku.

4.3 Navedba kakršne koli takojšnje medicinske oskrbe in posebnega zdravljenja

V primeru nesreče ali slabega počutja takoj poiščite zdravniško pomoč (če je mogoče, pokažite navodila za uporabo ali varnostni list).

ODDELEK 5: Protipožarni ukrepi

5.1 Sredstva za gašenje

Ustrezna sredstva za gašenje:

CO_2, gasilni aparat na prah, pena, pršenje z vodo.

Sredstva za gašenje, ki se jih iz varnostnih razlogov ne sme uporabljati:

Vodni curki

5.2 Posebne nevarnosti v zvezi s snovjo ali zmesjo

Pri gorenju nastajajo težki dimni plini.

Ne vdihavati pline, ki nastanejo pri eksploziji in/ali gorenju (ogljikov monoksid in ogljikov dioksid, dušikovi oksidi).

5.3 Nasvet za gasilce

Uporabiti ustrezne dihalne naprave.

Ločeno zberite kontaminirano vodo, uporabljeno za gašenje požara. Ne je izpustiti v kanalizacijo.

Če je to varno izvedljivo, nepoškodovane vsebnike umaknite iz neposredno ogroženega območja.

ODDELEK 6: Ukrepi o nenamernih izpustih

6.1 Osebni varnostni ukrepi, zaščitna oprema in postopki v sili

Za neizučeno osebje:

Nosite osebno varovalno opremo.

Osebe umaknite na varno mesto.

Glejte v oddelku 7 in 8 navedene zaščitne ukrepe.

Za reševalce:

Nosite osebno varovalno opremo.

6.2 Okoljevarstveni ukrepi

Preprečite vstop v tla/podtalnico. Preprečite razlitje v površinske vode ali v kanalizacijo.

V primeru puščanja plina ali razlitja v vodne tokove, tla ali kanalizacijo obvestite pristojne organe.

6.3 Metode in materiali za zadrževanje in čiščenje

Za zbiranje primeren material: inerten vpojni materiali (npr. pesek, vermikulit).

Po pobiranju z vodo izperite območje in prizadete materiale.

Kontaminirano vodo za pranje shranite in odstranite.

6.4 Sklicevanje na druge oddelke

Glejte tudi naslova 8 in 13

ODDELEK 7: Ravnanje in skladiščenje

7.1 Varnostni ukrepi za varno ravnanje

Preprečite stik s kožo in očmi, vdihavanje hlapov in megle.

Prazne vsebnike ne uporabite dokler niso očiščeni.

Pred postopki prenosa se prepričajte, da v vsebnikih ni ostankov nezdružljivih materialov.

Nasveti o splošni higieni dela:

Kontaminirana oblačila se mora pred vstopom v jedilnico zamenjati.

Med delom ne jejte in ne pijte.

Glejte tudi oddelek 8 o priporočeni varovalni opremi.

7.2 Pogoji za varno skladiščenje, vključno z nezdružljivostjo

Posode hranite tesno zaprte na hladnem in dobro prezračevanem mestu proč od virov toplote.

Hranite stran od hrane, pijač in krme.

Inkompaktibilne snovi:

Glejte točko 10.5

Navodila za prostore:

Primerno zračeni prostori.

7.3 Posebne končne uporabe

Priporočila

Glejte točko 1.2

Specifične rešitve za industrijski sektor

Nobena posebna uporaba

ODDELEK 8: Nadzor izpostavljenosti/osebna zaščita

8.1 Parametri nadzora

Mejne vrednosti za poklicno izpostavljenost

titanov dioksid

CAS: 13463-67-7	Tip OPZ	ACGIH		Dolgotrajna 0.2 mg/m3 Opombe: Nanoscale particles - A3 - (R) URT irr, Pneumoconiosis Dolgotrajna 2.5 mg/m3 Opombe: Finescale particles - A3 - (R) URT irr, Pneumoconiosis
	Tip OPZ	MAK	Avstrija	Dolgotrajna 5 mg/m3; Kratkotrajna 10 mg/m3 Opombe: Respirable fraction

	Tip OPZ	MAK	Nemčija	Dolgotrajna 0.3 mg/m3; Kratkotrajna 2.4 mg/m3 Opombe: Respirable fraction, except ultrafine particles , Multiplied by the material density
	Tip OPZ	VLEP	Belgija	Dolgotrajna 10 mg/m3
	Tip OPZ	VLEP	Francija	Dolgotrajna 11 mg/m3 Opombe: Inhalable aerosol
	Tip OPZ	VLEP	Romunija	Dolgotrajna 10 mg/m3; Kratkotrajna 15 mg/m3
	Tip OPZ	TLV	Bolgarija	Dolgotrajna 10 mg/m3
	Tip OPZ	VLA	Španija	Dolgotrajna 10 mg/m3 Opombe: Inhalable fraction
	Tip OPZ	SUVA	Švicar	Dolgotrajna 3 mg/m3 Opombe: Respirable aerosol
	Tip OPZ	WEL	U.K.	Dolgotrajna 10 mg/m3 Opombe: Inhalable fraction Dolgotrajna 4 mg/m3 Opombe: Respirable fraction
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 10 mg/m3 Opombe: Inhalable fraction Dolgotrajna 4 mg/m3 Opombe: Respirable fraction
	Tip OPZ	NDS	Poljska	Dolgotrajna 10 mg/m3 Opombe: Inhalable fraction
	Tip OPZ	IPRV	Litva	Dolgotrajna 5 mg/m3
	Tip OPZ	RV	Latvija	Dolgotrajna 10 mg/m3
	Tip OPZ	NGV/KGV	Švedska	Dolgotrajna 5 mg/m3 Opombe: inhalable aerosol
2-metoksi-1-metiletil acetat				
CAS: 108-65-6	Tip OPZ	EU		Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	MAK	Avstrija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	MAK	Nemčija	Dolgotrajna 270 mg/m3 - 50 ppm; Kratkotrajna 270 mg/m3 - 50 ppm
	Tip OPZ	VLEP	Belgija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air.
	Tip OPZ	VLEP	Francija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	VLEP	Italija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	VLEP	Romunija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm
	Tip OPZ	TLV	Bolgarija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	TLV	Češka	Dolgotrajna 270 mg/m3 - 49.14 ppm; Kratkotrajna 550 mg/m3 - 10.01 ppm Opombe: Skin
	Tip OPZ	VLA	Španija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 275 mg/m3; Kratkotrajna 550 mg/m3
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 550 mg/m3 - 100 ppm
	Tip OPZ	VLE	Portugalska	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	SUVA	Švicar	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 275 mg/m3 - 50 ppm
	Tip OPZ	WEL	U.K.	Dolgotrajna 274 mg/m3 - 50 ppm; Kratkotrajna 548 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm

				Opombe: Skin
	Tip OPZ	AGW	Nemčija	Dolgotrajna 270 mg/m3 - 50 ppm; Kratkotrajna 270 mg/m3 - 50 ppm
	Tip OPZ	NDS	Poljska	Dolgotrajna 260 mg/m3; Kratkotrajna 520 mg/m3 Opombe: Skin
	Tip OPZ	MV	Slovenija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	IPRV	Litva	Dolgotrajna 250 mg/m3 - 50 ppm; Kratkotrajna 400 mg/m3 - 75 ppm Opombe: Skin
	Tip OPZ	RV	Latvija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin

Kristalni silicijev dioksid, kremen (vdihljiva frakcija)

CAS: 14808-60-7	Tip OPZ	ACGIH		Dolgotrajna 0.025 mg/m3 Opombe: (R), A2 - Pulm fibrosis, lung cancer
	Tip OPZ	EU		Dolgotrajna 0.1 mg/m3 Opombe: Respirable dust particles
	Tip OPZ	MAK	Avstrija	Dolgotrajna 0.05 mg/m3 Opombe: Respirable fraction
	Tip OPZ	VLEP	Belgija	Dolgotrajna 0.1 mg/m3 Opombe: Respirable dust; Additional indication "C" means that the agent falls within the scope of Title 2 concerning carcinogenic, mutagenic and reprotoxic agents of Book VI of the Codex on well-being at work.
	Tip OPZ	VLEP	Francija	Dolgotrajna 0.1 mg/m3 Opombe: Respirable fraction
	Tip OPZ	VLEP	Italija	Dolgotrajna 0.1 mg/m3 Opombe: Respirable dust particles
	Tip OPZ	VLA	Španija	Dolgotrajna 0.05 mg/m3 Opombe: Respirable fraction
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 0.1 mg/m3 Opombe: Respirable fraction
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 0.075 mg/m3 Opombe: Respirable fraction
	Tip OPZ	SUVA	Švicar	Dolgotrajna 0.15 mg/m3 Opombe: Respirable aerosol
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 0.1 mg/m3
	Tip OPZ	AGW	Nemčija	Dolgotrajna 0.05 mg/m3; Kratkotrajna 0.4 mg/m3 Opombe: Respirable fraction
	Tip OPZ	NDS	Poljska	Dolgotrajna 0.1 mg/m3 Opombe: Respirable fraction
	Tip OPZ	MV	Slovenija	Dolgotrajna 0.15 mg/m3
	Tip OPZ	IPRV	Litva	Dolgotrajna 0.1 mg/m3
	Tip OPZ	NGV/KGV	Švedska	Dolgotrajna 0.1 mg/m3 Opombe: Respirable fraction

n-butil acetat

CAS: 123-86-4	Tip OPZ	ACGIH		Dolgotrajna 50 ppm; Kratkotrajna 150 ppm Opombe: Eye and URT irr
	Tip OPZ	EU		Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	MAK	Avstrija	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 480 mg/m3 - 100 ppm
	Tip OPZ	MAK	Nemčija	Dolgotrajna 480 mg/m3 - 100 ppm; Kratkotrajna 960 mg/m3 - 200 ppm
	Tip OPZ	VLEP	Belgija	Dolgotrajna 238 mg/m3 - 50 ppm; Kratkotrajna 712 mg/m3 - 150 ppm Opombe: Butylacetates, all isomers
	Tip OPZ	VLEP	Francija	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	VLEP	Italija	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	VLEP	Romunija	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	TLV	Bolgarija	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm

	Tip OPZ	TLV	Češka	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	VLA	Španija	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 241 mg/m3; Kratkotrajna 723 mg/m3
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	SUVA	Švicar	Dolgotrajna 240 mg/m3 - 50 ppm; Kratkotrajna 720 mg/m3 - 150 ppm
	Tip OPZ	WEL	U.K.	Dolgotrajna 724 mg/m3 - 150 ppm; Kratkotrajna 966 mg/m3 - 200 ppm
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 724 mg/m3 - 150 ppm; Kratkotrajna 966 mg/m3 - 200 ppm
	Tip OPZ	AGW	Nemčija	Dolgotrajna 300 mg/m3 - 62 ppm; Kratkotrajna 600 mg/m3 - 124 ppm
	Tip OPZ	NDS	Poljska	Dolgotrajna 240 mg/m3; Kratkotrajna 720 mg/m3
	Tip OPZ	MV	Slovenija	Dolgotrajna 300 mg/m3 - 62 ppm; Kratkotrajna 600 mg/m3 - 124 ppm

ksilen

CAS: 1330-20-7	Tip OPZ	ACGIH		Dolgotrajna 20 ppm Opombe: A4, BEI - URT and eye irr, CNS impair
	Tip OPZ	EU		Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	MAK	Avstrija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm
	Tip OPZ	MAK	Nemčija	Dolgotrajna 220 mg/m3 - 50 ppm; Kratkotrajna 440 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	VLEP	Belgija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air.
	Tip OPZ	VLEP	Francija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	VLEP	Italija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	VLEP	Romunija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm
	Tip OPZ	TLV	Bolgarija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	TLV	Češka	Dolgotrajna 200 mg/m3 - 45.4 ppm; Kratkotrajna 400 mg/m3 - 90.8 ppm Opombe: Skin
	Tip OPZ	VLA	Španija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 221 mg/m3; Kratkotrajna 442 mg/m3 Opombe: Skin
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 210 mg/m3 - 47.5 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	VLE	Portugalska	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	SUVA	Švicar	Dolgotrajna 220 mg/m3 - 50 ppm; Kratkotrajna 440 mg/m3 - 100 ppm
	Tip OPZ	WEL	U.K.	Dolgotrajna 220 mg/m3 - 50 ppm; Kratkotrajna 441 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	AGW	Nemčija	Dolgotrajna 220 mg/m3 - 50 ppm; Kratkotrajna 440 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	NDS	Poljska	Dolgotrajna 100 mg/m3; Kratkotrajna 200 mg/m3 Opombe: Skin
	Tip OPZ	MV	Slovenija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	IPRV	Litva	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	RV	Latvija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin

ksilen

CAS: 1330-20-7	Tip OPZ	EU		Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	TLV	Češka	Dolgotrajna 200 mg/m3 - 45.4 ppm; Kratkotrajna 400 mg/m3 - 90.8 ppm Opombe: Skin
	Tip OPZ	RV	Latvija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm
etilbenzen				
CAS: 100-41-4	Tip OPZ	ACGIH		Dolgotrajna 20 ppm Opombe: A3, BEI - URT irr, kidney dam (nephropathy), cochlear impair
	Tip OPZ	EU		Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	MAK	Avstrija	Dolgotrajna 440 mg/m3 - 100 ppm; Kratkotrajna 880 mg/m3 - 200 ppm
	Tip OPZ	MAK	Nemčija	Dolgotrajna 88 mg/m3 - 20 ppm; Kratkotrajna 176 mg/m3 - 40 ppm Opombe: Skin
	Tip OPZ	VLEP	Belgija	Dolgotrajna 87 mg/m3 - 20 ppm; Kratkotrajna 551 mg/m3 - 125 ppm Opombe: Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air.
	Tip OPZ	VLEP	Francija	Dolgotrajna 88.4 mg/m3 - 20 ppm; Kratkotrajna 442 mg/m3 - 100 ppm
	Tip OPZ	VLEP	Italija	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm
	Tip OPZ	VLEP	Romunija	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm
	Tip OPZ	TLV	Češka	Dolgotrajna 200 mg/m3 - 45.4 ppm; Kratkotrajna 500 mg/m3 - 113.5 ppm Opombe: Skin
	Tip OPZ	VLA	Španija	Dolgotrajna 441 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 442 mg/m3; Kratkotrajna 884 mg/m3
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 215 mg/m3; Kratkotrajna 430 mg/m3
	Tip OPZ	VLE	Portugalska	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	SUVA	Švicar	Dolgotrajna 435 mg/m3 - 100 ppm; Kratkotrajna 435 mg/m3 - 100 ppm
	Tip OPZ	WEL	U.K.	Dolgotrajna 441 mg/m3 - 100 ppm; Kratkotrajna 552 mg/m3 - 125 ppm
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	AGW	Nemčija	Dolgotrajna 88 mg/m3 - 20 ppm; Kratkotrajna 176 mg/m3 - 40 ppm Opombe: Skin
	Tip OPZ	NDS	Poljska	Dolgotrajna 200 mg/m3; Kratkotrajna 400 mg/m3
	Tip OPZ	MV	Slovenija	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
etilbenzen				
CAS: 100-41-4	Tip OPZ	ACGIH		Dolgotrajna 20 ppm Opombe: A3, BEI - URT irr, kidney dam (nephropathy), cochlear impair
	Tip OPZ	EU		Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	MAK	Avstrija	Dolgotrajna 440 mg/m3 - 100 ppm; Kratkotrajna 880 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	MAK	Nemčija	Dolgotrajna 88 mg/m3 - 20 ppm; Kratkotrajna 176 mg/m3 - 40 ppm Opombe: Skin
	Tip OPZ	VLEP	Belgija	Dolgotrajna 87 mg/m3 - 20 ppm; Kratkotrajna 551 mg/m3 - 125 ppm Opombe: Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air.
	Tip OPZ	VLEP	Francija	Dolgotrajna 88.4 mg/m3 - 20 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	VLEP	Italija	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	VLEP	Romunija	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm

	Tip OPZ	TLV	Bolgarija	Dolgotrajna 435 mg/m3; Kratkotrajna 535 mg/m3 Opombe: Skin
	Tip OPZ	TLV	Češka	Dolgotrajna 200 mg/m3 - 45.4 ppm; Kratkotrajna 500 mg/m3 - 113.5 ppm Opombe: Skin
	Tip OPZ	VLA	Španija	Dolgotrajna 441 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 442 mg/m3; Kratkotrajna 884 mg/m3 Opombe: Skin
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 215 mg/m3 - 48.6 ppm; Kratkotrajna 430 mg/m3 - 97.3 ppm Opombe: Skin
	Tip OPZ	VLE	Portugalska	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	SUVA	Švicar	Dolgotrajna 435 mg/m3 - 100 ppm; Kratkotrajna 435 mg/m3 - 100 ppm
	Tip OPZ	WEL	U.K.	Dolgotrajna 441 mg/m3 - 100 ppm; Kratkotrajna 552 mg/m3 - 125 ppm Opombe: Skin
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	AGW	Nemčija	Dolgotrajna 88 mg/m3 - 20 ppm; Kratkotrajna 176 mg/m3 - 40 ppm Opombe: Skin
	Tip OPZ	NDS	Poljska	Dolgotrajna 200 mg/m3; Kratkotrajna 400 mg/m3 Opombe: Skin
	Tip OPZ	MV	Slovenija	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	IPRV	Litva	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
butanon				
CAS: 78-93-3	Tip OPZ	ACGIH		Dolgotrajna 75 ppm; Kratkotrajna 150 ppm Opombe: BEI Skin - URT irr, CNS and PNS impair
	Tip OPZ	EU		Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	MAK	Avstrija	Dolgotrajna 295 mg/m3 - 100 ppm; Kratkotrajna 590 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	MAK	Nemčija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 600 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	VLEP	Belgija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	VLEP	Francija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	VLEP	Italija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	VLEP	Romunija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	TLV	Bolgarija	Dolgotrajna 590 mg/m3; Kratkotrajna 885 mg/m3
	Tip OPZ	TLV	Češka	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	VLA	Španija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 600 mg/m3; Kratkotrajna 900 mg/m3 Opombe: Skin
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 590 mg/m3 - 197 ppm; Kratkotrajna 900 mg/m3 - 300 ppm Opombe: Skin
	Tip OPZ	VLE	Portugalska	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	SUVA	Švicar	Dolgotrajna 590 mg/m3 - 200 ppm; Kratkotrajna 590 mg/m3 - 200 ppm
	Tip OPZ	WEL	U.K.	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 899 mg/m3 - 300 ppm Opombe: Skin
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	AGW	Nemčija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 600 mg/m3 - 200 ppm Opombe: Skin 15
	Tip OPZ	NDS	Poljska	Dolgotrajna 450 mg/m3; Kratkotrajna 900 mg/m3 Opombe: Skin
	Tip OPZ	MV	Slovenija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm Opombe: Skin

Tip OPZ	IPRV	Litva	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3

Mejna vrednost izpostavljenosti po PNEC

bis-[4-(2,3-epoksipropoksi)fenil]propan

CAS: 1675-54-3
- Način izpostavitve: Sladka voda; PNEC Omejite: 0.006 mg/l
- Način izpostavitve: Morska voda; PNEC Omejite: 0.001 mg/l
- Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 0.341 mg/kg
- Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.034 mg/kg
- Način izpostavitve: Tla (kmetijska); PNEC Omejite: 0.065 mg/kg
- Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 10 mg/l

reakcijska zmes 2,2'-[metilenbis(4,1-fenilenoksimetilen)]dioksiran in 2-({2-[4-(oksiran-2-ilmetoksi)]fenoksi})oksiran in 2,2'-[metilenbis(2,1-fenilenoksimetilen)]dioksiran
- Način izpostavitve: Sladka voda; PNEC Omejite: 0.003 mg/l
- Način izpostavitve: Morska voda; PNEC Omejite: 0.0003 mg/l
- Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 10 mg/l
- Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.0294 mg/kg
- Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 0.294 mg/kg
- Način izpostavitve: Tla (kmetijska); PNEC Omejite: 0.237 mg/kg

1,6-heksandiol diglicidil eter

CAS: 933999-84-9
- Način izpostavitve: Sladka voda; PNEC Omejite: 0.011 mg/l
- Način izpostavitve: Morska voda; PNEC Omejite: 0.001 mg/l
- Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 1 mg/l
- Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 0.283 mg/kg
- Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.028 mg/kg
- Način izpostavitve: Tla (kmetijska); PNEC Omejite: 0.223 mg/kg

bis(izopropil)naftalen

CAS: 38640-62-9
- Način izpostavitve: Sladka voda; PNEC Omejite: 0.236 µg/l
- Način izpostavitve: Morska voda; PNEC Omejite: 0.023 µg/l
- Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 0.853 mg/kg
- Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.085 mg/kg
- Način izpostavitve: Tla (kmetijska); PNEC Omejite: 0.171 mg/kg
- Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 0.15 mg/l

2-metoksi-1-metiletil acetat

CAS: 108-65-6
- Način izpostavitve: Sladka voda; PNEC Omejite: 0.635 mg/l
- Način izpostavitve: Morska voda; PNEC Omejite: 0.064 mg/l
- Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 100 mg/l
- Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 3.29 mg/kg
- Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.329 mg/kg
- Način izpostavitve: Tla (kmetijska); PNEC Omejite: 0.29 mg/kg

n-butil acetat

CAS: 123-86-4
- Način izpostavitve: Morska voda; PNEC Omejite: 0.018 mg/l
- Način izpostavitve: Sladka voda; PNEC Omejite: 0.18 mg/l
- Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.098 mg/kg
- Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 0.981 mg/kg
- Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 35.6 mg/l
- Način izpostavitve: Tla (kmetijska); PNEC Omejite: 0.09 mg/kg

ksilen

CAS: 1330-20-7
- Način izpostavitve: Morska voda; PNEC Omejite: 0.327 mg/l
- Način izpostavitve: Sladka voda; PNEC Omejite: 0.327 mg/l
- Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 6.58 mg/l
- Način izpostavitve: Morski sedimenti; PNEC Omejite: 12.46 mg/kg
- Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 12.46 mg/kg
- Način izpostavitve: Tla (kmetijska); PNEC Omejite: 2.31 mg/kg

etilbenzen

CAS: 100-41-4 Način izpostavitve: Sladka voda; PNEC Omejite: 0.1 mg/l

Način izpostavitve: Morska voda; PNEC Omejite: 0.01 mg/l

Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 9.6 mg/l

Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 13.7 mg/kg

Način izpostavitve: Morski sedimenti; PNEC Omejite: 1.37 mg/kg

Način izpostavitve: Tla (kmetijska); PNEC Omejite: 2.68 mg/kg

etilbenzen

CAS: 100-41-4 Način izpostavitve: Sladka voda; PNEC Omejite: 0.1 mg/l

Način izpostavitve: Morska voda; PNEC Omejite: 0.01 mg/l

Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 9.6 mg/l

Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 13.7 mg/kg

Način izpostavitve: Morski sedimenti; PNEC Omejite: 1.37 mg/kg

Način izpostavitve: Tla (kmetijska); PNEC Omejite: 2.68 mg/kg

butanon

CAS: 78-93-3 Način izpostavitve: Sladka voda; PNEC Omejite: 55.8 mg/l

Način izpostavitve: Morska voda; PNEC Omejite: 55.8 mg/l

Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 284.74 mg/kg

Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 709 mg/l

Način izpostavitve: Prehranska veriga; PNEC Omejite: 1000 mg/kg

Način izpostavitve: Tla (kmetijska); PNEC Omejite: 22.5 mg/kg

Izpeljane vrednosti brez učinka. (DNEL)

bis-[4-(2,3-epoksipropoksi)fenil]propan

CAS: 1675-54-3 Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 0.75 mg/kg; Uporabnik: 0.089 mg/kg

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 4.93 mg/m3; Uporabnik: 0.87 mg/m3

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Uporabnik: 0.5 mg/kg

reakcijska zmes 2,2'-[metilenbis(4,1-fenilenoksimetilen)]dioksiran in 2-({2-[4-(oksiran-2-ilmetoksi)]fenoksi})oksiran in 2,2'-[metilenbis(2,1-fenilenoksimetilen)]dioksiran

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 104.15 mg/kg; Uporabnik: 62.5 mg/kg

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek
Strokovni delavec: 0.0083 mg/cm2

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 29.39 mg/m3; Uporabnik: 8.7 mg/m3

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 6.25 mg/kg

1,6-heksandiol diglicidil eter

CAS: 933999-84-9 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
delavec: 10.57 mg/m3; Uporabnik: 5.29 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
delavec: 6 mg/kg; Uporabnik: 3 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 1.5 mg/kg

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
delavec: 10.57 mg/m3; Uporabnik: 5.29 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Uporabnik: 1.7 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Uporabnik: 1.5 mg/kg

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, lokalni učinek

delavec: 0.44 mg/m3; Uporabnik: 0.27 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, lokalni učinek
delavec: 0.022 mg/kg; Uporabnik: 0.013 mg/kg

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek
delavec: 0.022 mg/kg; Uporabnik: 0.013 mg/kg

bis(izopropil)naftalen

CAS: 38640-62-9 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 30 mg/m3; Uporabnik: 7.4 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 4.3 mg/kg; Uporabnik: 2.1 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 2.1 mg/kg

2-metoksi-1-metiletil acetat

CAS: 108-65-6 Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
delavec: 796 mg/kg; Uporabnik: 320 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 36 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Uporabnik: 500 mg/kg

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
delavec: 275 mg/m3; Uporabnik: 33 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek
delavec: 550 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, lokalni učinek
Uporabnik: 33 mg/m3

maščobne kisline, talovo olje, spojine z oleilamin

CAS: 85711-55-3 Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 0.024 mg/kg; Uporabnik: 0.012 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 0.012 mg/kg

n-butil acetat

CAS: 123-86-4 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
delavec: 300 mg/m3; Uporabnik: 35.7 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
delavec: 600 mg/m3; Uporabnik: 300 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, lokalni učinek
delavec: 300 mg/m3; Uporabnik: 35.7 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek
delavec: 600 mg/m3; Uporabnik: 300 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
delavec: 11 mg/kg; Uporabnik: 6 mg/kg

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
delavec: 11 mg/kg; Uporabnik: 6 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Uporabnik: 2 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 2 mg/kg

ksilen

CAS: 1330-20-7 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 221 mg/m3; Uporabnik: 65.3 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Strokovni delavec: 442 mg/m3; Uporabnik: 260 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek
Strokovni delavec: 442 mg/m3; Uporabnik: 260 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, lokalni učinek
Strokovni delavec: 221 mg/m3; Uporabnik: 65.3 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 212 mg/kg; Uporabnik: 125 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 12.5 mg/kg

etilbenzen

CAS: 100-41-4 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 77 mg/m3; Uporabnik: 15 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek
Strokovni delavec: 293 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 180 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 1.6 mg/kg

etilbenzen

CAS: 100-41-4 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 77 mg/m3; Uporabnik: 15 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, lokalni učinek
Strokovni delavec: 293 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 180 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 1.6 mg/kg

butanon

CAS: 78-93-3 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 600 mg/m3; Uporabnik: 106 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 1161 mg/kg; Uporabnik: 412 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 31 mg/kg

8.2 Nadzor izpostavljenosti

Poskrbite za ustrezno prezračevanje. Kadar je to izvedljivo, je to mogoče doseči z uporabo nadomestnega prezračevanja in dobrim splošnim vsesavanjem.

Zaščita oči:

Očala s stranskimi varovali (EN 16321).

Zaščita kože:

Uporabljajte oblačila, primerna za popolno zaščito kože glede na dejavnost in izpostavljenost (EN 14605/EN 13982), npr. delovni kombinezon, predpasnik, zaščitna obutev, primerna oblačila.

Zaščita rok:

Ni materiala ali kombinacije materialov za rokavice, ki bi lahko zagotovili neomejeno odpornost na katero koli kombinacijo kemikalij ali proizvodov.

Za daljše ali večkratno rokovanje uporabite rokavice, odporne na kemikalije.

Ustrezne rokavice tipa (EN 374/EN 16523); FKM (Fluórkaučuk): debelina >= 0.4 mm; permeacijski čas >= 480 min. NBR (Nitrilkaučuk): debelina >= 0.4 mm; permeacijski čas >= 480 min

Izbira primernih rokavic ni odvisna samo od materiala, temveč tudi od drugih kakovostnih lastnosti, ki se razlikujejo od enega do drugega proizvajalca, in od načinov ter časov uporabe mešanice.

Zaščita dihalnih poti:

Če so delavci izpostavljeni koncentracijam nad mejnimi vrednostmi izpostavljenosti, morajo uporabljati primerne, certificirane dihalne aparate.

Kombinirana filtrirna naprava (EN 14387): maska s filtrom A-P2.

Nadzor izpostavljenosti okolja:

Glejte točko 6.2

Higienski in tehnični ukrepi

Glejte poglavje 7.

ODDELEK 9: Fizikalne in kemijske lastnosti

9.1 Podatki o osnovnih fizikalnih in kemijskih lastnostih

fizično stanje: Tekoče

Izgled: Viskozni

Barva: siv

Vonj: značilnost

Tališče/ledišče: N.D.

Vrelišče ali začetno vrelišče in območje vrelišča: N.D.

Vnetljivost: ni znano

Spodnja in zgornja meja eksplozivnosti: N.D.

Plamenišče: > 93°C

Temperatura samovžiga: N.D.

Temperatura razgradnje: ni znano

pH: ni znano

Kinematična viskoznost: ni znano

Topnost v vodi: Netopno

Topnost v olju: ni znano

Porazdelitveni koeficient n-oktanol/voda (logaritemska vrednost): ni znano

Parni tlak: N.D.

Gostota in/ali relativna gostota: 1.40 kg/l (Interna metoda)

Relativna parna gostota: N.D. ni znano

Lastnosti delcev:

Velikost delcev: ni znano

9.2 Drugi podatki

Eksplozivne lastnosti: ni znano (Notranja evalvacija)

Oksidativne lastnosti: ni znano (Notranja evalvacija)

ODDELEK 10: Obstojnost in reaktivnost

10.1 Reaktivnost

Stabilen v normalnih pogojih

10.2 Kemijska stabilnost

Stabilen v normalnih pogojih

10.3 Možnost poteka nevarnih reakcij

V stiku z močnimi oksidatorji se lahko vname.

Zaradi toplote ali v primeru požara se lahko sprostijo ogljikovi oksidi in hlapi, ki lahko škodujejo zdravju.

10.4 Pogoji, ki se jim je treba izogniti

Izogibajte se bližine toplotnih virov.

10.5 Nezdružljivi materiali

Močni oksidanti, močni reduktorji, alifatski in aromatski amini.

Glejte točko 10.3

10.6 Nevarni produkti razgradnje

V primeru pravilnega skladiščenja in ravnanja ne pride do razvoja nevarnih produktov razgradnje.

Glejte točko 5.2

ODDELEK 11: Toksikološki podatki

11.1 Podatki o razredih nevarnosti, kakor so opredeljeni v Uredbi (ES) št. 1272/2008

Epoksidne smole, prisotne v tem izdelku so samo delno dražilne. Kljub temu vse epoksidne smole lahko povzročajo senzibilizacijo kože, ki je različna glede na osebo.

Pri nekaterih osebah se alergični dermatitis ne pokaže takoj in se pojavi šele po večih dneh ali tednih po pogostih ali daljših stikih.

Zaradi tega, čeprav so smole le lažje dražilne, se je treba skrbno izogibati stiku s kožo. Pri že razviti sensibilizaciji tudi izpostavljenost v manjših količinah lahko povzročajo lokalni edem ali eritem.

Toksikološki podatki izdelka:

a) akutna strupenost	Ni klasificirano Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.
b) jedkost za kožo/draženje kože	Proizvod je razvrščen: Skin Irrit. 2(H315)
c) resne okvare oči/draženje	Proizvod je razvrščen: Eye Irrit. 2(H319)
d) preobčutljivost pri vdihavanju in preobčutljivost kože	Proizvod je razvrščen: Skin Sens. 1A(H317)
e) mutagenost za zarodne celice	Ni klasificirano Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.

f) rakotvornost	Ni klasificirano
	Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.
g) strupenost za razmnoževanje	Proizvod je razvrščen: Repr. 1B(H360)
h) STOT - enkratna izpostavljenost	Ni klasificirano
	Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.
i) STOT - ponavljajoča se izpostavljenost	Ni klasificirano
	Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.
j) nevarnost pri vdihavanju	Ni klasificirano
	Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.

Toksikološki podatki glavnih snovi, ki jih najdemo v izdelku:

bis-[4-(2,3-epoksipropoksi)fenil]propan

CAS: 1675-54-3	a) akutna strupenost	LD50 Oralno Podgana > 2000 mg/kg
		LD50 Koža Podgana > 2000 mg/kg

reakcijska zmes 2,2'-[metilenbis(4,1-fenilenoksimetilen)]dioksiran in 2-({2-[4-(oksiran-2-ilmetoksi)]fenoksi})oksiran in 2,2'-[metilenbis(2,1-fenilenoksimetilen)]dioksiran

	a) akutna strupenost	LD50 Koža Podgana > 2000 mg/kg
		LD50 Oralno Podgana > 5000 mg/kg

1,6-heksandiol diglicidil eter

CAS: 933999-84-9	a) akutna strupenost	LD50 Oralno Podgana 2189 mg/kg
		LD50 Koža Podgana > 2000 mg/kg

titanov dioksid

CAS: 13463-67-7	a) akutna strupenost	LD50 Oralno Podgana > 5000 mg/kg
		LC50 Vdihavanje prahu Podgana > 6.82 mg/l 4h

bis(izopropil)naftalen

CAS: 38640-62-9	a) akutna strupenost	LD50 Oralno Podgana > 4000 mg/kg
		LC50 Koža Podgana > 4000 mg/kg
		LC50 Vdihavanje aerosola Podgana > 5.6 mg/l

2-metoksi-1-metiletil acetat

CAS: 108-65-6	a) akutna strupenost	LD50 Oralno Podgana > 5000 mg/kg
		LD50 Koža Zajec > 5000 mg/kg
		LC0 Vdihavanje hlapov Podgana > 4345 ppm 6h

maščobne kisline, talovo olje, spojine z oleilamin

CAS: 85711-55-3	a) akutna strupenost	LD50 Oralno Podgana > 2000 mg/kg

n-butil acetat

CAS: 123-86-4	a) akutna strupenost	LD50 Oralno Podgana 10760 mg/kg
		LD50 Koža Zajec 14112 mg/kg
		LC50 Vdihavanje hlapov Podgana > 21.1 mg/l 4h

ksilen

CAS: 1330-20-7	a) akutna strupenost	ATE - Dermalno: 1100 mg/kg tt
		ATE - Vdihavanje (Hlapi): 11 mg/l
		LD50 Oralno Podgana 3523 mg/kg

ksilen

CAS: 1330-20-7	a) akutna strupenost	ATE - Dermalno: 1100 mg/kg tt
		ATE - Vdihavanje (Hlapi): 11 mg/l

etilbenzen

CAS: 100-41-4	a) akutna strupenost	LD50 Oralno Podgana 3500 mg/kg
		LD50 Koža Zajec 15400 mg/kg
		LC50 Vdihavanje Podgana 17629 mg/m3 4h

etilbenzen

CAS: 100-41-4	a) akutna strupenost	ATE - Vdihavanje (Hlapi): 11 mg/l

LD50 Oralno Podgana 3500 mg/kg

LD50 Koža Zajec 15400 mg/kg

butanon

CAS: 78-93-3 a) akutna strupenost LD50 Oralno Podgana > 2193 mg/kg

LD50 Koža Zajec > 5000 mg/kg

11.2 Podatki o drugih nevarnostih

Lastnosti endokrinih motilcev:

Ni endokrinih motilcev v koncentraciji > = 0,1%.

ODDELEK 12: Ekološki podatki

Uporabljajte v skladu z dobrimi delovnimi navadami, izogibajte se odlaganju izdelka v okolju.

12.1 Strupenost

Ekotoksikološki podatki:

Strupeno za vodne organizme, z dolgotrajnimi učinki.

Ekotoksikoloških lastnosti izdelka

Proizvod je razvrščen: Aquatic Chronic 2(H411)

Seznam sestavin z ekotoksikološkimi lastnostmi

bis-[4-(2,3-epoksipropoksi)fenil]propan

CAS: 1675-54-3 a) akutna strupenost za vodno okolje: EC50 Vodna bolha 1.8 mg/l 48h

a) akutna strupenost za vodno okolje: LC50 Riba 2 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Alge 11 mg/l 72h

b) kronična strupenost za vodno okolje: NOEC Vodna bolha 0.3 mg/l 21d

reakcijska zmes 2,2'-[metilenbis(4,1-fenilenoksimetilen)]dioksiran in 2-({2-[4-(oksiran-2-ilmetoksi)]fenoksi})oksiran in 2,2'-[metilenbis(2,1-fenilenoksimetilen)]dioksiran

a) akutna strupenost za vodno okolje: LC50 Riba 2.54 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Alge 1.8 mg/l 72h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha 2.55 mg/l 48h

b) kronična strupenost za vodno okolje: NOEC Vodna bolha 0.3 mg/l - 21d

1,6-heksandiol diglicidil eter

CAS: 933999-84-9 a) akutna strupenost za vodno okolje: LC50 Riba 30 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha 47 mg/l 48h

titanov dioksid

CAS: 13463-67-7 a) akutna strupenost za vodno okolje: LC50 Riba > 1000 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha > 1000 mg/l 48h

a) akutna strupenost za vodno okolje: EC50 Alge 61 mg/l 72h

bis(izopropil)naftalen

CAS: 38640-62-9 a) akutna strupenost za vodno okolje: LC0 Riba 0.5 mg/l 96h

a) akutna strupenost za vodno okolje: EC0 Vodna bolha 0.16 mg/l 48h

a) akutna strupenost za vodno okolje: EC0 Alge 0.15 mg/l 72h

b) kronična strupenost za vodno okolje: NOEC Vodna bolha 0.013 mg/l 21d

2-metoksi-1-metiletil acetat

CAS: 108-65-6 a) akutna strupenost za vodno okolje: LC50 Riba 134 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha 408 mg/l 48h

a) akutna strupenost za vodno okolje: EC50 Alge > 1000 mg/l 96h

b) kronična strupenost za vodno okolje: NOEC Riba 47.5 mg/l - 14 d

maščobne kisline, talovo olje, spojine z oleilamin

CAS: 85711-55-3 a) akutna strupenost za vodno okolje: LC50 Riba 15.2 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha > 100 mg/l 48h

n-butil acetat

CAS: 123-86-4 a) akutna strupenost za vodno okolje: LC50 Riba 18 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha 44 mg/l 48h

a) akutna strupenost za vodno okolje: EC50 Alge 675 mg/l 72h

b) kronična strupenost za vodno okolje: NOEC Vodna bolha 23 mg/l - 21d

etilbenzen

CAS: 100-41-4 a) akutna strupenost za vodno okolje: LC50 Riba 4.2 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha 1.8 mg/l 48h

a) akutna strupenost za vodno okolje: EC50 Alge 3.6 mg/l 96h

b) kronična strupenost za vodno okolje: NOEC Vodna bolha 1 mg/l - 7d

etilbenzen

CAS: 100-41-4 a) akutna strupenost za vodno okolje: LC50 Riba 4.2 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha 1.8 mg/l 48h

a) akutna strupenost za vodno okolje: EC50 Alge 3.6 mg/l 96h

b) kronična strupenost za vodno okolje: NOEC Vodna bolha 1 mg/l - 7d

butanon

CAS: 78-93-3 a) akutna strupenost za vodno okolje: LC50 Riba 2973 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha 308 mg/l 48h

a) akutna strupenost za vodno okolje: EC50 Alge 1229 mg/l 96h

12.2 Obstojnost in razgradljivost

bis-[4-(2,3-epoksipropoksi)fenil]propan

CAS: 1675-54-3 Ni hitro razgradljivo

2-metoksi-1-metiletil acetat

CAS: 108-65-6 Hitro razgradljivo

n-butil acetat

CAS: 123-86-4 Hitro razgradljivo

ksilen

CAS: 1330-20-7 Hitro razgradljivo

ksilen

CAS: 1330-20-7 Hitro razgradljivo

etilbenzen

CAS: 100-41-4 Hitro razgradljivo

etilbenzen

CAS: 100-41-4 Hitro razgradljivo

butanon

CAS: 78-93-3 Hitro razgradljivo

12.3 Zmožnost kopičenja v organizmih

bis-[4-(2,3-epoksipropoksi)fenil]propan

CAS: 1675-54-3 Se ne kopiči v organizmih

titanov dioksid

CAS: 13463-67-7 Se ne kopiči v organizmih

ksilen

CAS: 1330-20-7 Se ne kopiči v organizmih

ksilen

CAS: 1330-20-7 Se ne kopiči v organizmih

12.4 Mobilnost v tleh

bis-[4-(2,3-epoksipropoksi)fenil]propan

CAS: 1675-54-3 Testiranje: Log Koc; Vrednost: 2.650

titanov dioksid

CAS: 13463-67-7 Ni mobilno

n-butil acetat

CAS: 123-86-4 Testiranje: Log Koc; Vrednost: 1.300

ksilen

CAS: 1330-20-7 Testiranje: Log Koc; Vrednost: 2.730

ksilen

CAS: 1330-20-7 Testiranje: Log Koc; Vrednost: 2.730

12.5 Rezultati ocene PBT in vPvB

Seznam sestavin z ekotoksikološkimi lastnostmi

bis(izopropil)naftalen

CAS: 38640-62-9 >=0.3 - <0.5 % PBT - vPvB

12.6 Lastnosti endokrinih motilcev

Ni endokrinih motilcev v koncentraciji > = 0,1%.

12.7 Drugi škodljivi učinki

ni znano

ODDELEK 13: Odstranjevanje

13.1 Metode ravnanja z odpadki

Če je mogoče, predelajte. Pošljite v usposobljena odlagališča ali v zažig pod kontroliranimi pogoji. Ravnajte se po lokalnih in državnih predpisih.

Ne dopustite, da pride v kanalizacijo ali vodne poti.

Odstraniti posode, ki jih kontaminira izdelka v skladu z lokalnimi ali nacionalnimi predpisi.

Ko izdelku poteče življenjska doba, ga odstranite v skladu z veljavno zakonodajo.

ODDELEK 14: Podatki o prevozu



14.1 Številka ZN in številka ID

3082

14.2 Pravilno odpremno ime ZN

ADR-uradno ime blaga: OKOLJU NEVARNA SNOV, TEKOČA, N.D.N. (bis-[4-(2,3-epoksipropoksi)fenil]propan - reakcijska zmes 2,2'-[metilenbis(4,1-fenilenoksimetilen)]dioksiran in 2-({2-[4-(oksiran-2-ilmetoksi)]fenoksi})oksiran in 2,2'-[metilenbis(2,1-fenilenoksimetilen)]dioksiran)

IATA-uradno ime blaga: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoksipropoksi)fenil]propan - reakcijska zmes 2,2'-[metilenbis(4,1-fenilenoksimetilen)]dioksiran in 2-({2-[4-(oksiran-2-ilmetoksi)]fenoksi})oksiran in 2,2'-[metilenbis(2,1-fenilenoksimetilen)]dioksiran)

IMDG-uradno ime blaga: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoksipropoksi)fenil]propan - reakcijska zmes 2,2'-[metilenbis(4,1-fenilenoksimetilen)]dioksiran in 2-({2-[4-(oksiran-2-ilmetoksi)]fenoksi})oksiran in 2,2'-[metilenbis(2,1-fenilenoksimetilen)]dioksiran)

14.3 Razredi nevarnosti prevoza

ADR-Razred: 9

IATA-razred: 9

IMDG-razred: 9

14.4 Skupina embalaže

ADR-embalažna skupina: III

IATA-embalažna skupina: III

IMDG-embalažna skupina: III

14.5 Nevarnosti za okolje

Onesnaževalec morja: Da

Onesnažuje okolje po: Da

IMDG-EMS: F-A, S-F

14.6 Posebni previdnostni ukrepi za uporabnika

Cestni in železniški transport (ADR-RID):

ADR-nalepka nevarnosti: 9

ADR - Identifikacijska številka nevarnosti: 90

ADR-posebni ukrepi: 274 335 375 601

ADR-Pravilnik o cestnem prevozu nevarnega blaga:

Zračni transport (IATA):

IATA-potniška letala: 964

IATA-tovorna letala: 964
IATA-nalepka: 9
IATA-dodatne nevarnosti: -
IATA-Erg: 9L
IATA-posebni ukrepi: A97 A158 A197 A215

Morski transport (IMDG):

IMDG-Zlaganje in ravnanje: Category A
IMDG-Segregacija: -
IMDG-dodatne nevarnosti: -
IMDG-posebni ukrepi: 274 335 969

14.7 Pomorski prevoz v razsutem stanju v skladu z instrumenti IMO

ni znano

ODDELEK 15: Zakonsko predpisani podatki

15.1 Predpisi/zakonodaja o zdravju, varnosti in okolju, specifični za snov ali zmes

Dir. 98/24/ES (Varovanje delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu)
Dir. 2000/39/ES (mejne vrednosti za poklicno izpostavljenost)
Direktiva 2010/75/EU
Uredba (ES) št. 1907/2006 (REACH)
Uredba (ES) št. 1272/2008 (CLP)
Uredba (ES) št. 790/2009 (1. ATP CLP) in (EU) št. 758/2013
Uredba (EU) 2020/878
Uredba (EU) št. 286/2011 (2. ATP CLP)
Uredba (EU) št. 618/2012 (3. ATP CLP)
Uredba (EU) št. 487/2013 (4. ATP CLP)
Uredba (EU) št. 944/2013 (5. ATP CLP)
Uredba (EU) št. 605/2014 (6. ATP CLP)
Uredba (EU) 2015/1221 (7. ATP CLP)
Uredba (EU) 2016/918 (8. ATP CLP)
Uredba (EU) 2016/1179 (9. ATP CLP)
Uredba (EU) 2017/776 (10. ATP CLP)
Uredba (EU) 2018/669 (11. ATP CLP)
Uredba (EU) 2018/1480 (13. ATP CLP)
Uredba (EU) 2019/521 (12. ATP CLP)
Uredba (EU) 2020/217 (14. ATP CLP)
Uredba (EU) 2020/1182 (15. ATP CLP)
Uredba (EU) 2021/643 (16. ATP CLP)
Uredba (EU) 2021/849 (17. ATP CLP)
Uredba (EU) 2022/692 (18. ATP CLP)
Uredba (EU) 2023/707
Uredba (EU) 2023/1434 (19. ATP CLP)
Uredba (EU) 2023/1435 (20. ATP CLP)
Uredba (EU) 2024/197 (21. ATP CLP)
Uredba (EU) 2024/2564 (22. ATP CLP)
Uredba (EU) ąt. 2024/2865
Uredba (EU) 2025/1222 (23. ATP CLP)

Omejitve, povezane z izdelkom ali vsebovanimi snovmi, v skladu s Prilogo XVII Uredbe (ES) 1907/2006 (REACH) in poznejše spremembe:

Omejitve v zvezi z izdelkom: 3
Omejitve v zvezi z vsebovanimi snovmi: 40, 75

Določbe v zvezi z direktivo EU 2012/18 (Seveso III)

Kategorija Seveso III v skladu s Prilogo 1, del 1	Mejna vrednost nižje stopnje (v tonah)	Mejna vrednost višje stopnje (v tonah)
izdelek spada v kategorijo: E2	200	500

Uredba (EU) št. 649/2012 (uredba PIC)

Snovi niso navedene

Nemški razred nevarnosti za vodo.

Razred 2: ogroža vodo.

SVHC snovi:

Na podlagi razpoložljivih podatkov, preparat ne vsebuje snovi SVHC v procentu ≥ 0.1%.

15.2 Ocena kemijske varnosti

Ocena kemijske varnosti ni bila opravljena za zmes. Zgledujte se po scenarijih izpostavljenosti snovi, priloženih temu varnostnemu listu.Pri posvetovanju s scenariji upoštevajte morebitne omejitve glede uporabe, navedene v razdelku 1.2.

ODDELEK 16: Drugi podatki

Številka	Opis
EUH066	Ponavljajoča izpostavljenost lahko povzroči nastanek suhe ali razpokane kože.
H225	Lahko vnetljiva tekočina in hlapi.
H226	Vnetljiva tekočina in hlapi.
H304	Pri zaužitju in vstopu v dihalne poti je lahko smrtno.
H312	Zdravju škodljivo v stiku s kožo.
H315	Povzroča draženje kože.
H317	Lahko povzroči alergijski odziv kože.
H318	Povzroča hude poškodbe oči.
H319	Povzroča hudo draženje oči.
H332	Zdravju škodljivo pri vdihavanju.
H335	Lahko povzroči draženje dihalnih poti.
H336	Lahko povzroči zaspanost ali omotico.
H351	Sum povzročanja raka v primeru vdihavanja.
H360F	Lahko škoduje plodnosti.
H372	V primeru dolgotrajnega ali ponovljenega vdihavanja povzroča poškodbe notranjih organov.
H373	Lahko škoduje organom pri dolgotrajni ali ponavljajoči se izpostavljenosti.
H373	V primeru dolgotrajnega ali ponovljenega zaužitja lahko povzroči poškodbe notranjih organov.
H373	V primeru dolgotrajnega ali ponovljenega vdihavanja in zaužitja lahko povzroči poškodbe notranjih organov.
H410	Zelo strupeno za vodne organizme, z dolgotrajnimi učinki.
H411	Strupeno za vodne organizme, z dolgotrajnimi učinki.
H412	Škodljivo za vodne organizme, z dolgotrajnimi učinki.

Številka	Razred in kategorija nevarnosti	Opis
2.6/2	Flam. Liq. 2	Vnetljiva tekočina, Kategorija 2
2.6/3	Flam. Liq. 3	Vnetljiva tekočina, Kategorija 3
3.1/4/Dermal	Acute Tox. 4	Akutna strupenost (dermalno), Kategorija 4
3.1/4/Inhal	Acute Tox. 4	Akutna strupenost (pri vdihavanju), Kategorija 4
3.10/1	Asp. Tox. 1	Nevarnost pri vdihavanju, Kategorija 1
3.2/2	Skin Irrit. 2	Draženje kože, Kategorija 2
3.3/1	Eye Dam. 1	Hude poškodbe oči, Kategorija 1
3.3/2	Eye Irrit. 2	Draženje oči, Kategorija 2
3.4.2/1	Skin Sens. 1	Preobčutljivost kože, Kategorija 1
3.4.2/1A	Skin Sens. 1A	Preobčutljivost kože, Kategorija 1A
3.6/2	Carc. 2	Rakotvornost, Kategorija 2
3.7/1B	Repr. 1B	Strupenost za razmnoževanje, Kategorija 1B
3.8/3	STOT SE 3	Specifična strupenost za ciljne organe (STOT) – enkratna izpostavljenost STOT enkrat, Kategorija 3
3.9/1	STOT RE 1	Specifična strupenost za ciljne organe (STOT) – ponavljajoča se izpostavljenost, Kategorija 1
3.9/2	STOT RE 2	Specifična strupenost za ciljne organe (STOT) – ponavljajoča se izpostavljenost, Kategorija 2
4.1/C1	Aquatic Chronic 1	Kronično (dolgotrajno) nevarnost za vodno okolje, Kategorija 1
4.1/C2	Aquatic Chronic 2	Kronično (dolgotrajno) nevarnost za vodno okolje, Kategorija 2
4.1/C3	Aquatic Chronic 3	Kronično (dolgotrajno) nevarnost za vodno okolje, Kategorija 3

Razvrstitev in postopek, uporabljen za izpeljavo razvrstitve za zmesi v skladu z Uredbo (ES) 1272/2008 [uredba CLP]:

Razvrstitev v skladu z Uredbo (ES) št. 1272/2008	Postopek razvrščanja
Skin Irrit. 2, H315	metoda izračuna

Eye Irrit. 2, H319	metoda izračuna
Skin Sens. 1A, H317	metoda izračuna
Repr. 1B, H360F	metoda izračuna
Aquatic Chronic 2, H411	metoda izračuna

Ta dokument je pripravila pristojna oseba, ki je ustrezno usposobljena

Glavni bibliografski viri:

ECDIN – Informacijska mreža za okoljske podatke za kemikalije – Skupno raziskovalno središče, Komisija Evropskih skupnosti

SAX – NEVARNE LASTNOSTI INDUSTRIJSKIH MATERIALOV – 8. izdaja – Van Nostrand Reinold

Varnostni listi dobaviteljev surovin.

Predstavljene informacije se nanašajo na naše znanje v zgoraj navedenem datumu. Nanašajo se zgolj na omenjeni izdelek in ne predstavljajo garancije za posebno kakovost.

Uporabnik je dolžan preveriti pravilnost in popolnost teh informacij glede na svojo specifično uporabo.

Ta list razveljavlja in nadomešča vsako predhodno izdajo

Legenda okrajšav in kratic, uporabljenih v varnostnem listu:

ACGIH: Ameriška konferenca vladnih industrijskih higienikov

ADR: Evropski sporazum o mednarodnem prevozu nevarnih snovi v cestnem prometu.

ATE: Ocena akutne strupenosti

ATEmix: Ocena akutne strupenosti (Zmesi)

BEI: Biološki indeks izpostavljenosti

CAS: Chemical Abstracts Service (oddelek Ameriškega kemijskega društva).

CAV: Center za zastrupitve

CE: Evropska skupnost

CLP: Razvrščanje, etiketiranje, pakiranje.

CMR: Rakotvorno, mutageno in strupeno za razmnoževanje

COV: Hlapna organska spojina

CSA: Ocena kemijske varnosti

CSR: Poročilo o kemijski varnosti

DNEL: Izpeljane vrednosti brez učinka.

EC50: Srednja učinkovita koncentracija

ECHA: Evropska agencija za kemikalije

EINECS: Evropski seznam obstoječih snovi.

ES: Scenarij izpostavljenosti

GefStoffVO: Odlok o nevarnih snoveh, Nemčija.

GHS: Globalno poenoten sistem razvrščanja in označevanja nevarnih kemikalij.

IARC: Mednarodna agencija za raziskovanje raka

IATA: Mednarodno združenje za zračni transport.

IC50: Srednja inhibitorna koncentracija

IMDG: Mednarodni kodeks za prevoz nevarnega blaga po morju

LC50: Letalna koncentracija za 50 odstotkov testne populacije.

LD50: Letalna doza za 50 odstotkov testne populacije.

LDLo: Najnižja smrtna doza

N.A.: Se ne uporablja

N/A: Se ne uporablja

N/D: Ni opredeljeno/Ni razpoložljiv

N.D.: Ni razpoložljiv

NIOSH: Nacionalni inštitut za varnost in zdravje pri delu

NOAEL: Raven brez opaznih negativnih vplivov

OSHA: Upravljanje varnosti in zdravja pri delu

PBT: Obstojne, se kopičijo v organizmih in so strupene

PGK: Navodila za embalažo nevarnih snovi

PNEC: Predvidena koncentracija brez učinka.

PSG: Potniki

RID: Pravilnik o mednarodnem prevozu nevarnega blaga po železnici.

STEL: Meja za kratkotrajno izpostavljenost.

STOT: Specifično strupeno za ciljne organe.

TLV: Mejna vrednost izpostavljenosti.

TLV-TWA: Mejna vrednost izpostavljenosti v časovnem obdobju po 8 ur dnevno (ACGIH standard).

vPvB: Telo obstojno, se zelo lahko kopiči v organizmih.

WGK: Nemški razred nevarnosti za vodo.

Odstavki spremenjeni od prejšnje revizije:

- ODDELEK 1: Identifikacija snovi/zmesi in družbe/podjetja

- ODDELEK 2: Določitev nevarnosti
- ODDELEK 3: Sestava/podatki o sestavinah
- ODDELEK 8: Nadzor izpostavljenosti/osebna zaščita
- ODDELEK 9: Fizikalne in kemijske lastnosti
- ODDELEK 11: Toksikološki podatki
- ODDELEK 12: Ekološki podatki
- ODDELEK 15: Zakonsko predpisani podatki
- ODDELEK 16: Drugi podatki

n-butyl acetate

Substance identification
Chemical Name: n-butyl acetate
CAS number: 123-86-4
Date - Version: 07/06/2017 10.0

1. USE IN COATINGS. USE IN PAINTS. USE IN PRINTING INKS. USE IN ADHESIVES.

Short title of the exposure scenario: Use in coatings. Use in paints. Use in printing inks. Use in adhesives.
SU3; ERC4; PROC7, PROC10, PROC13

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: CEPE SPERC4.1a.v1

Operating conditions

Yearly amount used in EU: 5,000,000 kgs
Minimum emission days per year: 225
Emission factor to air: 0.8%
Emission factor in water: 2%
Emission factor in soil: 0%
Receiving surface water (flow rate): 18,000 m³/day
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Suitable measures to reduce emissions to air can be: Exhaust gas treatment with thermal oxidation.
Type of treatment plant: Municipal sewage treatment plant.
Assumed sewage treatment plant flow: 2,000 m³/day

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR): 0.925355
Risk from environmental exposure is driven by soil.
Maximum safe use amount: 1080.7 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC7: Industrial spray application

Area of use: Industrial

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
Minimize manual tasks.
Daily general cleaning of equipment and work area.
Regular inspection and maintenance of equipment and machinery.
Ensure that the activity is performed outside the operator’s respiratory zone (head-product distance greater than 1m).
Avoid frequent and direct contact with the substance.
Check that risk reduction measures are implemented and that the conditions of use are respected.
Avoid splashes.
Make sure the spray booth is used.
Wear suitable clothing.

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 4.2857 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.38961
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 0.0001 mg/m³
Risk Characterization Ratio (RCR): 0.000001

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra Please note that a revised version was used (see exposure estimates).

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes

Area of use: Industrial

Operating conditions
Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Forced local ventilation. Effectiveness: 90%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 2.7429 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.249351
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 24.1996 mg/m³
Risk Characterization Ratio (RCR): 0.080665

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping and pouring

Area of use: Industrial

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures

Forced local ventilation. Effectiveness: 90%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 1.3714 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.124675
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 24.1996 mg/m³
Risk Characterization Ratio (RCR): 0.080665

Guidance for downstream users

For a comparison term, visit http://www.ecetoc.org/tra

2. USE IN COATINGS. USE IN PAINTS. USE IN PRINTING INKS. USE IN ADHESIVES.

Short title of the exposure scenario: Use in coatings. Use in paints. Use in printing inks. Use in adhesives.
SU3; ERC4; PROC7, PROC10, PROC13

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: CEPE SPERC4.1a.v1

Operating conditions

Yearly amount used in EU: 43,000,000 kgs
Minimum emission days per year: 225
Emission factor to air: 0.8%
Emission factor in water: 2%
Emission factor in soil: 0%
Receiving surface water (flow rate): 18,000 m³/day
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Suitable measures to reduce emissions to air can be: Exhaust gas treatment with thermal oxidation.
Type of treatment plant: Municipal sewage treatment plant.
Assumed sewage treatment plant flow: 2,000 m³/day

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR): 0.925355
Risk from environmental exposure is driven by soil.
Maximum safe use amount: 1080.7 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC7: Industrial spray application

Area of use: Industrial

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures

Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
Minimize manual tasks.
Daily general cleaning of equipment and work area.
Regular inspection and maintenance of equipment and machinery.
Ensure that the activity is performed outside the operator’s respiratory zone (head-product distance greater than 1m).
Avoid frequent and direct contact with the substance.
Check that risk reduction measures are implemented and that the conditions of use are respected.
Avoid splashes.
Make sure the spray booth is used.
Wear suitable clothing.

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 4.2857 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.38961

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 0.0001 mg/m³
Risk Characterization Ratio (RCR): 0.000001

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra Please note that a revised version was used (see exposure estimates).

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes

Area of use: Industrial

Operating conditions
Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Forced local ventilation. Effectiveness: 90%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 2.7429 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.249351
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 24.1996 mg/m³
Risk Characterization Ratio (RCR): 0.080665

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping and pouring

Area of use: Industrial

Operating conditions
Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Forced local ventilation. Effectiveness: 90%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 1.3714 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.124675
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 24.1996 mg/m³
Risk Characterization Ratio (RCR): 0.080665

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra

3. USE IN COATINGS. USE IN PAINTS. USE IN PRINTING INKS. USE IN ADHESIVES.

Short title of the exposure scenario: Use in coatings. Use in paints. Use in printing inks. Use in adhesives.
SU22; ERC8a, ERC8d; PROC10, PROC11, PROC13, PROC19

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: CEPE SPERC 8a.2a.v1

Operating conditions

Yearly amount used in EU: 2,000,000 kgs
Minimum emission days per year: 225
Emission factor to air: 99%
Emission factor in water: 1%
Emission factor in soil: 0%
Receiving surface water (flow rate): 18,000 m³/day
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

The wastewater treatment measures considered suitable are, for example, wastewater or sewage treatment plant.
Type of treatment plant: Municipal sewage treatment plant.
Assumed sewage treatment plant flow: 2,000 m³/day

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR): 0.012923
Risk from environmental exposure is driven by freshwater sediment.
Maximum safe use amount: 1934.6 kg/giorno

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: CEPE SPERC 8d.3a.v1

Operating conditions

Yearly amount used in EU: 2,000,000 kgs
Minimum emission days per year: 225
Emission factor to air: 98%
Emission factor in water: 2%
Emission factor in soil: 0%
Receiving surface water (flow rate): 18,000 m³/day
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Type of treatment plant: Municipal sewage treatment plant.
Assumed sewage treatment plant flow: 2,000 m³/day

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR): 0.092422
Risk from environmental exposure is driven by soil.
Maximum safe use amount: 1082 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes

Area of use: Professional

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures

Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour). Effectiveness: 70%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 2.7429 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.249351
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 145.1979 mg/m³
Risk Characterization Ratio (RCR): 0.483993

Guidance for downstream users

For a comparison term, visit http://www.ecetoc.org/tra

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application

Area of use: Professional

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤45%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures

Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
Minimize manual tasks.
Daily general cleaning of equipment and work area.
Regular inspection and maintenance of equipment and machinery.
Ensure that the activity is performed outside the operator’s respiratory zone (head-product distance greater than 1m).
Avoid frequent and direct contact with the substance.
Check that risk reduction measures are implemented and that the conditions of use are respected.
Avoid splashes.
Make sure the spray booth is used.
Wear suitable clothing.

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 10.7143 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.974026
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 0.0001 mg/m³
Risk Characterization Ratio (RCR): 0.000001

Guidance for downstream users

For a comparison term, visit http://www.ecetoc.org/tra Please note that a revised version was used (see exposure estimates).

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application

Area of use: Professional

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤45%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures

Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
Minimize manual tasks.
Avoid frequent and direct contact with the substance.
Check that risk reduction measures are implemented and that the conditions of use are respected.
Daily general cleaning of equipment and work area.
Regular control and maintenance of equipment and machinery.
Make sure doors and windows are open (general ventilation).
Avoid splashes.
Use an adequately effective local ventilation system.
Wear suitable clothing.

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker, modified version. The concentration of the substance has been considered using a linear approach. Worker - dermal, long-term - systemic.
Exposure estimation: 4.8214 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.438312
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker, modified version. Operator - inhalation, long-term - local.
Exposure estimation: 153 mg/m³
Risk Characterization Ratio (RCR): 0.51

Guidance for downstream users

For a comparison term, visit http://www.ecetoc.org/tra Please note that a revised version was used (see exposure estimates).

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application

Area of use: Professional

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures

Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
Minimize manual tasks.
Avoid frequent and direct contact with the substance.
Check that risk reduction measures are implemented and that the conditions of use are respected.
Daily general cleaning of equipment and work area.
Regular inspection and maintenance of equipment and machinery.
Avoid splashes.
Make sure doors and windows are open (general ventilation).
Wear a half face mask with a P2L filter or better.
Wear suitable clothing.

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker, modified version. The concentration of the substance has been considered using a linear approach. Worker - dermal, long-term - systemic.
Exposure estimation: 4.8214 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.438312
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker, modified version. Operator - inhalation, long-term - local.
Exposure estimation: 116 mg/m³
Risk Characterization Ratio (RCR): 0.386667

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra Please note that a revised version was used (see exposure estimates).

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping and pouring

Area of use: Professional

Operating conditions
Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour). Effectiveness: 70%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 1.3714 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.124675
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 145.1979 mg/m³
Risk Characterization Ratio (RCR): 0.483993

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC19: Manual mixing with direct contact with the only use of personal protective equipment

Area of use: Professional

Operating conditions
Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 240 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Forced local ventilation: Effectiveness: 80%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
Ensure a good standard of general or controlled ventilation (no less than 3-5 air changes per hour). Effectiveness: 30%

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 8.4857 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.771429
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 67.759 mg/m³
Risk Characterization Ratio (RCR): 0.225863

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC19: Manual mixing with direct contact with the only use of personal protective equipment
Area of use: Professional

Operating conditions
Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 60 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour). Effectiveness: 70%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 2.8286 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.257143
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 145.1979 mg/m³
Risk Characterization Ratio (RCR): 0.483993

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra

Bis(isopropyl)naphthalene

Substance identification
Chemical Name: bis(isopropyl)naphthalene
EC number: 254-052-6
CAS number: 38640-62-9
Date - Version: 01/18/2018 v.1

SECTION 1: TITLE - Use in coatings - Industrial

List of use descriptors
Name of identified use: Use in coatings - Industrial: SU03; PROC01, PROC02 PROC03, PROC05, PROC07, PROC08a, PROC08b, PROC10, PROC13, PROC15; ERC05
Process category:PROC01, PROC02, PROC03, PROC05, PROC07, PROC08a, PROC08b, PROC10, PROC13, PROC15
Substance supplied for such use in the form of: As-it-is
End use sector: SU06a, SU13, SU16, SU17, SU18, SU19
Environmental Release Category ERC05

Environmental contributing scenario:
Use in coatings - ERC05

Worker contributing scenario(s):
Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions [PROC1]
Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions [PROC2]
Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions [PROC3].
Use of materials at industrial sites in open batch processes [PROC5].
Industrial Spray Applications [PROC7].
Transfer of substance or preparation (charging/discharging) at non dedicated facilities [PROC8a].
Transfer of substance or preparation (charging/discharging) at dedicated facilities [PROC8b].
Roller, spray and flow application[PROC10].
Treatment of articles by dipping and pouring [PROC13].
Use as laboratory reagent [PROC15].

SECTION 2: EXPOSURE CONTROLS

CONTRIBUTING SCENARIO THAT CONTROLS ENVIRONMENTAL EXPOSURE

Quantity used
Daily amount per site: ≤ 5.3 tons/day.
Annual amount per site: ≤ 1200 tons/year.
Issue days: 225 days a year.
Percentage of EU tonnage used at regional scale: 100 %.

Other conditions concerning environmental exposure
Receiving surface water flow rate: ≥ 18000 m³/day.
Fattore di rilascio dopo la gestione del rischio in loco:
Emissions to process waste water: 0 % (CEPE SPERC 5.1a.v1)
Process air emissions: 0.1 % (CEPE SPERC 5.1a.v1)
Soil emissions from process: 0 % (CEPE SPERC 5.1a.v1)

On-site conditions and technical measures to reduce or limit discharges, emissions to air and releases to soil
Wet blast chiller or filtration: (Air - minimum efficiency: 95 %).

Conditions and measures related to sewage treatment plants
Wastewater treatment plant: Yes. (Efficiency of at least 85.29 %)
Discharge rate: ≥ 2000 m³/day.
Application of STP sludge on agricultural land: Yes.

CONTRIBUTING SCENARIO THAT CONTROLS WORKERS' EXPOSURE

Other conditions regarding workers' exposure
Do not swallow.
Avoid splashes.
Avoid contact with contaminated tools and objects.

Organisational measures to avoid/limit releases, dispersion and exposure.
Personnel training on good practice.
On-site supervision to check that the Risk Management Measures (RMMs) in place are being used correctly and the Operational Conditions (OCs) are being followed.
Sensitisers - Subject to relevant national legislation, pre-employment screening and appropriate health surveillance.

Conditions and measures for personal protection, hygiene and health assessments
Good level of personal hygiene.
Assumes a good basic standard of occupational hygiene is implemented.

SECTION 3: Exposure estimation and reference to its source

Exposure assessment (environment):
EUSES v2.1.2

Exposure estimation:
Fresh water: 0.000000887 mg/l
RCR: <0.01
Freshwater sediments: 0.00321 mg/Kg dwt
RCR: <0.01
Sea water: 0.000000016 mg/l.
RCR: <0.01
Marine sediment: 0.0000579 mg/kg dwt
RCR: <0.01
Wastewater treatment plant: 0 mg/l
RCR: <0.01
Soil: 0.012 mg/kg dwt
RCR: 0.677
Based on the applied risk management the risk to the environment is sufficiently controlled, RCR<1

Exposure assessment (human):
A qualitative approach was used to conclude that it is safe to use.

SECTION 4: Indications for the downstream user to assess whether he works within the limits established by ES.

Generals
The downstream user is required to assess that the operating conditions and risk management measures described in the exposure scenario are suitable for his/her use.
Where other OCs/RMMs are adopted, the user should ensure that risks are managed to at least equivalent levels.

The risk assessment methods/tools specified in Section 3 can be used for this assessment.

Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
If scaling reveals a condition of unsafe use [i.e. risk characterisation ratio (RCR) > 1], additional risk management measures (RMM) or a site-specific chemical safety assessment or a site-specific chemical safety assessment will be required.
Further details on scaling and control technologies are provided in the SPERC

SECTION 1: TITLE - Use in coatings - Inside - Professional

List of use descriptors
Name of identified use: Use in coatings - Inside - Professional: SU22; PROC05, PROC08a PROC10, PROC11, PROC13, PROC19; ERC08c
Process category:PROC05, PROC08a PROC10, PROC11, PROC13, PROC19
Substance supplied for such use in the form of: As-it-is
End use sector: SU06a, SU13, SU16, SU17, SU18, SU19
Subsequent service life relevant to that use: No.
Environmental Release Category ERC08c
Market sector by type of chemical product: PC09a

Environmental contributing scenario:
Use in coatings-ERC08c

Worker contributing scenario(s):
Use of materials at industrial sites in open batch processes [PROC5].
Transfer of substance or preparation (charging/discharging) at non dedicated facilities [PROC8a].
Roller application or brushing [PROC10]
Non-industrial spray application [PROC11].
Treatment of articles by dipping and pouring [PROC13].
Manual activities with direct contact [PROC19].

SECTION 2: EXPOSURE CONTROLS

CONTRIBUTING SCENARIO THAT CONTROLS ENVIRONMENTAL EXPOSURE

Quantity used
Daily amount of local widespread use: ≤ 0,00014 Tons/day

Other conditions concerning environmental exposure
Emissions to process waste water: 0 % (CEPE SPERC 8c.3a.v1)
Process air emissions: 2.2 % (CEPE SPERC 8c.3a.v1)
Soil emissions from process: 0 % (CEPE SPERC 8c.3a.v1)

Process-level conditions and technical measures (source) to prevent release
Indoor use
Professional use.

Conditions and measures related to sewage treatment plants
Wastewater treatment plant: Yes. (Efficiency of at least 85.29 %)

CONTRIBUTING SCENARIO THAT CONTROLS WORKERS' EXPOSURE

Other conditions regarding workers' exposure
Do not swallow.
Avoid splashes.
Avoid contact with contaminated tools and objects.

Organisational measures to avoid/limit releases, dispersion and exposure.
Personnel training on good practice.
On-site supervision to check that the Risk Management Measures (RMMs) in place are being used correctly and the Operational Conditions (OCs) are being followed.

Conditions and measures for personal protection, hygiene and health assessments
Good level of personal hygiene.
Assumes a good basic standard of occupational hygiene is implemented.

SECTION 3: Exposure estimation and reference to its source

Exposure assessment (environment):
EUSES v2.1.2

Exposure estimation:
Fresh water: 0.000000887 mg/l
RCR: <0.01
Freshwater sediments: 0.00321 mg/Kg dwt
RCR: <0.01
Sea water: 0.000000016 mg/l.
RCR: <0.01
Marine sediment: 0.0000579 mg/kg dwt
RCR: <0.01
Wastewater treatment plant: 0 mg/l
RCR: <0.01
Soil: 0.000076 mg/kg peso secco
RCR: <0.01
Based on the applied risk management the risk to the environment is sufficiently controlled, RCR<1

Exposure assessment (human):
A qualitative approach was used to conclude that it is safe to use.

SECTION 4: Indications for the downstream user to assess whether he works within the limits established by ES.

Generals
The downstream user is required to assess that the operating conditions and risk management measures described in the exposure scenario are suitable for his/her use.
Where other OCs/RMMs are adopted, the user should ensure that risks are managed to at least equivalent levels.

The risk assessment methods/tools specified in Section 3 can be used for this assessment.

Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
If scaling reveals a condition of unsafe use [i.e. risk characterisation ratio (RCR) > 1], additional risk management measures (RMM) or a site-specific chemical safety assessment or a site-specific chemical safety assessment will be required.
Further details on scaling and control technologies are provided in the SPERC

SECTION 1: TITLE - Use in coatings - Outdoor - Professional

List of use descriptors

Name of identified use: Use in coatings - Outdoor - Professional: SU22; PROC05, PROC08a PROC10, PROC11, PROC13, PROC19; ERC08f
Process category:PROC05, PROC08a PROC10, PROC11, PROC13, PROC19
Substance supplied for such use in the form of: As-it-is
End use sector: SU06a, SU13, SU16, SU17, SU18, SU19
Subsequent service life relevant to that use: No.
Environmental Release Category ERC08f
Market sector by type of chemical product: PC09a

Environmental contributing scenario:

Use in coatings - ERC08f

Worker contributing scenario(s):

Use of materials at industrial sites in open batch processes [PROC5].
Transfer of substance or preparation (charging/discharging) at non dedicated facilities [PROC8a].
Roller application or brushing [PROC10]
Non-industrial spray application [PROC11].
Treatment of articles by dipping and pouring [PROC13].
Manual activities with direct contact [PROC19].

SECTION 2: EXPOSURE CONTROLS

CONTRIBUTING SCENARIO THAT CONTROLS ENVIRONMENTAL EXPOSURE

Quantity used

Daily amount of local widespread use: ≤ 0,00011 Tons/day
Percentage of EU tonnage used at regional scale: 10%

Other conditions concerning environmental exposure

Emissions to process waste water: 1 % (CEPE SPERC 8f.2a.v1)
Process air emissions: 0 % (CEPE SPERC 8f.2a.v1)
Soil emissions from process: 0.5 % (CEPE SPERC 8f.2a.v1)

Process-level conditions and technical measures (source) to prevent release

Outdoor use
Professional use.

Conditions and measures related to sewage treatment plants

Wastewater treatment plant: Yes. (Efficiency of at least 85.29 %)

CONTRIBUTING SCENARIO THAT CONTROLS WORKERS' EXPOSURE

Other conditions regarding workers' exposure

Do not swallow.
Avoid splashes.
Avoid contact with contaminated tools and objects.

Organisational measures to avoid/limit releases, dispersion and exposure.

Personnel training on good practice.
On-site supervision to check that the Risk Management Measures (RMMs) in place are being used correctly and the Operational Conditions (OCs) are being followed.

Conditions and measures for personal protection, hygiene and health assessments

Good level of personal hygiene.
Assumes a good basic standard of occupational hygiene is implemented.

SECTION 3: Exposure estimation and reference to its source

Exposure assessment (environment):

EUSES v2.1.2

Exposure estimation:

Fresh water: 0.00000848 mg/l
RCR: 0.036
Freshwater sediments: 0.031 mg/Kg dwt
RCR: 0.359
Sea water: 0.000000775 mg/l.
RCR: 0.033
Marine sediment: 0.0028 mg/kg dwt
RCR: 0.329
Wastewater treatment plant: 0.00008 mg/l
RCR: <0.01
Soil: 0.015 mg/kg dwt
RCR: 0.891
Based on the applied risk management the risk to the environment is sufficiently controlled, RCR<1

Exposure assessment (human):

A qualitative approach was used to conclude that it is safe to use.

SECTION 4: Indications for the downstream user to assess whether he works within the limits established by ES.

Generals

The downstream user is required to assess that the operating conditions and risk management measures described in the exposure scenario are suitable for his/her use.
Where other OCs/RMMs are adopted, the user should ensure that risks are managed to at least equivalent levels.

The risk assessment methods/tools specified in Section 3 can be used for this assessment.

Environment

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
If scaling reveals a condition of unsafe use [i.e. risk characterisation ratio (RCR) > 1], additional risk management measures (RMM) or a site-specific chemical safety assessment or a site-specific chemical safety assessment will be required.
Further details on scaling and control technologies are provided in the SPERC

SECTION 1: TITLE - Use in coatings - Consumer good

List of use descriptors

Name of identified use: Use in coatings - Consumer good: SU21; PC09a, PC09b; ERC08c, ERC08f
Substance supplied for such use in the form of: As-it-is
Subsequent service life relevant to that use: Yes.
Environmental Release Category ERC08c, ERC08f
Market sector by type of chemical product: PC09a, PC09b

Environmental contributing scenario:

Use in coatings - ERC08c
Use in coatings - ERC08f

Worker contributing scenario(s):

coatings and paints, thinners, pickling solutions (PC9a)
additives, fillers, plasters, modeling clay (PC9b)

SECTION 2: EXPOSURE CONTROLS

CONTRIBUTING SCENARIO THAT CONTROLS ENVIRONMENTAL EXPOSURE 1

Quantity used

Daily amount of local widespread use: ≤ 0,0000011 Tons/day

Other conditions concerning environmental exposure

Emissions to process waste water: 1 % (CEPE SPERC 8c.1a.v1)
Process air emissions: 0 % (CEPE SPERC 8c.1a.v1)
Soil emissions from process: 0 % (CEPE SPERC 8c.1a.v1)

Conditions and measures related to sewage treatment plants

Wastewater treatment plant: Yes. (Efficiency of at least 85.29 %)

SECTION 2: EXPOSURE CONTROLS

CONTRIBUTING SCENARIO THAT CONTROLS ENVIRONMENTAL EXPOSURE 2

Quantity used

Daily amount of local widespread use: ≤ 0,0000011 Tons/day

Other conditions concerning environmental exposure

Emissions to process waste water: 1 % (CEPE SPERC 8f.1a.v1)
Process air emissions: 0 % (CEPE SPERC 8f.1a.v1)
Soil emissions from process: 0.5 % (CEPE SPERC 8f.1a.v1)

Conditions and measures related to sewage treatment plants

Wastewater treatment plant: Yes. (Efficiency of at least 85.29 %)
CONTRIBUTING SCENARIO CONTROLLING CONSUMERS EXPOSURE 3

Coatings and paints, thinners, pickling solutions (PC9a)

Use of the substance is considered safe for the consumer if operating within the limits established by the exposure scenario; therefore, if complying with the operating conditions and risk management measures set out above.
CONTRIBUTING SCENARIO CONTROLLING CONSUMERS EXPOSURE 4

Additives, fillers, plasters, modeling clay (PC9b)

Use of the substance is considered safe for the consumer if operating within the limits established by the exposure scenario; therefore, if complying with the operating conditions and risk management measures set out above.

SECTION 3: Exposure estimation and reference to its source

Exposure assessment (environment): 1
EUSES v2.1.2

Exposure estimation:
Fresh water: 0.000000946 mg/l
RCR: <0.01
Freshwater sediments: 0.00348 mg/Kg dwt
RCR: 0.041
Sea water: 0.0000000237 mg/l.
RCR: <0.01
Marine sediment: 0.0000857 mg/kg dwt
RCR: 0.01
Wastewater treatment plant: 0.000000809 mg/l
RCR: <0.01
Soil: 0.000224 mg/kg dwt
RCR: 0.013
Based on the applied risk management the risk to the environment is sufficiently controlled, RCR<1

SECTION 3: Exposure estimation and reference to its source

Exposure assessment (environment): 2
EUSES v2.1.2

Exposure estimation:
Fresh water: 0.000000946 mg/l
RCR: <0.01
Freshwater sediments: 0.00348 mg/Kg dwt
RCR: 0.041
Sea water: 0.0000000237 mg/l.
RCR: <0.01
Marine sediment: 0.0000857 mg/kg dwt
RCR: 0.01
Wastewater treatment plant: 0.000000809 mg/l
RCR: <0.01
Soil: 0.000224 mg/kg dwt
RCR: 0.013
Based on the applied risk management the risk to the environment is sufficiently controlled, RCR<1

Exposure assessment (human):
A qualitative approach was used to conclude that it is safe to use.

SECTION 4: Indications for the downstream user to assess whether he works within the limits established by ES.

Generals
The downstream user is required to assess that the operating conditions and risk management measures described in the exposure scenario are suitable for his/her use.
Where other OCs/RMMs are adopted, the user should ensure that risks are managed to at least equivalent levels.

The risk assessment methods/tools specified in Section 3 can be used for this assessment.

Xylene

Identification of the exposure scenario
Product name: Xylene
Reach registration number: 01-2119488216-32-XXXX
CAS number: 1330-20-7
EC number: 215-535-7
Review date: 14/02/2022 rev. 3.0

USE IN COATINGS - INDUSTRIAL USE

1. Title of the exposure scenario

Process purpose: Includes use in coatings (varnishes, inks, adhesives, etc.), including exposure during application (including material receipt, storage, bulk and semi-bulk preparation and transfer, application by spray, roller, manual spraying, dip, flow, fluid layers in production lines and in film formation) and system cleaning, maintenance and related laboratory activities.
Main sector: SU3 Industrial uses

Environment

Environmental Release Categories [ERC]: ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article).
Specific Environmental Release Category [SPERC]: ESVOC SPERC 4.3a.v1

Worker

Process categories:
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions.
PROC 3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions.
PROC4 Production of chemicals with the possibility of exposure.
PROC5 Mixing or blending in batch processes
PROC7 Industrial spraying.
PROC8a Transfer of a substance or preparation (charging/discharging) at non-dedicated facilities.
PROC8a Transfer of substance or mixture (charging/discharging) at non-dedicated facilities.
PROC10 Application with rollers or brushes.
PROC13 Treatment of articles by dipping and pouring.
PROC15 Use as laboratory reagent.
PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles.

2. Other conditions of use affecting exposure (Industrial - Environment 1)

Products features

Form: Liquid, vapor pressure 0.5 - 10 kPa at STP
Easily biodegradable.

Amounts used:

Annual amount per site: 2500 tonnes

Frequency and duration of use

Issue days: 300 days/year

Additional operating conditions relating to environmental exposure

Emission factor - air
Air release rate produced by the process (initial release prior to risk management measures): 0.98
Emission factor - water
Waste water release rate produced by the process (initial release prior to risk management measures): 0.007
Emission factor - soil
Soil release rate produced by the process (initial release prior to risk management measures): 0

Environmental factors that are not influenced by risk management

Dilution

Local fresh water dilution factor: 10
Local seawater dilution factor: 100

Risk management measures

Sewage Treatment Plant Data (STP)

Estimated substance removal from waste water via domestic sewage treatment: 95.8%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Local technical conditions and measures to reduce and limit discharges and air emissions

Air:

Treat air emission to provide a typical removal efficiency of > 90%.

Water:

Avoid releasing the undiluted substance into local waste water or recover it on site. The typical on-site purification technique has a removal efficiency of 95.8%.

Ground:

Soil emission controls are not applicable as there is no direct release to soil.

Conditions and measures for external treatment of waste

Sludge treatment:

Do not spread industrial sludge on natural soils. Sewerage sludge should be burned, stored or regenerated.
Waste treatment:
No waste of the substance is formed during production.

2. Other conditions of use affecting exposure (Workers - Health 1)

Products features

Form:

Liquid, vapor pressure 0.5 - 10 kPa at STP
Concentration information: Includes concentrations up to 100%, unless otherwise indicated.

Quantities used

Not applicable.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other operational conditions affecting worker exposure

Temperature: (unless stated differently) assumes use at not more than 20°C above ambient temperature.
Ventilation Rate: Ensure a sufficient amount of controlled ventilation (10 to 15 air changes per hour). Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and process-level (source) measures to prevent releases

Technical protective measures:

Handle substance within a closed system. Provide supplementary ventilation to points where emissions occur. Ensure material transfers are managed using closed or air exhaust systems. Drain or remove substance from equipment before opening or servicing PROC7 Industrial spraying: spraying (automatic/robotic) should be carried out in a ventilated booth with laminar air flow.

Risk management measures:

PROC7 Industrial spraying.
Manual spraying.
Wear respiratory protection in accordance with EN 140 with filter type A or better.

3. Verification of exposure (Environment 1)

Environmental exposure:

Predicted exposures are not expected to exceed the specific risks (listed in chapter 8 of the safety datasheet), when the risk management measures/operational conditions outlined in section 2 are implemented.
Maximum allowable site tonnage (Msafe), based on release following total waste water treatment removal: 9874 kg/day

3. Exposure Verification (Health 1)

Exposure

Predicted workplace exposures are not expected to exceed the DNEL when risk identification measures are implemented.

4. Guidance to check compliance with the exposure scenario (Environment 1)

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Required removal efficiency for waste water can be achieved using on-site/off-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

4. Guidance to check compliance with the exposure scenario (Health 1)

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

USE IN COATINGS - PROFESSIONAL USE

1. Title of the exposure scenario

Process purpose: Includes use in coatings (varnishes, inks, adhesives, etc.), including exposure during application (including material receipt, storage, bulk and semi-bulk preparation and transfer, application by spray, roller, brush and manual spraying or similar processes and film formation) and system cleaning, maintenance and related laboratory activities.
Main sector: SU22 Professional uses

Environment

Environmental Release Categories [ERC]:
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor).
ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor).
ERC8c Widespread use leading to inclusion into/onto article (indoor).
ERC8f Widespread use leading to inclusion into/onto article (outdoor).
Specific Environmental Release Category [SPERC]: ESVOC SPERC 8.3b.v1

Worker

Process categories:
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions.
PROC 3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions.
PROC4 Production of chemicals with the possibility of exposure.
PROC5 Mixing or blending in batch processes
PROC8a Transfer of a substance or preparation (charging/discharging) at non-dedicated facilities.
PROC8a Transfer of substance or mixture (charging/discharging) at non-dedicated facilities.
PROC10 Application with rollers or brushes.
PROC11 Non-industrial spray application.
PROC13 Treatment of articles by dipping and pouring.
PROC15 Use as laboratory reagent.
PROC19 Manual activities with direct contact.
PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles.

2. Other conditions of use affecting exposure (Industrial - Environment 1)

Products features

Form: Liquid, vapor pressure 0.5 - 10 kPa at STP Easily biodegradable.

Quantities used

Annual amount per site: 10 tonnes

Frequency and duration of use

Issue days: 365 days/year

Additional operating conditions relating to environmental exposure

Emission factor - air
Air release rate produced by the process (initial release prior to risk management measures): 0.98
Emission factor - water
Waste water release rate produced by the process (initial release prior to risk management measures): 0.01
Emission factor - soil
Soil release rate produced by the process (initial release prior to risk management measures): 0.01

Environmental factors that are not influenced by risk management

Dilution
Local fresh water dilution factor: 10
Local seawater dilution factor: 100

Risk management measures
Sewage Treatment Plant Data (STP)
Estimated substance removal from waste water via domestic sewage treatment 95.8%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Local technical conditions and measures to reduce and limit discharges and air emissions
Air: Treat air emission to provide a typical removal efficiency of 0%.
Water: The typical on-site purification technique has a removal efficiency of 95.8%.

Conditions and measures for external treatment of waste
Waste treatment: External treatment and disposal of waste should comply with applicable local and/or national regulations.

2. Other conditions of use affecting exposure (Workers - Health 1)

Products features
Form:
Liquid, vapor pressure 0.5 - 10 kPa at STP
Concentration information:
Includes concentrations up to 100%, unless otherwise indicated.

Quantities used
Not applicable.

Frequency and duration of use
Covers daily exposures up to 8 hours (unless stated differently).

Other operational conditions affecting worker exposure
Temperature:
(unless stated differently) assumes use at not more than 20°C above ambient temperature.
Ventilation Rate:
Provide a good standard of controlled ventilation (10 to 15 air changes per hour) or ensure operation is undertaken outdoors. Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and process-level (source) measures to prevent releases
Technical protective measures:
Handle substance within a closed system. Provide supplementary ventilation to points where emissions occur. Ensure material transfers are managed using closed or air exhaust systems. Clean/flush equipment prior to opening or maintenance. Transport on closed roads. PROC11 Non-industrial spray application. Indoor use. Perform in a laminar flow ventilated booth. PROC15 Use as laboratory reagents handle under fume hood or extract air.

Organizational measures to prevent/limit releases, dispersion and exposure
Organizational measures
Avoid activities with an exposure of more than 4 hours.
Hand Application - Finger Paints, Chalks, Stickers:
Limit the amount of substance in the mixture to 5%.

Risk management measures
Wear protective gloves according to EN 374, resistant to solvents.
PROC10 Application with rollers or brushes.
PROC11 Non-industrial spray application. Outdoor use.
PROC13 Treatment of articles by dipping and pouring. Outdoor use.
Wear respiratory protection in accordance with EN 140 with filter type A or better.

3. Verification of exposure (Environment 1)

Environmental exposure
Predicted exposures are not expected to exceed the specific risks (listed in chapter 8 of the safety datasheet), when the risk management measures/operational conditions outlined in section 2 are implemented.
Maximum allowable site tonnage (Msafe), based on release following total waste water treatment removal: 5969 kg/day

3. Exposure Verification (Health 1)

Exposure

Predicted workplace exposures are not expected to exceed the DNEL when risk identification measures are implemented.

4. Guidance to check compliance with the exposure scenario (Environment 1)

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Required removal efficiency for waste water can be achieved using on-site/off-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

4. Guidance to check compliance with the exposure scenario (Health 1)

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

bis-[4-(2,3-epoxipropoxi)phenyl]propane

Substance identification
Chemical Name: bis-[4-(2,3-epoxipropoxi)phenyl]propane
CAS number: 1675-54-3
Date - Version: 29/12/2021 - 1.3

INDUSTRIAL USE - PROFESSIONAL USES: PUBLIC SECTOR (ADMINISTRATION, EDUCATION, ENTERTAINMENT, SERVICES, CRAFTS) (SU22).

1. TITLE SECTION

Exposure scenario name: Industrial use.
Structured short title: Professional uses: public sector (administration, education, entertainment, service, crafts) (SU22).
Substance: 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane
EC number: 216-823-5
Registration number: 01-2119456619-26

ENVIRONMENT

SC 1: Use of non-reactive processing aid at industrial site (no inclusion in article) ERC4

WORKER

SC 2: Use as laboratory reagents PROC15
SC 3: Treatment of articles by dipping and pouring PROC13
SC 4: Tableting, compression, extrusion, pelletising, granulation PROC14
SC 5: General greasing/lubrication in high energy conditions PROC18
SC 6 Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8a

2. CONDITIONS OF USE AFFECTING EXPOSURE

2.1. ENVIRONMENTAL EXPOSURE CONTROL: Use of non-reactive processing aid at industrial site (no inclusion in article) (ERC4)

Product features (article)
Physical form of the product: Liquid

Amount used (or contained in articles), frequency and duration of use/exposure
Daily amount per site: 0,6 ton/day
Annual amount per site: 20 ton/year

Conditions and measures related to sewage treatment plant
STP Type: Municipal wastewater treatment plant.
Learn more about STP: biological elimination.
STP sludge treatment: It may be landfilled when allowed by local regulations.
STP effluent: 2,000 m³/day

Other conditions affecting environmental exposure
Water flow on the receiving surface: 18,000 m³/day
Outdoor / Indoor Indoor use.

2.2. WORKERS EXPOSURE CONTROL: Use as laboratory reagents (PROC15)

Product features (article)
Covers the percentage of substance in the product up to 100%.
Physical form of the product: Liquid.
Temperature: < 40°C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Covers daily exposures up to 8 hours.

Organizational and technical measures and conditions
Assumes a good basic standard of occupational hygiene is implemented.
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Dermal: minimum efficiency of 0%.
Inhalation: minimum yield of 30%.

Conditions and measures for personal protection, hygiene and health assessment
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Use adequate eye protection.
Dermal: minimum efficiency of 95%.
Inhalation: minimum yield of 0%.

Other conditions affecting worker exposure
Outdoor / Indoor Inside.
Temperature: < 40°C

2.3. WORKERS EXPOSURE CONTROL: Treatment of articles by dipping and pouring (PROC13)

Product features (article)
Covers the percentage of substance in the product up to 25%.
Physical form of the product: Liquid.
Vapour pressure: 0,00741 Pa
Temperature: < 70°C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Covers daily exposures up to 8 hours.

Organizational and technical measures and conditions
Assumes a good basic standard of occupational hygiene is implemented.
Provide a good standard of general ventilation (not less than 1 to 3 air changes per hour).
Dermal: minimum efficiency of 0%.
Inhalation: minimum yield of 0%.

Conditions and measures for personal protection, hygiene and health assessment
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Use adequate eye protection.
Dermal: minimum efficiency of 95%.
Inhalation: minimum yield of 0%.
Wear suitable respirator.
Inhalation: minimum yield of 90%.

Other conditions affecting worker exposure
Outdoor / Indoor Inside.
Temperature: < 40°C

2.4. WORKERS EXPOSURE CONTROL: Tableting, compression, extrusion, pelletising, granulation (PROC14)

Product features (article)
Covers the percentage of substance in the product up to 100%.
Physical form of the product: Liquid.
Temperature: < 40°C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Covers daily exposures up to 8 hours.

Organizational and technical measures and conditions
Assumes a good basic standard of occupational hygiene is implemented.
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Dermal: minimum efficiency of 0%.
Inhalation: minimum yield of 30%.

Conditions and measures for personal protection, hygiene and health assessment
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Use adequate eye protection.
Dermal: minimum efficiency of 95%.
Inhalation: minimum yield of 0%.

Other conditions affecting worker exposure
Outdoor / Indoor Inside.
Temperature: < 40°C

2.5. WORKERS EXPOSURE CONTROL: General greasing/lubrication in high energy conditions (PROC18)

Product features (article)
Covers concentrations up to 20%.
Physical form of the product: Liquid.
Temperature: ≤ 800°C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Covers daily exposures up to 8 hours.

Conditions and measures for personal protection, hygiene and health assessment
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Use adequate eye protection.
Dermal: minimum efficiency of 95%.
Inhalation: minimum yield of 0%.
Wear suitable respirator.
Inhalation: minimum yield of 90%.

Other conditions affecting worker exposure
Outdoor / Indoor Outside.
Industrial or professional environments: Professional use.
Temperature: ≤ 800°C

2.6. WORKERS EXPOSURE CONTROL: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities (PROC8a)

Product features (article)
Covers the percentage of substance in the product up to 25%.
Physical form of the product: Liquid.

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Covers daily exposures up to 8 hours.

Conditions and measures for personal protection, hygiene and health assessment
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Use adequate eye protection.
Dermal: minimum efficiency of 95%.
Inhalation: minimum yield of 0%.

Other conditions affecting worker exposure
Outdoor / Indoor Outside.
Industrial or professional environments: Professional use.
Temperature: A process temperature of up to < 40°C is assumed.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1. Environmental release and exposure: Use of non-reactive processing aid at industrial site (no inclusion in article) (ERC4)

Route release	Release rate	Method for estimating for release
water	1.2E-10kg/day	FEICA SPERC 5.1 a.v1
air	3E-4kg/day	FEICA SPERC 5.1 a.v1
Soil	0%	FEICA SPERC 5.1 a.v1

Protection target	Estimated Exposure (EUSES v2.1)	RCR
Fresh water	3.76E-4mg/l	0.063
Fresh water sediments	0.018mg/l	0.053
Sea water	2.95E-5mg/kg dry weight	0.049
Marine sediment	1.42E-3mg/kg dry weight	0.042
Sewage treatment plant	5.68E-11mg/l	< 0.01
Farmland	2.88E-6mg/kg dry weight	< 0.01
Prey for predators (freshwater)	mg/kg wet weight (EUSES v2.1)	< 0.01
Prey for predators (marine water)	9.13E-4mg/kg wet weight	< 0.01
Main predator prey (marine water)	9.13E-4mg/kg wet weight	< 0.01
Prey for Predators (Terrestrial)	1.68E-4mg/kg wet weight	< 0.01
Man through the environment - inhalation	7.65E-9mg/m³	< 0.01
Man through the environment - oral	3E-5mg/kgbw/day	< 0.01
Population exposed through the environment	-	< 0.01

3.2. Worker exposure: Use as laboratory reagents (PROC15)

Exposure routes	Health effect	Exposure indicator	Estimated exposure (ECETOC TRA worker v3)	RCR
inhalation	systemic	Long-term	0.993mg/m³	0.201
inhalation	local	Long-term	0.993mg/m³	-
inhalation	local	Short term	0.993mg/m³	-
dermal	systemic	Long-term	0.172mg/kg bw/day	0.045
dermal	local	Short term	9.92E-3mg/cm²	-
combined routes	-	-	-	0.247

3.3. Worker exposure: Treatment of articles by dipping and pouring (PROC13)

Exposure routes	Health effect	Exposure indicator	Estimated exposure (ECETOC TRA worker v3)	RCR
inhalation	systemic	Long-term	0.085mg/m³	0.017
inhalation	local	Long-term	0.085mg/m³	-
inhalation	local	Short term	0.085mg/m³	-
dermal	systemic	Long-term	0.411mg/kgbw/day	0.548
dermal	local	Short term	0.06mg/cm²	-
combined routes	-	-	-	0.566

1 - bis-[4-(2,3-epoxipropoxi)phenyl]propane - 1

3.4. Worker exposure: Tableting, compression, extrusion, pelletising, granulation (PROC14)

Exposure routes	Health effect	Exposure indicator	Estimated exposure (ECETOC TRA worker v3)	RCR
inhalation	systemic	Long-term	0.993mg/m³	0.201
inhalation	local	Long-term	0.993mg/m³	-
inhalation	local	Short term	0.993mg/m³	-
dermal	systemic	Long-term	0.172mg/kg bw/day	0.229
dermal	local	Short term	0.0025mg/cm²	-
combined routes	-	-	-	0.43

3.5. Worker exposure: General greasing/lubrication in high energy conditions (PROC18)

Exposure routes	Health effect	Exposure indicator	Estimated exposure (ECETOC TRA worker v3)	RCR
inhalation	systemic	Long-term	0.596mg/m³	0.121
inhalation	local	Long-term	0.596mg/m³	-
inhalation	local	Short term	0.596mg/m³	-
dermal	systemic	Long-term	0.411mg/kgbw/day	0.548
dermal	local	Short term	0.03mg/cm²	-
combined routes	-	-	-	0.669

3.6. Worker exposure: Transfer of a substance or a preparation (filling/emptying) at non-dedicated facilities (PROC8a)

Exposure routes	Health effect	Exposure indicator	Estimated exposure (ECETOC TRA worker v3)	RCR
inhalation	systemic	Long-term	0.596mg/m³	0.121
inhalation	local	Long-term	0.596mg/m³	-
inhalation	local	Short term	0.596mg/m³	-
dermal	systemic	Long-term	0.411mg/kgbw/day	0.548
dermal	local	Short term	0.03mg/cm²	-
combined routes	-	-	-	0.669

4. GUIDANCE FOR DOWNSTREAM USERS TO ASSESS WHETHER THEY COMPLY WITH THE LIMITS SET BY THE EXPOSURE SCENARIO

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

PROFESSIONAL USE - PROFESSIONAL USES: PUBLIC SECTOR (ADMINISTRATION, EDUCATION, ENTERTAINMENT, SERVICES, CRAFTS) (SU22).

1. TITLE SECTION

Exposure scenario name: Professional.
Structured short title: Professional uses: public sector (administration, education, entertainment, service, crafts) (SU22).
Substance: 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane
EC number: 216-823-5
Registration number: 01-2119456619-26

ENVIRONMENT

SC 1: Use at an industrial site leading to inclusion in article ERC5

WORKER

SC 2: Industrial spraying PROC7
SC 3 Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8a
SC 4: Transfer of substance or mixture (charging/discharging) from/to vessels/large containers at dedicated facilities. PROC8b
SC 5: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC9
SC 6: Application with rollers or brushes PROC10
SC 7: Non-industrial spraying PROC11

2. CONDITIONS OF USE AFFECTING EXPOSURE

2.1. ENVIRONMENTAL EXPOSURE CONTROL: Use at an industrial site leading to inclusion in article (ERC5)

Product features (article)

Covers a percentage of substance in the product up to 100%.
Physical form of the product: Liquid

Amount used (or contained in articles), frequency and duration of use/exposure

Annual amount per site: 30,000 tons/year
Daily amount per site: 100 tons/day

Conditions and measures related to sewage treatment plant

STP Type: Municipal wastewater treatment plant.
Learn more about STP: biological elimination.
STP sludge treatment: It may be landfilled when allowed by local regulations.
STP effluent: 2,000 m³/day

Other conditions affecting environmental exposure

Water flow on the receiving surface: 18,000 m³/day

2.2. WORKERS EXPOSURE CONTROL: Industrial spraying (PROC7)

Product features (article)

Covers the percentage of substance in the product up to 25%.
Physical form of the product: Liquid.
Vapour pressure: 0,00741 Pa

Amount used (or contained in articles), frequency and duration of use/exposure

Duration: Covers daily exposures up to 8 hours.

Organizational and technical measures and conditions

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

1 - bis-[4-(2,3-epoxipropoxi)phenyl]propane - 1

Conditions and measures for personal protection, hygiene and health assessment
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Use adequate eye protection.
If skin contamination is expected to extend to other parts of the body, these parts should also be protected with impermeable clothing equivalent to that described for the hands.
Wear suitable respirator.
Dermal: minimum efficiency of 99%.
Inhalation: minimum yield of 90%.

Other conditions affecting worker exposure
Outdoor / Indoor Inside.
Industrial or professional environments Professional use.
Temperature: Process temperature up to 70°C is assumed.

2.3. WORKERS EXPOSURE CONTROL: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities (PROC8a)

Product features (article)
Covers the percentage of substance in the product up to 25%.
Physical form of the product: Liquid.
Vapour pressure: 0,00741 Pa
Temperature: 70°C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Covers daily exposures up to 8 hours.

Organizational and technical measures and conditions
Provide a good standard of general ventilation (not less than 1 to 3 air changes per hour).
Dermal: minimum efficiency of 0%.
Inhalation: minimum yield of 0%.

Conditions and measures for personal protection, hygiene and health assessment
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Use adequate eye protection.
Dermal: minimum efficiency of 95%.
Inhalation: minimum yield of 0%.

Other conditions affecting worker exposure
Outdoor / Indoor Inside.
Industrial or professional environments Professional use.
Temperature: 70°C

2.4. WORKERS EXPOSURE CONTROL: Transfer of substance or mixture (charging/discharging) from/to vessels/large containers at dedicated facilities. (PROC8b)

Product features (article)
Covers the percentage of substance in the product up to 100%.
Physical form of the product: Liquid.
Vapour pressure: 0,00741 Pa
Temperature: 70°C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Covers daily exposures up to 8 hours.

Organizational and technical measures and conditions
Assumes a good basic standard of occupational hygiene is implemented.
Provide a good standard of general ventilation (not less than 1 to 3 air changes per hour).

Conditions and measures for personal protection, hygiene and health assessment
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Use adequate eye protection.
Dermal: minimum efficiency of 95%.
Inhalation: minimum yield of 0%.
Wear suitable respirator.
Inhalation: minimum yield of 90%.

Other conditions affecting worker exposure
Outdoor / Indoor Inside.
Temperature: 70°C

2.5. WORKERS EXPOSURE CONTROL: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9)

Product features (article)
Covers concentrations up to 100%.
Physical form of the product: Liquid.
Vapour pressure: 0,00741 Pa
Temperature: < 50°C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Covers daily exposures up to 8 hours.

Organizational and technical measures and conditions
Assumes a good basic standard of occupational hygiene is implemented.
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Dermal: minimum efficiency of 0%.
Inhalation: minimum yield of 30%.

Conditions and measures for personal protection, hygiene and health assessment
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Use adequate eye protection.
Dermal: minimum efficiency of 95%.
Inhalation: minimum yield of 0%.
Wear suitable respirator.
Inhalation: minimum yield of 90%.

Other conditions affecting worker exposure
Outdoor / Indoor Inside.
Temperature: < 50°C

2.6. WORKERS EXPOSURE CONTROL: Application with rollers or brushes (PROC10)

Product features (article)
Covers the percentage of substance in the product up to 25%.
Physical form of the product: Liquid.
Vapour pressure: 0,00741 Pa
Temperature: < 70°C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Covers daily exposures up to 8 hours.

Organizational and technical measures and conditions
Assumes a good basic standard of occupational hygiene is implemented.
Provide a good standard of general ventilation (not less than 1 to 3 air changes per hour).
Local exhaust ventilation.
Dermal: minimum efficiency of 0%.
Inhalation: minimum yield of 90%.

Conditions and measures for personal protection, hygiene and health assessment
Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Use adequate eye protection.
Dermal: minimum efficiency of 99%.
Inhalation: minimum yield of 0%.

Other conditions affecting worker exposure
Outdoor / Indoor Inside.
Temperature: < 70°C.

2.7. WORKERS EXPOSURE CONTROL: Non-industrial spraying (PROC11)

Product features (article)

Covers the percentage of substance in the product up to 25%.
Physical form of the product: Liquid.
Temperature: < 40°C

Amount used (or contained in articles), frequency and duration of use/exposure

Duration: Covers daily exposures up to 8 hours.

Organizational and technical measures and conditions

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Conditions and measures for personal protection, hygiene and health assessment

Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Use adequate eye protection.
If skin contamination is expected to extend to other parts of the body, these parts should also be protected with impermeable clothing equivalent to that described for the hands.
Wear suitable respirator.
Dermal: minimum efficiency of 99%.
Inhalation: minimum yield of 90%.

Other conditions affecting worker exposure

Outdoor / Indoor Inside.
Temperature: < 40°C.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1. Environmental release and exposure: Use at an industrial site leading to inclusion in article (ERC5)

Route release	Release rate	Method for estimating for release
water	0.06 kg/day	FEICA SPERC 8c.1 b.v1
air	0 kg/day	FEICA SPERC 8c.1 b.v1
Soil	0%	FEICA SPERC 8c.1 b.v1

Protection target	Estimated Exposure (EUSES v2.1)	RCR
Fresh water	3.22E-3mg/l	0,536
Fresh water sediments	0.155mg/l	0,454
Sea water	3.14E-4mg/l	0,523
Marine sediment	0.015mg/kg dry weight	0,442
Sewage treatment plant	0.028mg/l	< 0.01
Farmland	0.05mg/kg dry weight	0,779
Prey for predators (freshwater)	0.048mg/kg wet weight	< 0.01
Prey for predators (marine water)	4.53E-3mg/kg wet weight	< 0.01
Main predator prey (marine water)	1.64E-3mg/kg wet weight	< 0.01
Prey for Predators (Terrestrial)	0.056mg/kg wet weight	< 0.01
Man through the environment - inhalation	Concentration in air: 3.45E-11 mg/m³	< 0.01
Man through the environment - oral	1.47E-3mg/kg pc/giorno	< 0.01
Population exposed through the environment	-	< 0.01

3.2. Worker exposure: Industrial spraying (PROC7)

Exposure routes	Health effect	Exposure indicator	Estimated exposure	RCR
inhalation	systemic	Long-term	0.34mg/m³ (ART v1.5)	0.069
inhalation	local	Long-term	0.34mg/m³ (ART v1.5)	-
inhalation	local	Short term	0.78mg/m³ (ART v1.5)	-
dermal	systemic	Long-term	0.257mg/kgbw/day (ECETOC TRA worker v3)	0.343
dermal	local	Short term	0.012mg/cm² (ECETOC TRA worker v3)	-
combined routes	-	-	-	0.412

3.3. Worker exposure: Transfer of a substance or a preparation (filling/emptying) at non-dedicated facilities (PROC8a)

Exposure routes	Health effect	Exposure indicator	Estimated exposure (ECETOC TRA worker v3)	RCR
inhalation	systemic	Long-term	0.851mg/m³	0.173
inhalation	local	Long-term	0.851mg/m³	-
inhalation	local	Short term	0.851mg/m³	-
dermal	systemic	Long-term	0.411mg/kgbw/day	0.548
dermal	local	Short term	0.03mg/cm²	-
combined routes	-	-	-	0.721

3.4. Worker exposure: Transfer of a substance or a mixture (fill/discharge) at dedicated facilities (PROC8b)

Exposure routes	Health effect	Exposure indicator	Estimated exposure (ECETOC TRA worker v3)	RCR
inhalation	systemic	Long-term	0.085mg/m³	0.017
inhalation	local	Long-term	0.085mg/m³	-
inhalation	local	Short term	0.0851mg/m³	-
dermal	systemic	Long-term	0.411mg/kgbw/day	0.548
dermal	local	Short term	0.03mg/cm²	-
combined routes	-	-	-	0.566

3.5. Worker exposure: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) (PROC9)

Exposure routes	Health effect	Exposure indicator	Estimated exposure (ECETOC TRA worker v3)	RCR
inhalation	systemic	Long-term	0.099mg/m³	0.02
inhalation	local	Long-term	0.099mg/m³	-
inhalation	local	Short term	0.993mg/m³	-
dermal	systemic	Long-term	0.343mg/kgbw/day	0.457
dermal	local	Short term	0.05mg/cm²	-
combined routes	-	-	-	0.659

1 - bis-[4-(2,3-epoxipropoxi)phenyl]propane - 1

3.6. Worker exposure: Application with rollers or brushes (PROC10)

Exposure routes	Health effect	Exposure indicator	Estimated exposure (ECETOC TRA worker v3)	RCR
inhalation	systemic	Long-term	0.085mg/m³	0.017
inhalation	local	Long-term	0.085mg/m³	-
inhalation	local	Short term	0.085mg/m³	-
dermal	systemic	Long-term	0.165mg/kgbw/day	0.219
dermal	local	Short term	0.012mg/cm²	-
combined routes	-	-	-	0.237

3.7. Worker exposure: Non-industrial spraying (PROC11)

Exposure routes	Health effect	Exposure indicator	Estimated exposure	RCR
inhalation	systemic	Long-term	0.34mg/m³ (ART v1 .5)	0.069
inhalation	local	Long-term	0.34mg/m³ (ART v1 .5)	-
inhalation	local	Short term	0.78mg/m³ (ART v1 .5)	-
dermal	systemic	Long-term	0.643mg/kgbw/day (ECETOC TRA worker v3)	0.857
dermal	local	Short term	0.03mg/cm² (ECETOC TRA worker v3)	-
combined routes	-	-	-	0.926

4. GUIDANCE FOR DOWNSTREAM USERS TO ASSESS WHETHER THEY COMPLY WITH THE LIMITS SET BY THE EXPOSURE SCENARIO

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

1 - bis-[4-(2,3-epoxipropoxi)phenyl]propane - 1

2-methoxy-1-methylethyl acetate

Substance identification
Chemical Name: 2-methoxy-1-methylethyl acetate
CAS number: 108-65-6
Date - Version: 02/08/2021 18.0

4. USE IN COATINGS. - USE IN INDUSTRIAL PLANTS

Short title of the exposure scenario: Use in coatings. - Use in industrial plants
SU3; ERC4; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: ERC4: Industrial use of processing aids not becoming part of articles.

Operating conditions

Yearly amount used in EU: 63,050,000 kg
Daily amount per site: 105.087 kg
Minimum continuous emission days per year: 300
Emission factor to air: 27%
Emission factor in water: 2%
Emission factor in soil: 0.1%
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Treat air emissions to provide a typical removal efficiency of 70%.
Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the wastewater after Risk Management Measures and treatment in the treatment plant (5): 87.3%
Assumed treatment plant flow: 2,000 m³/day

Measures relative to the waste

Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source

Risk Characterization Ratio (RCR): 0.1338
Risk from environmental exposure is driven by freshwater and marine water.
Maximum safe use amount: 79,180 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC1: Use in closed process, no likelihood of exposure.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 0.04 mg/m³
Risk Characterization Ratio (RCR): 0.0001
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. General exposure. Continuous process (closed system) with sample collection.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. Film formation - Fast drying.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Operation is carried out at elevated temperature (> 20°C above ambient temperature).

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.5
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC3: Use in batch process (synthesis or formulation). Mixing operations. General exposure (closed system).

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 93.85 mg/m³
Risk Characterization Ratio (RCR): 0.25
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC4: Use in batch process (synthesis) where opportunity for exposure arises. Film formation - Air drying.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application. Mixing operations (open systems).

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC7: Industrial spray application. Spraying (automatic/robotic).

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Carry out in a vented booth or extracted enclosure. Effectiveness: 95%.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 46.93 mg/m³
Risk Characterization Ratio (RCR): 0.13
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 2.14 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.04

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC7: Industrial spray application. Spraying (manual).

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Effectiveness: 70%.
Wear suitable gloves compliant with EN ISO 374-1. Effectiveness: 80%.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 281.56 mg/m³
Risk Characterization Ratio (RCR): 0.76
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 8.57 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.17

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Non-dedicated system.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. Material transfers. Dedicated plant.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Material transfers. Drum/batch transfers. Transfer from containers. Dedicated plant.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes. Roller, spatula, jet application.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Wear suitable gloves compliant with EN ISO 374-1. Effectiveness: 80%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 5.49 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.11

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping, pouring, enamelling.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC14: Production of preparations or articles by tableting, compression, extrusion or pelletising. Production or preparation of articles by tableting, compression, extrusion.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 3.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.07

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC15: Use as laboratory reagent. Laboratory activities.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

5. USE IN COATINGS. - USE IN INDUSTRIAL PLANTS

Short title of the exposure scenario: Use in coatings. - Use in industrial plants
SU3; ERC4; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: ERC4: Industrial use of processing aids not becoming part of articles.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 430kg
Minimum continuous emission days per year: 300
Emission factor to air: 80%
Emission factor in water: 10%
Emission factor in soil: 0.1%
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the wastewater after Risk Management Measures and treatment in the treatment plant (5): 87.3%
Assumed treatment plant flow: 2,000 m³/day

Measures relative to the waste

Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source

Risk Characterization Ratio (RCR): 0.029
Risk from environmental exposure is driven by freshwater and marine water.
Maximum safe use amount: 140.104 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC1: Use in closed process, no likelihood of exposure (closed system). General exposure.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure.
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. General exposure. Continuous process (closed system) with sample collection.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 7.51 mg/m³
Risk Characterization Ratio (RCR): 0.02
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. Film formation - Fast drying.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Operation is carried out at elevated temperature (> 20°C above ambient temperature).

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC3: Use in batch process (synthesis or formulation). Mixing operations. General exposure (closed system).

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 18.77 mg/m³
Risk Characterization Ratio (RCR): 0.05
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC4: Use in batch process (synthesis) where opportunity for exposure arises. Film formation - Air drying.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 15.02 mg/m³
Risk Characterization Ratio (RCR): 0.04
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application. Mixing operations (open systems).

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC7: Industrial spray application. Spraying (automatic/robotic). Spraying (manual)

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Wear suitable gloves compliant with EN ISO 374-1. Effectiveness: 80%.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 8.57 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.17

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC7: Industrial spray application. Spraying (manual).

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Wear suitable gloves compliant with EN ISO 374-1.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Non-dedicated system.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. Material transfers. Dedicated plant.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Material transfers. Drum/batch transfers. Transfer from containers. Dedicated plant.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes. Roller, spatula, jet application.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 27.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.54

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping, pouring, enamelling.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC14: Production of preparations or articles by tableting, compression, extrusion or pelletising. Production or preparation of articles by tableting, compression, extrusion.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 3.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.07

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC15: Use as laboratory reagent. Laboratory activities.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 7.51 mg/m³
Risk Characterization Ratio (RCR): 0.02
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

7 USE IN COATINGS. - USE IN INDUSTRIAL PLANTS

Short title of the exposure scenario: Use in coatings. - Use in professional installations
SU22; ERC8a, ERC8d; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: ERC8a: Wide dispersive indoor use of processing aids in open systems.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 433 kg
Minimum continuous emission days per year: 300
Emission factor to air: 80%
Emission factor in water: 10%
Emission factor in soil: 0.1%
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the wastewater after Risk Management Measures and treatment in the treatment plant (5): 87.3%
Assumed treatment plant flow: 2,000 m³/day

Measures relative to the waste

Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source

Risk Characterization Ratio (RCR): 0.029
Risk from environmental exposure is driven by freshwater and marine water.
Maximum safe use amount: 15,141 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: ERC8d: Wide dispersive outdoor use of processing aids in open systems.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 433 kg
Minimum continuous emission days per year: 300
Emission factor to air: 80%
Emission factor in water: 10%
Emission factor in soil: 0.1%
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the wastewater after Risk Management Measures and treatment in the treatment plant (5): 87.3%
Assumed treatment plant flow: 2,000 m³/day

Measures relative to the waste
Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source
Risk Characterization Ratio (RCR): 0.029
Risk from environmental exposure is driven by freshwater and marine water.
Maximum safe use amount: 15,141 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC1: Use in closed process, no likelihood of exposure.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 0.04 mg/m³
Risk Characterization Ratio (RCR): 0.0001
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. Filling/Preparation of equipment required for drums and containers.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure.
The use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. General exposure. Use in confined systems (closed system). Filling/Preparation of equipment required for drums and containers.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Operation is carried out at elevated temperature (> 20°C above ambient temperature).

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC3: Use in batch process (synthesis or formulation). Preparation of material for application

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 93.85 mg/m³
Risk Characterization Ratio (RCR): 0.25
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC4: Use in batch process (synthesis) where opportunity for exposure arises. Film formation - Air drying.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Film formation - Air drying.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure.
The use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%.
Alternatively: Ensure that operations are carried out externally.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 269.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Ensure that operations are carried out externally.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Drum/batch transfers. Non-dedicated system.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. Material transfers. Drum/batch transfers Dedicated plant.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes. Roller, spatula, jet application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%.
Wear suitable gloves compliant with EN ISO 374-1. Effectiveness: 80%
If there is no general ventilation, ensure that operations are carried out outdoors.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 5.49 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.11

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes. Roller, spatula, jet application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Ensure that operations are carried out externally.
Wear suitable gloves compliant with EN ISO 374-1.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application. Spraying (manual).

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Carry out in a vented booth or extracted enclosure. Effectiveness: 80%.
Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 2.14 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.04

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application. Spraying (manual).

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Ensure that operations are carried out externally. Effectiveness: 30%.
Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%.
Wear suitable gloves compliant with EN ISO 374-1. Effectiveness: 80%.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 131.4 mg/m³
Risk Characterization Ratio (RCR): 0.36
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 21.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.42

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping, pouring, enamelling.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%.
Alternatively: Ensure that operations are carried out externally.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping, pouring, enamelling.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Ensure that operations are carried out externally.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC15: Use as laboratory reagent. Laboratory activities.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC19: Manual mixing with direct contact using only personal protective equipment. Hand application - fingerpaints, pastels, adhesives.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%.
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%.
If there is no general ventilation, ensure that operations are carried out outdoors.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 14.14 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.28

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC19: Manual mixing with direct contact using only personal protective equipment. Hand application - fingerpaints, pastels, adhesives.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Ensure that operations are carried out externally.
Wear chemically resistant gloves in combination with “basic” employee training.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

8. USE IN COATINGS. - USE IN INDUSTRIAL PLANTS

Short title of the exposure scenario: Use in coatings. - Use in professional installations
SU22; ERC8a, ERC8d; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: ERC8a: Wide dispersive indoor use of processing aids in open systems.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 433 kg
Minimum continuous emission days per year: 300
Emission factor to air: 80%
Emission factor in water: 10%
Emission factor in soil: 0.1%
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the wastewater after Risk Management Measures and treatment in the treatment plant (5): 87.3%
Assumed treatment plant flow: 2,000 m³/day

Measures relative to the waste

Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source

Risk Characterization Ratio (RCR): 0.029
Risk from environmental exposure is driven by freshwater and marine water.
Maximum safe use amount: 15,141 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: ERC8d: Wide dispersive outdoor use of processing aids in open systems.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 433 kg
Minimum continuous emission days per year: 300
Emission factor to air: 80%
Emission factor in water: 10%
Emission factor in soil: 0.1%
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the wastewater after Risk Management Measures and treatment in the treatment plant (5): 87.3%
Assumed treatment plant flow: 2,000 m³/day

Measures relative to the waste
Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source
Risk Characterization Ratio (RCR): 0.029
Risk from environmental exposure is driven by freshwater and marine water.
Maximum safe use amount: 15,141 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC1: Use in closed process, no likelihood of exposure. General exposure (closed system).

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. Filling/Preparation of equipment required for drums and containers.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. General exposure. Use in confined systems (closed system). Filling/Preparation of equipment required for drums and containers.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Operation is carried out at elevated temperature (> 20°C above ambient temperature).

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 15.02 mg/m³
Risk Characterization Ratio (RCR): 0.4
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC3: Use in batch process (synthesis or formulation). Preparation of material for application

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 18.77 mg/m³
Risk Characterization Ratio (RCR): 0.05
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Film formation - Air drying.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Film formation - Air drying.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Indoor use.
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Ensure that operations are carried out externally.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Drum/batch transfers. Non-dedicated system.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. Material transfers. Drum/batch transfers Dedicated plant.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes. Roller, spatula, jet application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 27.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.54

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes. Roller, spatula, jet application.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Indoor/Outdoor: Outdoor use.
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application. Spraying (manual).

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%.
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%.
If there is no general ventilation, ensure that operations are carried out outdoors.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 10.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.21

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application. Spraying (manual).

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Ensure that operations are carried out externally.
Wear chemically resistant gloves in combination with “basic” employee training.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping, pouring, enamelling.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping, pouring, enamelling.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Indoor use.
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Ensure that operations are carried out externally.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC15: Use as laboratory reagent. Laboratory activities.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 7.51 mg/m³
Risk Characterization Ratio (RCR): 0.02
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC19: Manual mixing with direct contact using only personal protective equipment. Hand application - fingerpaints, pastels, adhesives.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Wear suitable gloves compliant with EN ISO 374-1. Effectiveness: 80%.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 28.29 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.56

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC19: Manual mixing with direct contact using only personal protective equipment. Hand application - fingerpaints, pastels, adhesives.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Outdoor use.
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Wear suitable gloves compliant with EN ISO 374-1.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

Xylene

Identification of the exposure scenario
Product name: Xylene
Reach registration number: 01-2119488216-32-XXXX
CAS number: 1330-20-7
EC number: 215-535-7
Review date: 14/02/2022 rev. 3.0

USE IN COATINGS - INDUSTRIAL USE

1. Title of the exposure scenario

Process purpose: Includes use in coatings (varnishes, inks, adhesives, etc.), including exposure during application (including material receipt, storage, bulk and semi-bulk preparation and transfer, application by spray, roller, manual spraying, dip, flow, fluid layers in production lines and in film formation) and system cleaning, maintenance and related laboratory activities.
Main sector: SU3 Industrial uses

Environment

Environmental Release Categories [ERC]: ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article).
Specific Environmental Release Category [SPERC]: ESVOC SPERC 4.3a.v1

Worker

Process categories:
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions.
PROC 3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions.
PROC4 Production of chemicals with the possibility of exposure.
PROC5 Mixing or blending in batch processes
PROC7 Industrial spraying.
PROC8a Transfer of a substance or preparation (charging/discharging) at non-dedicated facilities.
PROC8a Transfer of substance or mixture (charging/discharging) at non-dedicated facilities.
PROC10 Application with rollers or brushes.
PROC13 Treatment of articles by dipping and pouring.
PROC15 Use as laboratory reagent.
PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles.

2. Other conditions of use affecting exposure (Industrial - Environment 1)

Products features

Form: Liquid, vapor pressure 0.5 - 10 kPa at STP
Easily biodegradable.

Amounts used:

Annual amount per site: 2500 tonnes

Frequency and duration of use

Issue days: 300 days/year

Additional operating conditions relating to environmental exposure

Emission factor - air
Air release rate produced by the process (initial release prior to risk management measures): 0.98
Emission factor - water
Waste water release rate produced by the process (initial release prior to risk management measures): 0.007
Emission factor - soil
Soil release rate produced by the process (initial release prior to risk management measures): 0

Environmental factors that are not influenced by risk management

Dilution

Local fresh water dilution factor: 10
Local seawater dilution factor: 100

Risk management measures

Sewage Treatment Plant Data (STP)

Estimated substance removal from waste water via domestic sewage treatment: 95.8%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Local technical conditions and measures to reduce and limit discharges and air emissions

Air:

Treat air emission to provide a typical removal efficiency of > 90%.

Water:

Avoid releasing the undiluted substance into local waste water or recover it on site. The typical on-site purification technique has a removal efficiency of 95.8%.

Ground:

Soil emission controls are not applicable as there is no direct release to soil.

Conditions and measures for external treatment of waste

Sludge treatment:

Do not spread industrial sludge on natural soils. Sewerage sludge should be burned, stored or regenerated.
Waste treatment:
No waste of the substance is formed during production.

2. Other conditions of use affecting exposure (Workers - Health 1)

Products features

Form:

Liquid, vapor pressure 0.5 - 10 kPa at STP
Concentration information: Includes concentrations up to 100%, unless otherwise indicated.

Quantities used

Not applicable.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other operational conditions affecting worker exposure

Temperature: (unless stated differently) assumes use at not more than 20°C above ambient temperature.
Ventilation Rate: Ensure a sufficient amount of controlled ventilation (10 to 15 air changes per hour). Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and process-level (source) measures to prevent releases

Technical protective measures:

Handle substance within a closed system. Provide supplementary ventilation to points where emissions occur. Ensure material transfers are managed using closed or air exhaust systems. Drain or remove substance from equipment before opening or servicing PROC7 Industrial spraying: spraying (automatic/robotic) should be carried out in a ventilated booth with laminar air flow.

Risk management measures:

PROC7 Industrial spraying.
Manual spraying.
Wear respiratory protection in accordance with EN 140 with filter type A or better.

3. Verification of exposure (Environment 1)

Environmental exposure:

Predicted exposures are not expected to exceed the specific risks (listed in chapter 8 of the safety datasheet), when the risk management measures/operational conditions outlined in section 2 are implemented.
Maximum allowable site tonnage (Msafe), based on release following total waste water treatment removal: 9874 kg/day

3. Exposure Verification (Health 1)

Exposure

Predicted workplace exposures are not expected to exceed the DNEL when risk identification measures are implemented.

4. Guidance to check compliance with the exposure scenario (Environment 1)

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Required removal efficiency for waste water can be achieved using on-site/off-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

4. Guidance to check compliance with the exposure scenario (Health 1)

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

USE IN COATINGS - PROFESSIONAL USE

1. Title of the exposure scenario

Process purpose: Includes use in coatings (varnishes, inks, adhesives, etc.), including exposure during application (including material receipt, storage, bulk and semi-bulk preparation and transfer, application by spray, roller, brush and manual spraying or similar processes and film formation) and system cleaning, maintenance and related laboratory activities.
Main sector: SU22 Professional uses

Environment

Environmental Release Categories [ERC]:
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor).
ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor).
ERC8c Widespread use leading to inclusion into/onto article (indoor).
ERC8f Widespread use leading to inclusion into/onto article (outdoor).
Specific Environmental Release Category [SPERC]: ESVOC SPERC 8.3b.v1

Worker

Process categories:
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions.
PROC 3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions.
PROC4 Production of chemicals with the possibility of exposure.
PROC5 Mixing or blending in batch processes
PROC8a Transfer of a substance or preparation (charging/discharging) at non-dedicated facilities.
PROC8a Transfer of substance or mixture (charging/discharging) at non-dedicated facilities.
PROC10 Application with rollers or brushes.
PROC11 Non-industrial spray application.
PROC13 Treatment of articles by dipping and pouring.
PROC15 Use as laboratory reagent.
PROC19 Manual activities with direct contact.
PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles.

2. Other conditions of use affecting exposure (Industrial - Environment 1)

Products features

Form: Liquid, vapor pressure 0.5 - 10 kPa at STP Easily biodegradable.

Quantities used

Annual amount per site: 10 tonnes

Frequency and duration of use

Issue days: 365 days/year

Additional operating conditions relating to environmental exposure

Emission factor - air
Air release rate produced by the process (initial release prior to risk management measures): 0.98
Emission factor - water
Waste water release rate produced by the process (initial release prior to risk management measures): 0.01
Emission factor - soil
Soil release rate produced by the process (initial release prior to risk management measures): 0.01

Environmental factors that are not influenced by risk management

Dilution
Local fresh water dilution factor: 10
Local seawater dilution factor: 100

Risk management measures
Sewage Treatment Plant Data (STP)
Estimated substance removal from waste water via domestic sewage treatment 95.8%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Local technical conditions and measures to reduce and limit discharges and air emissions
Air: Treat air emission to provide a typical removal efficiency of 0%.
Water: The typical on-site purification technique has a removal efficiency of 95.8%.

Conditions and measures for external treatment of waste
Waste treatment: External treatment and disposal of waste should comply with applicable local and/or national regulations.

2. Other conditions of use affecting exposure (Workers - Health 1)

Products features
Form:
Liquid, vapor pressure 0.5 - 10 kPa at STP
Concentration information:
Includes concentrations up to 100%, unless otherwise indicated.

Quantities used
Not applicable.

Frequency and duration of use
Covers daily exposures up to 8 hours (unless stated differently).

Other operational conditions affecting worker exposure
Temperature:
(unless stated differently) assumes use at not more than 20°C above ambient temperature.
Ventilation Rate:
Provide a good standard of controlled ventilation (10 to 15 air changes per hour) or ensure operation is undertaken outdoors. Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and process-level (source) measures to prevent releases
Technical protective measures:
Handle substance within a closed system. Provide supplementary ventilation to points where emissions occur. Ensure material transfers are managed using closed or air exhaust systems. Clean/flush equipment prior to opening or maintenance. Transport on closed roads. PROC11 Non-industrial spray application. Indoor use. Perform in a laminar flow ventilated booth. PROC15 Use as laboratory reagents handle under fume hood or extract air.

Organizational measures to prevent/limit releases, dispersion and exposure
Organizational measures
Avoid activities with an exposure of more than 4 hours.
Hand Application - Finger Paints, Chalks, Stickers:
Limit the amount of substance in the mixture to 5%.

Risk management measures
Wear protective gloves according to EN 374, resistant to solvents.
PROC10 Application with rollers or brushes.
PROC11 Non-industrial spray application. Outdoor use.
PROC13 Treatment of articles by dipping and pouring. Outdoor use.
Wear respiratory protection in accordance with EN 140 with filter type A or better.

3. Verification of exposure (Environment 1)

Environmental exposure
Predicted exposures are not expected to exceed the specific risks (listed in chapter 8 of the safety datasheet), when the risk management measures/operational conditions outlined in section 2 are implemented.
Maximum allowable site tonnage (Msafe), based on release following total waste water treatment removal: 5969 kg/day

3. Exposure Verification (Health 1)

Exposure

Predicted workplace exposures are not expected to exceed the DNEL when risk identification measures are implemented.

4. Guidance to check compliance with the exposure scenario (Environment 1)

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Required removal efficiency for waste water can be achieved using on-site/off-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

4. Guidance to check compliance with the exposure scenario (Health 1)

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

FASSA EPOXY 400 COMP.B

Varnostni list z dne 15/05/2026 revizija 3

ODDELEK 1: Identifikacija snovi/zmesi in družbe/podjetja

1.1 Identifikator izdelka

Identifikacija pripravka:

Komercialno ime: FASSA EPOXY 400 COMP.B

Komercialna koda: 1224.B

UFI: JXUA-8HQK-830Q-YWR7

1.2 Pomembne identificirane uporabe snovi ali zmesi in odsvetovane uporabe

Priporočena uporaba: Epoksidna smola; Samo za profesionalno uporabo

Odsvetovane uporabe: Ni namenjeno za potrošniško uporabo

1.3 Podrobnosti o dobavitelju varnostnega lista

Dobavitelj FASSA Srl

Via Lazzaris, 3 - 31027 Spresiano (TV) - ITALY

Tel. +39 0422 7222

Fax +39 0422 887509

Odgovorni: laboratorio.spresiano@fassabortolo.it

1.4 Telefonska številka za nujne primere

112 - Center za obveščanje (na voljo 24 ur)

ODDELEK 2: Določitev nevarnosti



2.1 Razvrstitev snovi ali zmesi

Uredba (ES) št. 1272/2008 (CLP)

Acute Tox. 4	Zdravju škodljivo pri zaužitju.
Skin Corr. 1B	Povzroča hude opekline kože in poškodbe oči.
Skin Sens. 1A	Lahko povzroči alergijski odziv kože.
Aquatic Chronic 3	Škodljivo za vodne organizme, z dolgotrajnimi učinki.

Nevarnosti fizikalno-kemijskih lastnosti za zdravje ljudi in za okolje:

Ni drugih tveganj

2.2 Elementi etikete

Uredba (ES) št. 1272/2008 (CLP)

Piktogrami za nevarnost in Opozorilna beseda



Nevarno

Stavki o nevarnosti

H302	Zdravju škodljivo pri zaužitju.
H314	Povzroča hude opekline kože in poškodbe oči.
H317	Lahko povzroči alergijski odziv kože.
H412	Škodljivo za vodne organizme, z dolgotrajnimi učinki.

Previdnostni stavki

P260	Ne vdihavati dima/plina/meglice/hlapov/razpršila
P264	Po uporabi temeljito umiti z vodo.
P280	Nadenite si zaščitne rokavice in zaščitite oči/obraz.
P303+P361+P353	PRI STIKU S KOŽO (ali lasmi): Takoj sleči vsa kontaminirana oblačila. Kožo izprati z vodo ali prho.
P305+P351+P338	PRI STIKU Z OČMI: Previdno izpirati z vodo nekaj minut. Odstranite kontaktne leče, če jih imate in če to lahko storite brez težav. Nadaljujte z izpiranjem.

P310 Takoj pokličite CENTER ZA ZASTRUPITVE/ zdravnika.

Posebne oznake:

EUH071 Jedko za dihalne poti.

Vsebuje:

benzil alkohol

2,2,4(ali 2,4,4)-trimetilheksan-1,6-diamin

m-phenylenebis(methylamine)

3-aminopropiltrietoksisilan

formaldehid, polimerni reakcijski produkti s 4-terc-butilfenol, m-fenilenbis(metilamin) in trimetilheksan-1,6-diamin

Posebne določbe v skladu s Prilogo XVII uredbe REACH in poznejše spremembe:

Nobeden

2.3 Druge nevarnosti

Ni snovi PBT, vPvB ali endokrinih motilcev v koncentraciji > = 0,1%.

Ni drugih tveganj

ODDELEK 3: Sestava/podatki o sestavinah

3.1 Snovi

ni znano

3.2 Zmesi

Identifikacija pripravka: FASSA EPOXY 400 COMP.B

Nevarne sestavine, skladno z Uredbo CLP in njeno razvrstitvijo:

Količina	Ime	Ident. št.	Razvrstitev	Registracijska številka:
≥30 - <50 %	m-phenylenebis(methylamine)	CAS:1477-55-0 EC:216-032-5	Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 3, H412, EUH071 Ocena akutne strupenosti: ATE - Oralno: 500mg/kg tt ATE - Vdihavanje (Prahom/meglice): 1.5mg/l	01-2119480150-50-xxxx
≥10 - <20 %	benzil alkohol	CAS:100-51-6 EC:202-859-9 Index:603-057-00-5	Acute Tox. 4, H302 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Ocena akutne strupenosti: ATE - Oralno: 1200mg/kg tt	01-2119492630-38-xxxx
≥1 - <3 %	formaldehid, polimerni reakcijski produkti s 4-terc-butilfenol, m-fenilenbis(metilamin) in trimetilheksan-1,6-diamin		Skin Corr. 1B, H314; Eye Dam. 1, H318; Skin Sens. 1A, H317; Aquatic Chronic 3, H412	Izvzeti
≥1 - <3 %	fenol, stireniran	CAS:61788-44-1 EC:262-975-0	Aquatic Acute 1, H400; Aquatic Chronic 2, H411	01-2119979575-18-xxxx
≥0.5 - <1 %	2,2,4(ali 2,4,4)-trimetilheksan-1, 6-diamin	CAS:25513-64-8 EC:247-063-2	Acute Tox. 4, H302 Skin Corr. 1A, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Ocena akutne strupenosti: ATE - Oralno: 910mg/kg tt	01-2119560598-25-xxxx
≥0.5 - <1 %	Kristalni silicijev dioksid, kremen (vdihljiva frakcija)	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372	Izvzeti
≥0.5 - <1 %	titanov dioksid	CAS:13463-67-7 EC:236-675-5 Index:022-006-00-2	Carc. 2, H351	01-2119489379-17-xxxx

≥0.1 - <0.3 %	3-aminopropiltrietoksisilan	CAS:919-30-2 EC:213-048-4 Index:612-108-00-0	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Ocena akutne strupenosti: ATE - Oralno: 500mg/kg tt	01-2119480479-24-xxxx
≥0.1 - <0.3 %	2-metoksi-1-metiletil acetat	CAS:108-65-6 EC:203-603-9 Index:607-195-00-7	Flam. Liq. 3, H226; STOT SE 3, H336	01-2119475791-29-xxxx
≥0.1 - <0.3 %	n-butil acetat	CAS:123-86-4 EC:204-658-1 Index:607-025-00-1	Flam. Liq. 3, H226; STOT SE 3, H336, EUH066	01-2119485493-29-xxxx
≥0.1 - <0.3 %	ksilen	CAS:1330-20-7 EC:215-535-7 Index:601-022-00-9	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Aquatic Chronic 3, H412 Ocena akutne strupenosti: ATE - Dermalno: 1100mg/kg tt ATE - Vdihavanje (Hlapi): 11mg/l	01-2119488216-32-xxxx
≥0.1 - <0.3 %	butanon	CAS:78-93-3 EC:201-159-0 Index:606-002-00-3	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	01-2119457290-43-xxxx
≥0.1 - <0.3 %	etilbenzen	CAS:100-41-4 EC:202-849-4 Index:601-023-00-4	Flam. Liq. 2, H225; Acute Tox. 4, H332; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 3, H412	01-2119489370-35-xxxx

ODDELEK 4: Ukrepi za prvo pomoč

4.1 Opis ukrepov za prvo pomoč

V primeru stika s kožo:

Kontaminirana oblačila takoj slecite in jih na varen način odstranite.

TAKOJ SE POSVETUJTE Z ZDRAVNIKOM.

V primeru stika z očmi:

V primeru stika z očmi dovolj dolgo in z odprtimi očesnimi vekami izpirajte z obilo vode, nato poiščite pomoč zdravnika oftalmologa.

Poškodovano oko zaščitite.

V primeru zaužitja:

Ne zaužijte in ne pijte ničesar.

Po zaužitju ne izzivati bruhanja, takoj poiskati zdravniško pomoč in pokazati varnostni list in nalepko.

V primeru vdihavanja:

Prizadeto osebo umaknite na svež zrak in pustite počivati na toplem.

4.2 Najpomembnejši simptomi in učinki, akutni in zapozneli

Simptomi in ucinki so taki, kot je pricakovano glede na nevarnosti, kar je prikazano v 2. razdelku.

4.3 Navedba kakršne koli takojšnje medicinske oskrbe in posebnega zdravljenja

V primeru nesreče ali slabega počutja takoj poiščite zdravniško pomoč (če je mogoče, pokažite navodila za uporabo ali varnostni list).

ODDELEK 5: Protipožarni ukrepi

5.1 Sredstva za gašenje

Ustrezna sredstva za gašenje:

CO_2, gasilni aparat na prah, pena, pršenje z vodo.

Sredstva za gašenje, ki se jih iz varnostnih razlogov ne sme uporabljati:

Vodni curki

5.2 Posebne nevarnosti v zvezi s snovjo ali zmesjo

Pri gorenju nastajajo težki dimni plini.

Ne vdihavati pline, ki nastanejo pri eksploziji in/ali gorenju (ogljikov monoksid in ogljikov dioksid, dušikovi oksidi).

5.3 Nasvet za gasilce

Uporabiti ustrezne dihalne naprave.

Ločeno zberite kontaminirano vodo, uporabljeno za gašenje požara. Ne je izpustiti v kanalizacijo.

Če je to varno izvedljivo, nepoškodovane vsebnike umaknite iz neposredno ogroženega območja.

ODDELEK 6: Ukrepi o nenamernih izpustih

6.1 Osebni varnostni ukrepi, zaščitna oprema in postopki v sili

Za neizučeno osebje:

Nosite osebno varovalno opremo.

Osebe umaknite na varno mesto.

Glejte v oddelku 7 in 8 navedene zaščitne ukrepe.

Za reševalce:

Nosite osebno varovalno opremo.

6.2 Okoljevarstveni ukrepi

Preprečite vstop v tla/podtalnico. Preprečite razlitje v površinske vode ali v kanalizacijo.

V primeru puščanja plina ali razlitja v vodne tokove, tla ali kanalizacijo obvestite pristojne organe.

6.3 Metode in materiali za zadrževanje in čiščenje

Za zbiranje primeren material: inerten vpojni materiali (npr. pesek, vermikulit).

Po pobiranju z vodo izperite območje in prizadete materiale.

Kontaminirano vodo za pranje shranite in odstranite.

6.4 Sklicevanje na druge oddelke

Glejte tudi naslova 8 in 13

ODDELEK 7: Ravnanje in skladiščenje

7.1 Varnostni ukrepi za varno ravnanje

Preprečite stik s kožo in očmi, vdihavanje hlapov in megle.

Prazne vsebnike ne uporabite dokler niso očiščeni.

Pred postopki prenosa se prepričajte, da v vsebnikih ni ostankov nezdružljivih materialov.

Nasveti o splošni higieni dela:

Kontaminirana oblačila se mora pred vstopom v jedilnico zamenjati.

Med delom ne jejte in ne pijte.

Glejte tudi oddelek 8 o priporočeni varovalni opremi.

7.2 Pogoji za varno skladiščenje, vključno z nezdružljivostjo

Posode hranite tesno zaprte na hladnem in dobro prezračevanem mestu proč od virov toplote.

Hranite stran od hrane, pijač in krme.

Inkompaktibilne snovi:

Glejte točko 10.5

Navodila za prostore:

Primerno zračeni prostori.

7.3 Posebne končne uporabe

Priporočila

Glejte točko 1.2

Specifične rešitve za industrijski sektor

Nobena posebna uporaba

ODDELEK 8: Nadzor izpostavljenosti/osebna zaščita

8.1 Parametri nadzora

Mejne vrednosti za poklicno izpostavljenost

m-phenylenebis(methylamine)

CAS: 1477-55-0	Tip OPZ	ACGIH		Kratkotrajna Zgornja meja - 0.018 ppm Opombe: Skin - Eye, skin, and GI irr
	Tip OPZ	MAK	Avstrija	Dolgotrajna 0.1 mg/m3
	Tip OPZ	VLEP	Belgija	Kratkotrajna 0.1 mg/m3
	Tip OPZ	VLEP	Francija	Kratkotrajna 0.1 mg/m3
	Tip OPZ	SUVA	Švicar	Dolgotrajna 0.1 mg/m3

benzil alkohol

CAS: 100-51-6	Tip OPZ	MAK	Nemčija	Dolgotrajna 22 mg/m3 - 5 ppm; Kratkotrajna 44 mg/m3 - 10 ppm Opombe: Inhalable fraction and vapour, Skin
	Tip OPZ	TLV	Bolgarija	Dolgotrajna 5 mg/m3
	Tip OPZ	TLV	Češka	Dolgotrajna 40 mg/m3 - 8.88 ppm; Kratkotrajna 80 mg/m3 - 17.76 ppm
	Tip OPZ	SUVA	Švicar	Dolgotrajna 22 mg/m3 - 5 ppm
	Tip OPZ	AGW	Nemčija	Dolgotrajna 22 mg/m3 - 5 ppm; Kratkotrajna 44 mg/m3 - 10 ppm

				Opombe: Inhalable fraction and vapour
	Tip OPZ	NDS	Poljska	Dolgotrajna 240 mg/m3
	Tip OPZ	MV	Slovenija	Dolgotrajna 22 mg/m3 - 5 ppm; Kratkotrajna 44 mg/m3 - 10 ppm Opombe: Skin
	Tip OPZ	IPRV	Litva	Dolgotrajna 5 mg/m3 Opombe: Skin

Kristalni silicijev dioksid, kremen (vdihljiva frakcija)

CAS: 14808-60-7	Tip OPZ	ACGIH		Dolgotrajna 0.025 mg/m3 Opombe: (R), A2 - Pulm fibrosis, lung cancer
	Tip OPZ	EU		Dolgotrajna 0.1 mg/m3 Opombe: Respirable dust particles
	Tip OPZ	MAK	Avstrija	Dolgotrajna 0.05 mg/m3 Opombe: Respirable fraction
	Tip OPZ	VLEP	Belgija	Dolgotrajna 0.1 mg/m3 Opombe: Respirable dust; Additional indication "C" means that the agent falls within the scope of Title 2 concerning carcinogenic, mutagenic and reprotoxic agents of Book VI of the Codex on well-being at work.
	Tip OPZ	VLEP	Francija	Dolgotrajna 0.1 mg/m3 Opombe: Respirable fraction
	Tip OPZ	VLEP	Italija	Dolgotrajna 0.1 mg/m3 Opombe: Respirable dust particles
	Tip OPZ	VLA	Španija	Dolgotrajna 0.05 mg/m3 Opombe: Respirable fraction
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 0.1 mg/m3 Opombe: Respirable fraction
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 0.075 mg/m3 Opombe: Respirable fraction
	Tip OPZ	SUVA	Švicar	Dolgotrajna 0.15 mg/m3 Opombe: Respirable aerosol
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 0.1 mg/m3
	Tip OPZ	AGW	Nemčija	Dolgotrajna 0.05 mg/m3; Kratkotrajna 0.4 mg/m3 Opombe: Respirable fraction
	Tip OPZ	NDS	Poljska	Dolgotrajna 0.1 mg/m3 Opombe: Respirable fraction
	Tip OPZ	MV	Slovenija	Dolgotrajna 0.15 mg/m3
	Tip OPZ	IPRV	Litva	Dolgotrajna 0.1 mg/m3
	Tip OPZ	NGV/KGV	Švedska	Dolgotrajna 0.1 mg/m3 Opombe: Respirable fraction

titanov dioksid

CAS: 13463-67-7	Tip OPZ	ACGIH		Dolgotrajna 0.2 mg/m3 Opombe: Nanoscale particles - A3 - (R) URT irr, Pneumoconiosis
				Dolgotrajna 2.5 mg/m3 Opombe: Finescale particles - A3 - (R) URT irr, Pneumoconiosis
	Tip OPZ	MAK	Avstrija	Dolgotrajna 5 mg/m3; Kratkotrajna 10 mg/m3 Opombe: Respirable fraction
	Tip OPZ	MAK	Nemčija	Dolgotrajna 0.3 mg/m3; Kratkotrajna 2.4 mg/m3 Opombe: Respirable fraction, except ultrafine particles , Multiplied by the material density
	Tip OPZ	VLEP	Belgija	Dolgotrajna 10 mg/m3
	Tip OPZ	VLEP	Francija	Dolgotrajna 11 mg/m3 Opombe: Inhalable aerosol
	Tip OPZ	VLEP	Romunija	Dolgotrajna 10 mg/m3; Kratkotrajna 15 mg/m3
	Tip OPZ	TLV	Bolgarija	Dolgotrajna 10 mg/m3
	Tip OPZ	VLA	Španija	Dolgotrajna 10 mg/m3

				Opombe: Inhalable fraction
	Tip OPZ	SUVA	Švicar	Dolgotrajna 3 mg/m3 Opombe: Respirable aerosol
	Tip OPZ	WEL	U.K.	Dolgotrajna 10 mg/m3 Opombe: Inhalable fraction Dolgotrajna 4 mg/m3 Opombe: Respirable fraction
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 10 mg/m3 Opombe: Inhalable fraction Dolgotrajna 4 mg/m3 Opombe: Respirable fraction
	Tip OPZ	NDS	Poljska	Dolgotrajna 10 mg/m3 Opombe: Inhalable fraction
	Tip OPZ	IPRV	Litva	Dolgotrajna 5 mg/m3
	Tip OPZ	RV	Latvija	Dolgotrajna 10 mg/m3
	Tip OPZ	NGV/KGV	Švedska	Dolgotrajna 5 mg/m3 Opombe: inhalable aerosol
2-metoksi-1-metiletil acetat				
CAS: 108-65-6	Tip OPZ	EU		Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	MAK	Avstrija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	MAK	Nemčija	Dolgotrajna 270 mg/m3 - 50 ppm; Kratkotrajna 270 mg/m3 - 50 ppm
	Tip OPZ	VLEP	Belgija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air.
	Tip OPZ	VLEP	Francija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	VLEP	Italija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	VLEP	Romunija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm
	Tip OPZ	TLV	Bolgarija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	TLV	Češka	Dolgotrajna 270 mg/m3 - 49.14 ppm; Kratkotrajna 550 mg/m3 - 10.01 ppm Opombe: Skin
	Tip OPZ	VLA	Španija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 275 mg/m3; Kratkotrajna 550 mg/m3
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 550 mg/m3 - 100 ppm
	Tip OPZ	VLE	Portugalska	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	SUVA	Švicar	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 275 mg/m3 - 50 ppm
	Tip OPZ	WEL	U.K.	Dolgotrajna 274 mg/m3 - 50 ppm; Kratkotrajna 548 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	AGW	Nemčija	Dolgotrajna 270 mg/m3 - 50 ppm; Kratkotrajna 270 mg/m3 - 50 ppm
	Tip OPZ	NDS	Poljska	Dolgotrajna 260 mg/m3; Kratkotrajna 520 mg/m3 Opombe: Skin
	Tip OPZ	MV	Slovenija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	IPRV	Litva	Dolgotrajna 250 mg/m3 - 50 ppm; Kratkotrajna 400 mg/m3 - 75 ppm Opombe: Skin

	Tip OPZ	RV	Latvija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm Opombe: Skin
n-butil acetat				
CAS: 123-86-4	Tip OPZ	ACGIH		Dolgotrajna 50 ppm; Kratkotrajna 150 ppm Opombe: Eye and URT irr
	Tip OPZ	EU		Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	MAK	Avstrija	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 480 mg/m3 - 100 ppm
	Tip OPZ	MAK	Nemčija	Dolgotrajna 480 mg/m3 - 100 ppm; Kratkotrajna 960 mg/m3 - 200 ppm
	Tip OPZ	VLEP	Belgija	Dolgotrajna 238 mg/m3 - 50 ppm; Kratkotrajna 712 mg/m3 - 150 ppm Opombe: Butylacetates, all isomers
	Tip OPZ	VLEP	Francija	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	VLEP	Italija	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	VLEP	Romunija	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	TLV	Bolgarija	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	TLV	Češka	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	VLA	Španija	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 241 mg/m3; Kratkotrajna 723 mg/m3
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 241 mg/m3 - 50 ppm; Kratkotrajna 723 mg/m3 - 150 ppm
	Tip OPZ	SUVA	Švicar	Dolgotrajna 240 mg/m3 - 50 ppm; Kratkotrajna 720 mg/m3 - 150 ppm
	Tip OPZ	WEL	U.K.	Dolgotrajna 724 mg/m3 - 150 ppm; Kratkotrajna 966 mg/m3 - 200 ppm
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 724 mg/m3 - 150 ppm; Kratkotrajna 966 mg/m3 - 200 ppm
	Tip OPZ	AGW	Nemčija	Dolgotrajna 300 mg/m3 - 62 ppm; Kratkotrajna 600 mg/m3 - 124 ppm
	Tip OPZ	NDS	Poljska	Dolgotrajna 240 mg/m3; Kratkotrajna 720 mg/m3
	Tip OPZ	MV	Slovenija	Dolgotrajna 300 mg/m3 - 62 ppm; Kratkotrajna 600 mg/m3 - 124 ppm
ksilen				
CAS: 1330-20-7	Tip OPZ	ACGIH		Dolgotrajna 20 ppm Opombe: A4, BEI - URT and eye irr, CNS impair
	Tip OPZ	EU		Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	MAK	Avstrija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm
	Tip OPZ	MAK	Nemčija	Dolgotrajna 220 mg/m3 - 50 ppm; Kratkotrajna 440 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	VLEP	Belgija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air.
	Tip OPZ	VLEP	Francija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	VLEP	Italija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	VLEP	Romunija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm
	Tip OPZ	TLV	Bolgarija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	TLV	Češka	Dolgotrajna 200 mg/m3 - 45.4 ppm; Kratkotrajna 400 mg/m3 - 90.8 ppm Opombe: Skin
	Tip OPZ	VLA	Španija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 221 mg/m3; Kratkotrajna 442 mg/m3 Opombe: Skin
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 210 mg/m3 - 47.5 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	VLE	Portugalska	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	SUVA	Švicar	Dolgotrajna 220 mg/m3 - 50 ppm; Kratkotrajna 440 mg/m3 - 100 ppm
	Tip OPZ	WEL	U.K.	Dolgotrajna 220 mg/m3 - 50 ppm; Kratkotrajna 441 mg/m3 - 100 ppm

				Opombe: Skin
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	AGW	Nemčija	Dolgotrajna 220 mg/m3 - 50 ppm; Kratkotrajna 440 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	NDS	Poljska	Dolgotrajna 100 mg/m3; Kratkotrajna 200 mg/m3 Opombe: Skin
	Tip OPZ	MV	Slovenija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	IPRV	Litva	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
	Tip OPZ	RV	Latvija	Dolgotrajna 221 mg/m3 - 50 ppm; Kratkotrajna 442 mg/m3 - 100 ppm Opombe: Skin
butanon				
CAS: 78-93-3	Tip OPZ	ACGIH		Dolgotrajna 75 ppm; Kratkotrajna 150 ppm Opombe: BEI Skin - URT irr, CNS and PNS impair
	Tip OPZ	EU		Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	MAK	Avstrija	Dolgotrajna 295 mg/m3 - 100 ppm; Kratkotrajna 590 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	MAK	Nemčija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 600 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	VLEP	Belgija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	VLEP	Francija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	VLEP	Italija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	VLEP	Romunija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	TLV	Bolgarija	Dolgotrajna 590 mg/m3; Kratkotrajna 885 mg/m3
	Tip OPZ	TLV	Češka	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	VLA	Španija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 600 mg/m3; Kratkotrajna 900 mg/m3 Opombe: Skin
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 590 mg/m3 - 197 ppm; Kratkotrajna 900 mg/m3 - 300 ppm Opombe: Skin
	Tip OPZ	VLE	Portugalska	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	SUVA	Švicar	Dolgotrajna 590 mg/m3 - 200 ppm; Kratkotrajna 590 mg/m3 - 200 ppm
	Tip OPZ	WEL	U.K.	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 899 mg/m3 - 300 ppm Opombe: Skin
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm
	Tip OPZ	AGW	Nemčija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 600 mg/m3 - 200 ppm Opombe: Skin 15
	Tip OPZ	NDS	Poljska	Dolgotrajna 450 mg/m3; Kratkotrajna 900 mg/m3 Opombe: Skin
	Tip OPZ	MV	Slovenija	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3 - 300 ppm Opombe: Skin
	Tip OPZ	IPRV	Litva	Dolgotrajna 600 mg/m3 - 200 ppm; Kratkotrajna 900 mg/m3
etilbenzen				
CAS: 100-41-4	Tip OPZ	ACGIH		Dolgotrajna 20 ppm Opombe: A3, BEI - URT irr, kidney dam (nephropathy), cochlear impair
	Tip OPZ	EU		Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
	Tip OPZ	MAK	Avstrija	Dolgotrajna 440 mg/m3 - 100 ppm; Kratkotrajna 880 mg/m3 - 200 ppm
	Tip OPZ	MAK	Nemčija	Dolgotrajna 88 mg/m3 - 20 ppm; Kratkotrajna 176 mg/m3 - 40 ppm Opombe: Skin
	Tip OPZ	VLEP	Belgija	Dolgotrajna 87 mg/m3 - 20 ppm; Kratkotrajna 551 mg/m3 - 125 ppm

			Opombe: Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air.
Tip OPZ	VLEP	Francija	Dolgotrajna 88.4 mg/m3 - 20 ppm; Kratkotrajna 442 mg/m3 - 100 ppm
Tip OPZ	VLEP	Italija	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm
Tip OPZ	VLEP	Romunija	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm
Tip OPZ	TLV	Češka	Dolgotrajna 200 mg/m3 - 45.4 ppm; Kratkotrajna 500 mg/m3 - 113.5 ppm Opombe: Skin
Tip OPZ	VLA	Španija	Dolgotrajna 441 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
Tip OPZ	ÁK	Madžarska	Dolgotrajna 442 mg/m3; Kratkotrajna 884 mg/m3
Tip OPZ	MAC	Nizozemska	Dolgotrajna 215 mg/m3; Kratkotrajna 430 mg/m3
Tip OPZ	VLE	Portugalska	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
Tip OPZ	SUVA	Švicar	Dolgotrajna 435 mg/m3 - 100 ppm; Kratkotrajna 435 mg/m3 - 100 ppm
Tip OPZ	WEL	U.K.	Dolgotrajna 441 mg/m3 - 100 ppm; Kratkotrajna 552 mg/m3 - 125 ppm
Tip OPZ	GVI	Hrvaška	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin
Tip OPZ	AGW	Nemčija	Dolgotrajna 88 mg/m3 - 20 ppm; Kratkotrajna 176 mg/m3 - 40 ppm Opombe: Skin
Tip OPZ	NDS	Poljska	Dolgotrajna 200 mg/m3; Kratkotrajna 400 mg/m3
Tip OPZ	MV	Slovenija	Dolgotrajna 442 mg/m3 - 100 ppm; Kratkotrajna 884 mg/m3 - 200 ppm Opombe: Skin

Mejna vrednost izpostavljenosti po PNEC

m-phenylenebis(methylamine)

CAS: 1477-55-0
- Način izpostavitve: Morska voda; PNEC Omejite: 0.009 mg/l
- Način izpostavitve: Sladka voda; PNEC Omejite: 0.094 mg/l
- Način izpostavitve: Morska voda; PNEC Omejite: 0.043 mg/kg
- Način izpostavitve: Sladka voda; PNEC Omejite: 0.43 mg/kg
- Način izpostavitve: Tla (kmetijska); PNEC Omejite: 0.045 mg/kg
- Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 10 mg/l

benzil alkohol

CAS: 100-51-6
- Način izpostavitve: Sladka voda; PNEC Omejite: 1 mg/l
- Način izpostavitve: Morska voda; PNEC Omejite: 0.1 mg/l
- Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 39 mg/l
- Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 5.27 mg/kg
- Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.527 mg/kg
- Način izpostavitve: Tla (kmetijska); PNEC Omejite: 0.456 mg/kg

fenol, stireniran

CAS: 61788-44-1
- Način izpostavitve: Sladka voda; PNEC Omejite: 0.004 mg/l
- Način izpostavitve: Morska voda; PNEC Omejite: 0.4 µg/l
- Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 36.2 mg/l
- Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 0.248 mg/kg
- Način izpostavitve: Morski sedimenti; PNEC Omejite: 24.8 µg/kg
- Način izpostavitve: Tla (kmetijska); PNEC Omejite: 47.3 µg/kg

2,2,4(ali 2,4,4)-trimetilheksan-1,6-diamin

CAS: 25513-64-8
- Način izpostavitve: Morska voda; PNEC Omejite: 0.01 mg/l
- Način izpostavitve: Sladka voda; PNEC Omejite: 0.102 mg/l
- Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 72 mg/l
- Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 0.622 mg/kg
- Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.062 mg/kg
- Način izpostavitve: Tla (kmetijska); PNEC Omejite: 10 mg/kg

3-aminopropiltrietoksisilan

CAS: 919-30-2 Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 1.3 mg/l

2-metoksi-1-metiletil acetat

CAS: 108-65-6 Način izpostavitve: Sladka voda; PNEC Omejite: 0.635 mg/l
Način izpostavitve: Morska voda; PNEC Omejite: 0.064 mg/l
Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 100 mg/l
Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 3.29 mg/kg
Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.329 mg/kg
Način izpostavitve: Tla (kmetijska); PNEC Omejite: 0.29 mg/kg

n-butil acetat

CAS: 123-86-4 Način izpostavitve: Morska voda; PNEC Omejite: 0.018 mg/l
Način izpostavitve: Sladka voda; PNEC Omejite: 0.18 mg/l
Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.098 mg/kg
Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 0.981 mg/kg
Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 35.6 mg/l
Način izpostavitve: Tla (kmetijska); PNEC Omejite: 0.09 mg/kg

ksilen

CAS: 1330-20-7 Način izpostavitve: Morska voda; PNEC Omejite: 0.327 mg/l
Način izpostavitve: Sladka voda; PNEC Omejite: 0.327 mg/l
Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 6.58 mg/l
Način izpostavitve: Morski sedimenti; PNEC Omejite: 12.46 mg/kg
Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 12.46 mg/kg
Način izpostavitve: Tla (kmetijska); PNEC Omejite: 2.31 mg/kg

butanon

CAS: 78-93-3 Način izpostavitve: Sladka voda; PNEC Omejite: 55.8 mg/l
Način izpostavitve: Morska voda; PNEC Omejite: 55.8 mg/l
Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 284.74 mg/kg
Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 709 mg/l
Način izpostavitve: Prehranska veriga; PNEC Omejite: 1000 mg/kg
Način izpostavitve: Tla (kmetijska); PNEC Omejite: 22.5 mg/kg

etilbenzen

CAS: 100-41-4 Način izpostavitve: Sladka voda; PNEC Omejite: 0.1 mg/l
Način izpostavitve: Morska voda; PNEC Omejite: 0.01 mg/l
Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 9.6 mg/l
Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 13.7 mg/kg
Način izpostavitve: Morski sedimenti; PNEC Omejite: 1.37 mg/kg
Način izpostavitve: Tla (kmetijska); PNEC Omejite: 2.68 mg/kg

Izpeljane vrednosti brez učinka. (DNEL)

m-phenylenebis(methylamine)

CAS: 1477-55-0 Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 0.33 mg/kg

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, lokalni učinek
Strokovni delavec: 0.2 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 1.2 mg/m3

benzil alkohol

CAS: 100-51-6 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Strokovni delavec: 110 mg/m3; Uporabnik: 27 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 22 mg/m3; Uporabnik: 5.4 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Strokovni delavec: 40 mg/kg; Uporabnik: 20 mg/kg

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 8 mg/kg; Uporabnik: 4 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Uporabnik: 20 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 4 mg/kg

fenol, stireniran

CAS: 61788-44-1 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 7.4 mg/m3; Uporabnik: 1.31 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 2.1 mg/kg; Uporabnik: 0.75 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 0.75 mg/kg

2,2,4(ali 2,4,4)-trimetilheksan-1,6-diamin

CAS: 25513-64-8 Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 0.05 mg/kg

3-aminopropiltrietoksisilan

CAS: 919-30-2 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 14 mg/m3; Uporabnik: 3.5 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 2 mg/kg; Uporabnik: 1 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 1 mg/kg

2-metoksi-1-metiletil acetat

CAS: 108-65-6 Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
delavec: 796 mg/kg; Uporabnik: 320 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 36 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Uporabnik: 500 mg/kg

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
delavec: 275 mg/m3; Uporabnik: 33 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek
delavec: 550 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, lokalni učinek
Uporabnik: 33 mg/m3

n-butil acetat

CAS: 123-86-4 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
delavec: 300 mg/m3; Uporabnik: 35.7 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
delavec: 600 mg/m3; Uporabnik: 300 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, lokalni učinek
delavec: 300 mg/m3; Uporabnik: 35.7 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek
delavec: 600 mg/m3; Uporabnik: 300 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
delavec: 11 mg/kg; Uporabnik: 6 mg/kg

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
delavec: 11 mg/kg; Uporabnik: 6 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Uporabnik: 2 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 2 mg/kg

ksilen

CAS: 1330-20-7 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 221 mg/m3; Uporabnik: 65.3 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Strokovni delavec: 442 mg/m3; Uporabnik: 260 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek
Strokovni delavec: 442 mg/m3; Uporabnik: 260 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, lokalni učinek
Strokovni delavec: 221 mg/m3; Uporabnik: 65.3 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 212 mg/kg; Uporabnik: 125 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 12.5 mg/kg

butanon

CAS: 78-93-3 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 600 mg/m3; Uporabnik: 106 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 1161 mg/kg; Uporabnik: 412 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 31 mg/kg

etilbenzen

CAS: 100-41-4 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 77 mg/m3; Uporabnik: 15 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek
Strokovni delavec: 293 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 180 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 1.6 mg/kg

8.2 Nadzor izpostavljenosti

Poskrbite za ustrezno prezračevanje. Kadar je to izvedljivo, je to mogoče doseči z uporabo nadomestnega prezračevanja in dobrim splošnim vsesavanjem.

Zaščita oči:

Očala s stranskimi varovali (EN 16321).

Zaščita kože:

Uporabljajte oblačila, primerna za popolno zaščito kože glede na dejavnost in izpostavljenost (EN 14605/EN 13982), npr. delovni kombinezon, predpasnik, zaščitna obutev, primerna oblačila.

Zaščita rok:

Ni materiala ali kombinacije materialov za rokavice, ki bi lahko zagotovili neomejeno odpornost na katero koli kombinacijo kemikalij ali proizvodov.

Za daljše ali večkratno rokovanje uporabite rokavice, odporne na kemikalije.

Ustrezne rokavice tipa (EN 374/EN 16523); FKM (Fluórkaučuk): debelina >= 0.4 mm; permeacijski čas >= 480 min. NBR (Nitrilkaučuk): debelina >= 0.4 mm; permeacijski čas >= 480 min

Izbira primernih rokavic ni odvisna samo od materiala, temveč tudi od drugih kakovostnih lastnosti, ki se razlikujejo od enega do drugega proizvajalca, in od načinov ter časov uporabe mešanice.

Zaščita dihalnih poti:

Če so delavci izpostavljeni koncentracijam nad mejnimi vrednostmi izpostavljenosti, morajo uporabljati primerne, certificirane dihalne aparate.

Kombinirana filtrirna naprava (EN 14387): maska s filtrom A-P2.

Nadzor izpostavljenosti okolja:

Glejte točko 6.2

Higienski in tehnični ukrepi

Glejte poglavje 7.

ODDELEK 9: Fizikalne in kemijske lastnosti

9.1 Podatki o osnovnih fizikalnih in kemijskih lastnostih

fizično stanje: Tekoče

Izgled: Tekoče
Barva: bel
Vonj: značilnost
Tališče/ledišče: N.D.
Vrelišče ali začetno vrelišče in območje vrelišča: N.D.
Vnetljivost: ni znano
Spodnja in zgornja meja eksplozivnosti: N.D.
Plamenišče: > 93°C
Temperatura samovžiga: N.D.
Temperatura razgradnje: ni znano
pH: >=10.50<=11.50 (Interna metoda)
Kinematična viskoznost: ni znano
Topnost v vodi: Rahlo topno
Topnost v olju: ni znano
Porazdelitveni koeficient n-oktanol/voda (logaritemska vrednost): ni znano
Parni tlak: N.D.
Gostota in/ali relativna gostota: 1.51 kg/l (Interna metoda)
Relativna parna gostota: N.D. ni znano
Lastnosti delcev:
Velikost delcev: ni znano

9.2 Drugi podatki

Eksplozivne lastnosti: ni znano (Notranja evalvacija)
Oksidativne lastnosti: ni znano (Notranja evalvacija)

ODDELEK 10: Obstojnost in reaktivnost

10.1 Reaktivnost

Stabilen v normalnih pogojih

10.2 Kemijska stabilnost

Stabilen v normalnih pogojih

10.3 Možnost poteka nevarnih reakcij

V stiku z močnimi oksidatorji se lahko vname.
Zaradi toplote ali v primeru požara se lahko sprostijo ogljikovi oksidi in hlapi, ki lahko škodujejo zdravju.

10.4 Pogoji, ki se jim je treba izogniti

Izogibajte se bližine toplotnih virov.

10.5 Nezdružljivi materiali

Močni oksidanti, močni reduktorji, alifatski in aromatski amini.
Glejte točko 10.3

10.6 Nevarni produkti razgradnje

V primeru pravilnega skladiščenja in ravnanja ne pride do razvoja nevarnih produktov razgradnje.
Glejte točko 5.2

ODDELEK 11: Toksikološki podatki

11.1 Podatki o razredih nevarnosti, kakor so opredeljeni v Uredbi (ES) št. 1272/2008

Toksikološki podatki izdelka:

a) akutna strupenost	Proizvod je razvrščen: Acute Tox. 4(H302)
b) jedkost za kožo/draženje kože	Proizvod je razvrščen: Skin Corr. 1B(H314)
c) resne okvare oči/draženje	Ni klasificirano
	Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.
d) preobčutljivost pri vdihavanju in preobčutljivost kože	Proizvod je razvrščen: Skin Sens. 1A(H317)
e) mutagenost za zarodne celice	Ni klasificirano
	Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.
f) rakotvornost	Ni klasificirano
	Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.
g) strupenost za razmnoževanje	Ni klasificirano
	Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.
h) STOT - enkratna izpostavljenost	Ni klasificirano
	Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.
i) STOT - ponavljajoča se	Ni klasificirano

izpostavljenost

Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.

j) nevarnost pri vdihavanju Ni klasificirano

Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.

Toksikološki podatki glavnih snovi, ki jih najdemo v izdelku:

m-phenylenebis(methylamine)

CAS: 1477-55-0 a) akutna strupenost ATE - Oralno: 500 mg/kg tt
ATE - Vdihavanje (Prahom/meglice): 1.5 mg/l
LD50 Koža Podgana > 3100 mg/kg
LD50 Oralno Podgana 930 mg/kg
LC50 Vdihavanje aerosola Podgana 1.34 mg/l 4h

benzil alkohol

CAS: 100-51-6 a) akutna strupenost ATE - Oralno: 1200 mg/kg tt
LD50 Oralno Podgana 1620 mg/kg

fenol, stireniran

CAS: 61788-44-1 a) akutna strupenost LD50 Oralno Podgana > 2000 mg/kg
LD50 Koža Podgana > 2000 mg/kg

2,2,4(ali 2,4,4)-trimetilheksan-1,6-diamin

CAS: 25513-64-8 a) akutna strupenost ATE - Oralno: 910 mg/kg tt

titanov dioksid

CAS: 13463-67-7 a) akutna strupenost LD50 Oralno Podgana > 5000 mg/kg
LC50 Vdihavanje prahu Podgana > 6.82 mg/l 4h

3-aminopropiltrietoksisilan

CAS: 919-30-2 a) akutna strupenost ATE - Oralno: 500 mg/kg tt
LD50 Oralno Podgana 1490 mg/kg
LD50 Koža Zajec 4075 mg/kg

2-metoksi-1-metiletil acetat

CAS: 108-65-6 a) akutna strupenost LD50 Oralno Podgana > 5000 mg/kg
LD50 Koža Zajec > 5000 mg/kg
LC0 Vdihavanje hlapov Podgana > 4345 ppm 6h

n-butil acetat

CAS: 123-86-4 a) akutna strupenost LD50 Oralno Podgana 10760 mg/kg
LD50 Koža Zajec 14112 mg/kg
LC50 Vdihavanje hlapov Podgana > 21.1 mg/l 4h

ksilen

CAS: 1330-20-7 a) akutna strupenost ATE - Dermalno: 1100 mg/kg tt
ATE - Vdihavanje (Hlapi): 11 mg/l
LD50 Oralno Podgana 3523 mg/kg

butanon

CAS: 78-93-3 a) akutna strupenost LD50 Oralno Podgana > 2193 mg/kg
LD50 Koža Zajec > 5000 mg/kg

etilbenzen

CAS: 100-41-4 a) akutna strupenost LD50 Oralno Podgana 3500 mg/kg
LD50 Koža Zajec 15400 mg/kg
LC50 Vdihavanje Podgana 17629 mg/m3 4h

11.2 Podatki o drugih nevarnostih

Lastnosti endokrinih motilcev:

Ni endokrinih motilcev v koncentraciji > = 0,1%.

ODDELEK 12: Ekološki podatki

Uporabljajte v skladu z dobrimi delovnimi navadami, izogibajte se odlaganju izdelka v okolju.

12.1 Strupenost

Ekotoksikološki podatki:

Škodljivo za vodne organizme, z dolgotrajnimi učinki.

Ekotoksikoloških lastnosti izdelka

Proizvod je razvrščen: Aquatic Chronic 3(H412)

Seznam sestavin z ekotoksikološkimi lastnostmi

m-phenylenebis(methylamine)

CAS: 1477-55-0
- a) akutna strupenost za vodno okolje: LC50 Riba 87.6 mg/l 96h
- a) akutna strupenost za vodno okolje: EC50 Alge 20.3 mg/l 72h
- a) akutna strupenost za vodno okolje: EC50 Vodna bolha 15.2 mg/l 48h
- b) kronična strupenost za vodno okolje: NOEC Vodna bolha 4.7 mg/l 21d
- b) kronična strupenost za vodno okolje: NOEC Alge 10.5 mg/l 72h

benzil alkohol

CAS: 100-51-6
- a) akutna strupenost za vodno okolje: LC50 Riba 460 mg/l 96h
- a) akutna strupenost za vodno okolje: EC50 Vodna bolha 230 mg/l 48h
- a) akutna strupenost za vodno okolje: EC50 Alge 770 mg/l 72h
- b) kronična strupenost za vodno okolje: NOEC Vodna bolha 51 mg/l 21d
- b) kronična strupenost za vodno okolje: NOEC Alge 310 mg/l 72h

fenol, stireniran

CAS: 61788-44-1
- a) akutna strupenost za vodno okolje: LC50 Riba 5.6 mg/l 96h
- a) akutna strupenost za vodno okolje: EC50 Vodna bolha 4.6 mg/l 48h
- a) akutna strupenost za vodno okolje: EC50 Alge 1.35 mg/l 72h
- b) kronična strupenost za vodno okolje: NOEC Riba 61.8 µg/l
- b) kronična strupenost za vodno okolje: NOEC Vodna bolha 0.2 mg/l
- b) kronična strupenost za vodno okolje: NOEC Alge 0.42 mg/l

2,2,4(ali 2,4,4)-trimetilheksan-1,6-diamin

CAS: 25513-64-8
- a) akutna strupenost za vodno okolje: LC50 Riba 174 mg/l 48h
- a) akutna strupenost za vodno okolje: EC50 Vodna bolha 31.5 mg/l 24h
- a) akutna strupenost za vodno okolje: EC50 Alge 43.5 mg/l 72h

titanov dioksid

CAS: 13463-67-7
- a) akutna strupenost za vodno okolje: LC50 Riba > 1000 mg/l 96h
- a) akutna strupenost za vodno okolje: EC50 Vodna bolha > 1000 mg/l 48h
- a) akutna strupenost za vodno okolje: EC50 Alge 61 mg/l 72h

3-aminopropiltrietoksisilan

CAS: 919-30-2
- a) akutna strupenost za vodno okolje: LC50 Riba > 934 mg/l 96h
- a) akutna strupenost za vodno okolje: EC50 Vodna bolha 331 mg/l 48h
- a) akutna strupenost za vodno okolje: EC50 Alge 603 mg/l 72h

2-metoksi-1-metiletil acetat

CAS: 108-65-6
- a) akutna strupenost za vodno okolje: LC50 Riba 134 mg/l 96h
- a) akutna strupenost za vodno okolje: EC50 Vodna bolha 408 mg/l 48h
- a) akutna strupenost za vodno okolje: EC50 Alge > 1000 mg/l 96h
- b) kronična strupenost za vodno okolje: NOEC Riba 47.5 mg/l - 14 d

n-butil acetat

CAS: 123-86-4
- a) akutna strupenost za vodno okolje: LC50 Riba 18 mg/l 96h
- a) akutna strupenost za vodno okolje: EC50 Vodna bolha 44 mg/l 48h
- a) akutna strupenost za vodno okolje: EC50 Alge 675 mg/l 72h
- b) kronična strupenost za vodno okolje: NOEC Vodna bolha 23 mg/l - 21d

butanon

CAS: 78-93-3
- a) akutna strupenost za vodno okolje: LC50 Riba 2973 mg/l 96h
- a) akutna strupenost za vodno okolje: EC50 Vodna bolha 308 mg/l 48h
- a) akutna strupenost za vodno okolje: EC50 Alge 1229 mg/l 96h

etilbenzen

CAS: 100-41-4 a) akutna strupenost za vodno okolje: LC50 Riba 4.2 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha 1.8 mg/l 48h

a) akutna strupenost za vodno okolje: EC50 Alge 3.6 mg/l 96h

b) kronična strupenost za vodno okolje: NOEC Vodna bolha 1 mg/l - 7d

12.2 Obstojnost in razgradljivost

m-phenylenebis(methylamine)

CAS: 1477-55-0 Ni hitro razgradljivo

benzil alkohol

CAS: 100-51-6 Hitro razgradljivo

fenol, stireniran

CAS: 61788-44-1 Ni hitro razgradljivo

2,2,4(ali 2,4,4)-trimetilheksan-1,6-diamin

CAS: 25513-64-8 Ni hitro razgradljivo

3-aminopropiltrietoksisilan

CAS: 919-30-2 Ni hitro razgradljivo

2-metoksi-1-metiletil acetat

CAS: 108-65-6 Hitro razgradljivo

n-butil acetat

CAS: 123-86-4 Hitro razgradljivo

ksilen

CAS: 1330-20-7 Hitro razgradljivo

butanon

CAS: 78-93-3 Hitro razgradljivo

etilbenzen

CAS: 100-41-4 Hitro razgradljivo

12.3 Zmožnost kopičenja v organizmih

2,2,4(ali 2,4,4)-trimetilheksan-1,6-diamin

CAS: 25513-64-8 Se ne kopiči v organizmih

titanov dioksid

CAS: 13463-67-7 Se ne kopiči v organizmih

3-aminopropiltrietoksisilan

CAS: 919-30-2 Se ne kopiči v organizmih

ksilen

CAS: 1330-20-7 Se ne kopiči v organizmih

12.4 Mobilnost v tleh

2,2,4(ali 2,4,4)-trimetilheksan-1,6-diamin

CAS: 25513-64-8 Testiranje: Log Koc; Vrednost: 1.400

titanov dioksid

CAS: 13463-67-7 Ni mobilno

3-aminopropiltrietoksisilan

CAS: 919-30-2 Testiranje: Log Koc; Vrednost: -0.600

n-butil acetat

CAS: 123-86-4 Testiranje: Log Koc; Vrednost: 1.300

ksilen

CAS: 1330-20-7 Testiranje: Log Koc; Vrednost: 2.730

12.5 Rezultati ocene PBT in vPvB

Na podlagi razpoložljivih podatkov, preparat ne vsebuje snovi PBT/vPvB v procentu ≥ 0.1%.

12.6 Lastnosti endokrinih motilcev

Ni endokrinih motilcev v koncentraciji > = 0,1%.

12.7 Drugi škodljivi učinki

ni znano

ODDELEK 13: Odstranjevanje

13.1 Metode ravnanja z odpadki

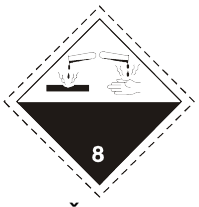
Če je mogoče, predelajte. Pošljite v usposobljena odlagališča ali v zažig pod kontroliranimi pogoji. Ravnajte se po lokalnih in državnih predpisih.

Ne dopustite, da pride v kanalizacijo ali vodne poti.

Odstraniti posode, ki jih kontaminira izdelka v skladu z lokalnimi ali nacionalnimi predpisi.

Ko izdelku poteče življenjska doba, ga odstranite v skladu z veljavno zakonodajo.

ODDELEK 14: Podatki o prevozu



14.1 Številka ZN in številka ID

2735

14.2 Pravilno odpremno ime ZN

ADR-uradno ime blaga: TEKOČI AMINI, JEDKI, N.D.R. (formaldehid, polimerni reakcijski produkti s 4-terc-butilfenol, m-fenilenbis(metilamin) in trimetilheksan-1,6-diamin)

IATA-uradno ime blaga: AMINES, LIQUID, CORROSIVE, N.O.S. POLYAMINES, LIQUID, CORROSIVE, N.O.S. (formaldehid, polimerni reakcijski produkti s 4-terc-butilfenol, m-fenilenbis(metilamin) in trimetilheksan-1,6-diamin)

IMDG-uradno ime blaga: AMINES, LIQUID, CORROSIVE, N.O.S. POLYAMINES, LIQUID, CORROSIVE, N.O.S. (formaldehid, polimerni reakcijski produkti s 4-terc-butilfenol, m-fenilenbis(metilamin) in trimetilheksan-1,6-diamin)

14.3 Razredi nevarnosti prevoza

ADR-Razred: 8

IATA-razred: 8

IMDG-razred: 8

14.4 Skupina embalaže

ADR-embalažna skupina: II

IATA-embalažna skupina: II

IMDG-embalažna skupina: II

14.5 Nevarnosti za okolje

Onesnaževalec morja: Ne

Onesnažuje okolje po: Ne

IMDG-EMS: F-A, S-B

14.6 Posebni previdnostni ukrepi za uporabnika

Cestni in železniški transport (ADR-RID):

ADR-nalepka nevarnosti: 8

ADR - Identifikacijska številka nevarnosti: 80

ADR-posebni ukrepi: 274

ADR-Pravilnik o cestnem prevozu nevarnega blaga:

Zračni transport (IATA):

IATA-potniška letala: 851

IATA-tovorna letala: 855

IATA-nalepka: 8

IATA-dodatne nevarnosti: -

IATA-Erg: 8L

IATA-posebni ukrepi: A3 A803

Morski transport (IMDG):

IMDG-Zlaganje in ravnanje: Category A

IMDG-Segregacija: SG35 SGG18

IMDG-dodatne nevarnosti: -

IMDG-posebni ukrepi: 274

14.7 Pomorski prevoz v razsutem stanju v skladu z instrumenti IMO

ni znano

ODDELEK 15: Zakonsko predpisani podatki

15.1 Predpisi/zakonodaja o zdravju, varnosti in okolju, specifični za snov ali zmes

Dir. 98/24/ES (Varovanje delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu)
Dir. 2000/39/ES (mejne vrednosti za poklicno izpostavljenost)
Direktiva 2010/75/EU
Uredba (ES) št. 1907/2006 (REACH)
Uredba (ES) št. 1272/2008 (CLP)
Uredba (ES) št. 790/2009 (1. ATP CLP) in (EU) št. 758/2013
Uredba (EU) 2020/878
Uredba (EU) št. 286/2011 (2. ATP CLP)
Uredba (EU) št. 618/2012 (3. ATP CLP)
Uredba (EU) št. 487/2013 (4. ATP CLP)
Uredba (EU) št. 944/2013 (5. ATP CLP)
Uredba (EU) št. 605/2014 (6. ATP CLP)
Uredba (EU) 2015/1221 (7. ATP CLP)
Uredba (EU) 2016/918 (8. ATP CLP)
Uredba (EU) 2016/1179 (9. ATP CLP)
Uredba (EU) 2017/776 (10. ATP CLP)
Uredba (EU) 2018/669 (11. ATP CLP)
Uredba (EU) 2018/1480 (13. ATP CLP)
Uredba (EU) 2019/521 (12. ATP CLP)
Uredba (EU) 2020/217 (14. ATP CLP)
Uredba (EU) 2020/1182 (15. ATP CLP)
Uredba (EU) 2021/643 (16. ATP CLP)
Uredba (EU) 2021/849 (17. ATP CLP)
Uredba (EU) 2022/692 (18. ATP CLP)
Uredba (EU) 2023/707
Uredba (EU) 2023/1434 (19. ATP CLP)
Uredba (EU) 2023/1435 (20. ATP CLP)
Uredba (EU) 2024/197 (21. ATP CLP)
Uredba (EU) 2024/2564 (22. ATP CLP)
Uredba (EU) ąt. 2024/2865
Uredba (EU) 2025/1222 (23. ATP CLP)

Omejitve, povezane z izdelkom ali vsebovanimi snovmi, v skladu s Prilogo XVII Uredbe (ES) 1907/2006 (REACH) in poznejše spremembe:

Omejitve v zvezi z izdelkom: 3

Omejitve v zvezi z vsebovanimi snovmi: 40, 75

Določbe v zvezi z direktivo EU 2012/18 (Seveso III)

Nobena

Uredba (EU) št. 649/2012 (uredba PIC)

Snovi niso navedene

Nemški razred nevarnosti za vodo.

Razred 3: izjemno nevarna.

SVHC snovi:

Na podlagi razpoložljivih podatkov, preparat ne vsebuje snovi SVHC v procentu ≥ 0.1%.

15.2 Ocena kemijske varnosti

Ocena kemijske varnosti ni bila opravljena za zmes. Zgledujte se po scenarijih izpostavljenosti snovi, priloženih temu varnostnemu listu.Pri posvetovanju s scenariji upoštevajte morebitne omejitve glede uporabe, navedene v razdelku 1.2.

ODDELEK 16: Drugi podatki

Številka	Opis
EUH066	Ponavljajoča izpostavljenost lahko povzroči nastanek suhe ali razpokane kože.
EUH071	Jedko za dihalne poti.
H225	Lahko vnetljiva tekočina in hlapi.
H226	Vnetljiva tekočina in hlapi.
H302	Zdravju škodljivo pri zaužitju.
H304	Pri zaužitju in vstopu v dihalne poti je lahko smrtno.

H312	Zdravju škodljivo v stiku s kožo.
H314	Povzroča hude opekline kože in poškodbe oči.
H315	Povzroča draženje kože.
H317	Lahko povzroči alergijski odziv kože.
H318	Povzroča hude poškodbe oči.
H319	Povzroča hudo draženje oči.
H332	Zdravju škodljivo pri vdihavanju.
H335	Lahko povzroči draženje dihalnih poti.
H336	Lahko povzroči zaspanost ali omotico.
H351	Sum povzročanja raka v primeru vdihavanja.
H372	V primeru dolgotrajnega ali ponovljenega vdihavanja povzroča poškodbe notranjih organov.
H373	Lahko škoduje organom pri dolgotrajni ali ponavljajoči se izpostavljenosti.
H373	V primeru dolgotrajnega ali ponovljenega vdihavanja in zaužitja lahko povzroči poškodbe notranjih organov.
H400	Zelo strupeno za vodne organizme.
H411	Strupeno za vodne organizme, z dolgotrajnimi učinki.
H412	Škodljivo za vodne organizme, z dolgotrajnimi učinki.

Številka	**Razred in kategorija nevarnosti**	**Opis**
2.6/2	Flam. Liq. 2	Vnetljiva tekočina, Kategorija 2
2.6/3	Flam. Liq. 3	Vnetljiva tekočina, Kategorija 3
3.1/4/Dermal	Acute Tox. 4	Akutna strupenost (dermalno), Kategorija 4
3.1/4/Inhal	Acute Tox. 4	Akutna strupenost (pri vdihavanju), Kategorija 4
3.1/4/Oral	Acute Tox. 4	Akutna strupenost (oralno), Kategorija 4
3.10/1	Asp. Tox. 1	Nevarnost pri vdihavanju, Kategorija 1
3.2/1A	Skin Corr. 1A	Jedkost za kožo, Kategorija 1A
3.2/1B	Skin Corr. 1B	Jedkost za kožo, Kategorija 1B
3.2/2	Skin Irrit. 2	Draženje kože, Kategorija 2
3.3/1	Eye Dam. 1	Hude poškodbe oči, Kategorija 1
3.3/2	Eye Irrit. 2	Draženje oči, Kategorija 2
3.4.2/1A	Skin Sens. 1A	Preobčutljivost kože, Kategorija 1A
3.4.2/1B	Skin Sens. 1B	Preobčutljivost kože, Kategorija 1B
3.6/2	Carc. 2	Rakotvornost, Kategorija 2
3.8/3	STOT SE 3	Specifična strupenost za ciljne organe (STOT) – enkratna izpostavljenost STOT enkrat, Kategorija 3
3.9/1	STOT RE 1	Specifična strupenost za ciljne organe (STOT) – ponavljajoča se izpostavljenost, Kategorija 1
3.9/2	STOT RE 2	Specifična strupenost za ciljne organe (STOT) – ponavljajoča se izpostavljenost, Kategorija 2
4.1/A1	Aquatic Acute 1	Akutno nevarnost za vodno okolje, Kategorija 1
4.1/C2	Aquatic Chronic 2	Kronično (dolgotrajno) nevarnost za vodno okolje, Kategorija 2
4.1/C3	Aquatic Chronic 3	Kronično (dolgotrajno) nevarnost za vodno okolje, Kategorija 3

Razvrstitev in postopek, uporabljen za izpeljavo razvrstitve za zmesi v skladu z Uredbo (ES) 1272/2008 [uredba CLP]:

Razvrstitev v skladu z Uredbo (ES) št. 1272/2008	**Postopek razvrščanja**
Acute Tox. 4, H302	metoda izračuna
Skin Corr. 1B, H314	metoda izračuna
Skin Sens. 1A, H317	metoda izračuna
Aquatic Chronic 3, H412	metoda izračuna

Ta dokument je pripravila pristojna oseba, ki je ustrezno usposobljena

Glavni bibliografski viri:

ECDIN – Informacijska mreža za okoljske podatke za kemikalije – Skupno raziskovalno središče, Komisija Evropskih skupnosti

SAX – NEVARNE LASTNOSTI INDUSTRIJSKIH MATERIALOV – 8. izdaja – Van Nostrand Reinold

Varnostni listi dobaviteljev surovin.

Predstavljene informacije se nanašajo na naše znanje v zgoraj navedenem datumu. Nanašajo se zgolj na omenjeni izdelek in ne predstavljajo garancije za posebno kakovost.

Uporabnik je dolžan preveriti pravilnost in popolnost teh informacij glede na svojo specifično uporabo.
Ta list razveljavlja in nadomešča vsako predhodno izdajo
Legenda okrajšav in kratic, uporabljenih v varnostnem listu:

ACGIH: Ameriška konferenca vladnih industrijskih higienikov
ADR: Evropski sporazum o mednarodnem prevozu nevarnih snovi v cestnem prometu.
ATE: Ocena akutne strupenosti
ATEmix: Ocena akutne strupenosti (Zmesi)
BEI: Biološki indeks izpostavljenosti
CAS: Chemical Abstracts Service (oddelek Ameriškega kemijskega društva).
CAV: Center za zastrupitve
CE: Evropska skupnost
CLP: Razvrščanje, etiketiranje, pakiranje.
CMR: Rakotvorno, mutageno in strupeno za razmnoževanje
COV: Hlapna organska spojina
CSA: Ocena kemijske varnosti
CSR: Poročilo o kemijski varnosti
DNEL: Izpeljane vrednosti brez učinka.
EC50: Srednja učinkovita koncentracija
ECHA: Evropska agencija za kemikalije
EINECS: Evropski seznam obstoječih snovi.
ES: Scenarij izpostavljenosti
GefStoffVO: Odlok o nevarnih snoveh, Nemčija.
GHS: Globalno poenoten sistem razvrščanja in označevanja nevarnih kemikalij.
IARC: Mednarodna agencija za raziskovanje raka
IATA: Mednarodno združenje za zračni transport.
IC50: Srednja inhibitorna koncentracija
IMDG: Mednarodni kodeks za prevoz nevarnega blaga po morju
LC50: Letalna koncentracija za 50 odstotkov testne populacije.
LD50: Letalna doza za 50 odstotkov testne populacije.
LDLo: Najnižja smrtna doza
N.A.: Se ne uporablja
N/A: Se ne uporablja
N/D: Ni opredeljeno/Ni razpoložljiv
N.D.: Ni razpoložljiv
NIOSH: Nacionalni inštitut za varnost in zdravje pri delu
NOAEL: Raven brez opaznih negativnih vplivov
OSHA: Upravljanje varnosti in zdravja pri delu
PBT: Obstojne, se kopičijo v organizmih in so strupene
PGK: Navodila za embalažo nevarnih snovi
PNEC: Predvidena koncentracija brez učinka.
PSG: Potniki
RID: Pravilnik o mednarodnem prevozu nevarnega blaga po železnici.
STEL: Meja za kratkotrajno izpostavljenost.
STOT: Specifično strupeno za ciljne organe.
TLV: Mejna vrednost izpostavljenosti.
TLV-TWA: Mejna vrednost izpostavljenosti v časovnem obdobju po 8 ur dnevno (ACGIH standard).
vPvB: Telo obstojno, se zelo lahko kopiči v organizmih.
WGK: Nemški razred nevarnosti za vodo.

Odstavki spremenjeni od prejšnje revizije:

- ODDELEK 1: Identifikacija snovi/zmesi in družbe/podjetja
- ODDELEK 2: Določitev nevarnosti
- ODDELEK 3: Sestava/podatki o sestavinah
- ODDELEK 8: Nadzor izpostavljenosti/osebna zaščita
- ODDELEK 9: Fizikalne in kemijske lastnosti
- ODDELEK 11: Toksikološki podatki
- ODDELEK 12: Ekološki podatki
- ODDELEK 15: Zakonsko predpisani podatki
- ODDELEK 16: Drugi podatki

n-butyl acetate

Substance identification
Chemical Name: n-butyl acetate
CAS number: 123-86-4
Date - Version: 07/06/2017 10.0

1. USE IN COATINGS. USE IN PAINTS. USE IN PRINTING INKS. USE IN ADHESIVES.

Short title of the exposure scenario: Use in coatings. Use in paints. Use in printing inks. Use in adhesives.
SU3; ERC4; PROC7, PROC10, PROC13

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: CEPE SPERC4.1a.v1

Operating conditions

Yearly amount used in EU: 5,000,000 kgs
Minimum emission days per year: 225
Emission factor to air: 0.8%
Emission factor in water: 2%
Emission factor in soil: 0%
Receiving surface water (flow rate): 18,000 m³/day
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Suitable measures to reduce emissions to air can be: Exhaust gas treatment with thermal oxidation.
Type of treatment plant: Municipal sewage treatment plant.
Assumed sewage treatment plant flow: 2,000 m³/day

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR): 0.925355
Risk from environmental exposure is driven by soil.
Maximum safe use amount: 1080.7 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC7: Industrial spray application

Area of use: Industrial

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
Minimize manual tasks.
Daily general cleaning of equipment and work area.
Regular inspection and maintenance of equipment and machinery.
Ensure that the activity is performed outside the operator’s respiratory zone (head-product distance greater than 1m).
Avoid frequent and direct contact with the substance.
Check that risk reduction measures are implemented and that the conditions of use are respected.
Avoid splashes.
Make sure the spray booth is used.
Wear suitable clothing.

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 4.2857 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.38961
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 0.0001 mg/m³
Risk Characterization Ratio (RCR): 0.000001

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra Please note that a revised version was used (see exposure estimates).

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes

Area of use: Industrial

Operating conditions
Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Forced local ventilation. Effectiveness: 90%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 2.7429 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.249351
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 24.1996 mg/m³
Risk Characterization Ratio (RCR): 0.080665

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping and pouring

Area of use: Industrial

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures

Forced local ventilation. Effectiveness: 90%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 1.3714 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.124675
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 24.1996 mg/m³
Risk Characterization Ratio (RCR): 0.080665

Guidance for downstream users

For a comparison term, visit http://www.ecetoc.org/tra

2. USE IN COATINGS. USE IN PAINTS. USE IN PRINTING INKS. USE IN ADHESIVES.

Short title of the exposure scenario: Use in coatings. Use in paints. Use in printing inks. Use in adhesives.
SU3; ERC4; PROC7, PROC10, PROC13

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: CEPE SPERC4.1a.v1

Operating conditions

Yearly amount used in EU: 43,000,000 kgs
Minimum emission days per year: 225
Emission factor to air: 0.8%
Emission factor in water: 2%
Emission factor in soil: 0%
Receiving surface water (flow rate): 18,000 m³/day
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Suitable measures to reduce emissions to air can be: Exhaust gas treatment with thermal oxidation.
Type of treatment plant: Municipal sewage treatment plant.
Assumed sewage treatment plant flow: 2,000 m³/day

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR): 0.925355
Risk from environmental exposure is driven by soil.
Maximum safe use amount: 1080.7 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC7: Industrial spray application

Area of use: Industrial

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures

Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
Minimize manual tasks.
Daily general cleaning of equipment and work area.
Regular inspection and maintenance of equipment and machinery.
Ensure that the activity is performed outside the operator’s respiratory zone (head-product distance greater than 1m).
Avoid frequent and direct contact with the substance.
Check that risk reduction measures are implemented and that the conditions of use are respected.
Avoid splashes.
Make sure the spray booth is used.
Wear suitable clothing.

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 4.2857 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.38961

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 0.0001 mg/m³
Risk Characterization Ratio (RCR): 0.000001

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra Please note that a revised version was used (see exposure estimates).

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes

Area of use: Industrial

Operating conditions
Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Forced local ventilation. Effectiveness: 90%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 2.7429 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.249351
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 24.1996 mg/m³
Risk Characterization Ratio (RCR): 0.080665

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping and pouring

Area of use: Industrial

Operating conditions
Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Forced local ventilation. Effectiveness: 90%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 1.3714 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.124675
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 24.1996 mg/m³
Risk Characterization Ratio (RCR): 0.080665

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra

3. USE IN COATINGS. USE IN PAINTS. USE IN PRINTING INKS. USE IN ADHESIVES.

Short title of the exposure scenario: Use in coatings. Use in paints. Use in printing inks. Use in adhesives.
SU22; ERC8a, ERC8d; PROC10, PROC11, PROC13, PROC19

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: CEPE SPERC 8a.2a.v1

Operating conditions

Yearly amount used in EU: 2,000,000 kgs
Minimum emission days per year: 225
Emission factor to air: 99%
Emission factor in water: 1%
Emission factor in soil: 0%
Receiving surface water (flow rate): 18,000 m³/day
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

The wastewater treatment measures considered suitable are, for example, wastewater or sewage treatment plant.
Type of treatment plant: Municipal sewage treatment plant.
Assumed sewage treatment plant flow: 2,000 m³/day

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR): 0.012923
Risk from environmental exposure is driven by freshwater sediment.
Maximum safe use amount: 1934.6 kg/giorno

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: CEPE SPERC 8d.3a.v1

Operating conditions

Yearly amount used in EU: 2,000,000 kgs
Minimum emission days per year: 225
Emission factor to air: 98%
Emission factor in water: 2%
Emission factor in soil: 0%
Receiving surface water (flow rate): 18,000 m³/day
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Type of treatment plant: Municipal sewage treatment plant.
Assumed sewage treatment plant flow: 2,000 m³/day

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR): 0.092422
Risk from environmental exposure is driven by soil.
Maximum safe use amount: 1082 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes

Area of use: Professional

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures

Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour). Effectiveness: 70%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 2.7429 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.249351
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 145.1979 mg/m³
Risk Characterization Ratio (RCR): 0.483993

Guidance for downstream users

For a comparison term, visit http://www.ecetoc.org/tra

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application

Area of use: Professional

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤45%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures

Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
Minimize manual tasks.
Daily general cleaning of equipment and work area.
Regular inspection and maintenance of equipment and machinery.
Ensure that the activity is performed outside the operator’s respiratory zone (head-product distance greater than 1m).
Avoid frequent and direct contact with the substance.
Check that risk reduction measures are implemented and that the conditions of use are respected.
Avoid splashes.
Make sure the spray booth is used.
Wear suitable clothing.

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 10.7143 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.974026
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 0.0001 mg/m³
Risk Characterization Ratio (RCR): 0.000001

Guidance for downstream users

For a comparison term, visit http://www.ecetoc.org/tra Please note that a revised version was used (see exposure estimates).

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application

Area of use: Professional

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤45%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures

Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
Minimize manual tasks.
Avoid frequent and direct contact with the substance.
Check that risk reduction measures are implemented and that the conditions of use are respected.
Daily general cleaning of equipment and work area.
Regular control and maintenance of equipment and machinery.
Make sure doors and windows are open (general ventilation).
Avoid splashes.
Use an adequately effective local ventilation system.
Wear suitable clothing.

Exposure estimation and reference to its source

Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker, modified version. The concentration of the substance has been considered using a linear approach. Worker - dermal, long-term - systemic.
Exposure estimation: 4.8214 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.438312
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker, modified version. Operator - inhalation, long-term - local.
Exposure estimation: 153 mg/m³
Risk Characterization Ratio (RCR): 0.51

Guidance for downstream users

For a comparison term, visit http://www.ecetoc.org/tra Please note that a revised version was used (see exposure estimates).

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application

Area of use: Professional

Operating conditions

Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures

Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
Minimize manual tasks.
Avoid frequent and direct contact with the substance.
Check that risk reduction measures are implemented and that the conditions of use are respected.
Daily general cleaning of equipment and work area.
Regular inspection and maintenance of equipment and machinery.
Avoid splashes.
Make sure doors and windows are open (general ventilation).
Wear a half face mask with a P2L filter or better.
Wear suitable clothing.

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker, modified version. The concentration of the substance has been considered using a linear approach. Worker - dermal, long-term - systemic.
Exposure estimation: 4.8214 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.438312
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker, modified version. Operator - inhalation, long-term - local.
Exposure estimation: 116 mg/m³
Risk Characterization Ratio (RCR): 0.386667

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra Please note that a revised version was used (see exposure estimates).

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping and pouring

Area of use: Professional

Operating conditions
Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour). Effectiveness: 70%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 1.3714 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.124675
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 145.1979 mg/m³
Risk Characterization Ratio (RCR): 0.483993

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC19: Manual mixing with direct contact with the only use of personal protective equipment

Area of use: Professional

Operating conditions
Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 240 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Forced local ventilation: Effectiveness: 80%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
Ensure a good standard of general or controlled ventilation (no less than 3-5 air changes per hour). Effectiveness: 30%

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 8.4857 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.771429
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 67.759 mg/m³
Risk Characterization Ratio (RCR): 0.225863

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC19: Manual mixing with direct contact with the only use of personal protective equipment
Area of use: Professional

Operating conditions
Substance concentration: n-butyl acetate content: ≥0 - ≤100%
Physical state: liquid
Vapor pressure of the substance during use: 1120Pa
Process temperature: 20°C
Duration and frequency of application: 60 mins. 5 days a week
Indoor/Outdoor: Internal use

Risk management measures
Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour). Effectiveness: 70%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Worker - dermal, long-term - systemic.
Exposure estimation: 2.8286 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.257143
Evaluation method: EASY TRA v4.1, ECETOC TRA v3.0, Worker. Operator - inhalation, long-term - local.
Exposure estimation: 145.1979 mg/m³
Risk Characterization Ratio (RCR): 0.483993

Guidance for downstream users
For a comparison term, visit http://www.ecetoc.org/tra

Xylene

Identification of the exposure scenario
Product name: Xylene
Reach registration number: 01-2119488216-32-XXXX
CAS number: 1330-20-7
EC number: 215-535-7
Review date: 14/02/2022 rev. 3.0

USE IN COATINGS - INDUSTRIAL USE

1. Title of the exposure scenario

Process purpose: Includes use in coatings (varnishes, inks, adhesives, etc.), including exposure during application (including material receipt, storage, bulk and semi-bulk preparation and transfer, application by spray, roller, manual spraying, dip, flow, fluid layers in production lines and in film formation) and system cleaning, maintenance and related laboratory activities.
Main sector: SU3 Industrial uses

Environment

Environmental Release Categories [ERC]: ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article).
Specific Environmental Release Category [SPERC]: ESVOC SPERC 4.3a.v1

Worker

Process categories:
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions.
PROC 3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions.
PROC4 Production of chemicals with the possibility of exposure.
PROC5 Mixing or blending in batch processes
PROC7 Industrial spraying.
PROC8a Transfer of a substance or preparation (charging/discharging) at non-dedicated facilities.
PROC8a Transfer of substance or mixture (charging/discharging) at non-dedicated facilities.
PROC10 Application with rollers or brushes.
PROC13 Treatment of articles by dipping and pouring.
PROC15 Use as laboratory reagent.
PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles.

2. Other conditions of use affecting exposure (Industrial - Environment 1)

Products features

Form: Liquid, vapor pressure 0.5 - 10 kPa at STP
Easily biodegradable.

Amounts used:

Annual amount per site: 2500 tonnes

Frequency and duration of use

Issue days: 300 days/year

Additional operating conditions relating to environmental exposure

Emission factor - air
Air release rate produced by the process (initial release prior to risk management measures): 0.98
Emission factor - water
Waste water release rate produced by the process (initial release prior to risk management measures): 0.007
Emission factor - soil
Soil release rate produced by the process (initial release prior to risk management measures): 0

Environmental factors that are not influenced by risk management

Dilution

Local fresh water dilution factor: 10
Local seawater dilution factor: 100

Risk management measures

Sewage Treatment Plant Data (STP)

Estimated substance removal from waste water via domestic sewage treatment: 95.8%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Local technical conditions and measures to reduce and limit discharges and air emissions

Air:

Treat air emission to provide a typical removal efficiency of > 90%.

Water:

Avoid releasing the undiluted substance into local waste water or recover it on site. The typical on-site purification technique has a removal efficiency of 95.8%.

Ground:

Soil emission controls are not applicable as there is no direct release to soil.

Conditions and measures for external treatment of waste

Sludge treatment:

Do not spread industrial sludge on natural soils. Sewerage sludge should be burned, stored or regenerated.
Waste treatment:
No waste of the substance is formed during production.

2. Other conditions of use affecting exposure (Workers - Health 1)

Products features

Form:

Liquid, vapor pressure 0.5 - 10 kPa at STP
Concentration information: Includes concentrations up to 100%, unless otherwise indicated.

Quantities used

Not applicable.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other operational conditions affecting worker exposure

Temperature: (unless stated differently) assumes use at not more than 20°C above ambient temperature.
Ventilation Rate: Ensure a sufficient amount of controlled ventilation (10 to 15 air changes per hour). Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and process-level (source) measures to prevent releases

Technical protective measures:

Handle substance within a closed system. Provide supplementary ventilation to points where emissions occur. Ensure material transfers are managed using closed or air exhaust systems. Drain or remove substance from equipment before opening or servicing PROC7 Industrial spraying: spraying (automatic/robotic) should be carried out in a ventilated booth with laminar air flow.

Risk management measures:

PROC7 Industrial spraying.
Manual spraying.
Wear respiratory protection in accordance with EN 140 with filter type A or better.

3. Verification of exposure (Environment 1)

Environmental exposure:

Predicted exposures are not expected to exceed the specific risks (listed in chapter 8 of the safety datasheet), when the risk management measures/operational conditions outlined in section 2 are implemented.
Maximum allowable site tonnage (Msafe), based on release following total waste water treatment removal: 9874 kg/day

3. Exposure Verification (Health 1)

Exposure

Predicted workplace exposures are not expected to exceed the DNEL when risk identification measures are implemented.

4. Guidance to check compliance with the exposure scenario (Environment 1)

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Required removal efficiency for waste water can be achieved using on-site/off-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

4. Guidance to check compliance with the exposure scenario (Health 1)

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

USE IN COATINGS - PROFESSIONAL USE

1. Title of the exposure scenario

Process purpose: Includes use in coatings (varnishes, inks, adhesives, etc.), including exposure during application (including material receipt, storage, bulk and semi-bulk preparation and transfer, application by spray, roller, brush and manual spraying or similar processes and film formation) and system cleaning, maintenance and related laboratory activities.
Main sector: SU22 Professional uses

Environment

Environmental Release Categories [ERC]:
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor).
ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor).
ERC8c Widespread use leading to inclusion into/onto article (indoor).
ERC8f Widespread use leading to inclusion into/onto article (outdoor).
Specific Environmental Release Category [SPERC]: ESVOC SPERC 8.3b.v1

Worker

Process categories:
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions.
PROC 3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions.
PROC4 Production of chemicals with the possibility of exposure.
PROC5 Mixing or blending in batch processes
PROC8a Transfer of a substance or preparation (charging/discharging) at non-dedicated facilities.
PROC8a Transfer of substance or mixture (charging/discharging) at non-dedicated facilities.
PROC10 Application with rollers or brushes.
PROC11 Non-industrial spray application.
PROC13 Treatment of articles by dipping and pouring.
PROC15 Use as laboratory reagent.
PROC19 Manual activities with direct contact.
PROC24 High (mechanical) energy work-up of substances bound in/on materials and/or articles.

2. Other conditions of use affecting exposure (Industrial - Environment 1)

Products features

Form: Liquid, vapor pressure 0.5 - 10 kPa at STP Easily biodegradable.

Quantities used

Annual amount per site: 10 tonnes

Frequency and duration of use

Issue days: 365 days/year

Additional operating conditions relating to environmental exposure

Emission factor - air
Air release rate produced by the process (initial release prior to risk management measures): 0.98
Emission factor - water
Waste water release rate produced by the process (initial release prior to risk management measures): 0.01
Emission factor - soil
Soil release rate produced by the process (initial release prior to risk management measures): 0.01

Environmental factors that are not influenced by risk management

Dilution
Local fresh water dilution factor: 10
Local seawater dilution factor: 100

Risk management measures
Sewage Treatment Plant Data (STP)
Estimated substance removal from waste water via domestic sewage treatment 95.8%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Local technical conditions and measures to reduce and limit discharges and air emissions
Air: Treat air emission to provide a typical removal efficiency of 0%.
Water: The typical on-site purification technique has a removal efficiency of 95.8%.

Conditions and measures for external treatment of waste
Waste treatment: External treatment and disposal of waste should comply with applicable local and/or national regulations.

2. Other conditions of use affecting exposure (Workers - Health 1)

Products features
Form:
Liquid, vapor pressure 0.5 - 10 kPa at STP
Concentration information:
Includes concentrations up to 100%, unless otherwise indicated.

Quantities used
Not applicable.

Frequency and duration of use
Covers daily exposures up to 8 hours (unless stated differently).

Other operational conditions affecting worker exposure
Temperature:
(unless stated differently) assumes use at not more than 20°C above ambient temperature.
Ventilation Rate:
Provide a good standard of controlled ventilation (10 to 15 air changes per hour) or ensure operation is undertaken outdoors. Assumes a good basic standard of occupational hygiene is implemented.

Technical conditions and process-level (source) measures to prevent releases
Technical protective measures:
Handle substance within a closed system. Provide supplementary ventilation to points where emissions occur. Ensure material transfers are managed using closed or air exhaust systems. Clean/flush equipment prior to opening or maintenance. Transport on closed roads. PROC11 Non-industrial spray application. Indoor use. Perform in a laminar flow ventilated booth. PROC15 Use as laboratory reagents handle under fume hood or extract air.

Organizational measures to prevent/limit releases, dispersion and exposure
Organizational measures
Avoid activities with an exposure of more than 4 hours.
Hand Application - Finger Paints, Chalks, Stickers:
Limit the amount of substance in the mixture to 5%.

Risk management measures
Wear protective gloves according to EN 374, resistant to solvents.
PROC10 Application with rollers or brushes.
PROC11 Non-industrial spray application. Outdoor use.
PROC13 Treatment of articles by dipping and pouring. Outdoor use.
Wear respiratory protection in accordance with EN 140 with filter type A or better.

3. Verification of exposure (Environment 1)

Environmental exposure
Predicted exposures are not expected to exceed the specific risks (listed in chapter 8 of the safety datasheet), when the risk management measures/operational conditions outlined in section 2 are implemented.
Maximum allowable site tonnage (Msafe), based on release following total waste water treatment removal: 5969 kg/day

3. Exposure Verification (Health 1)

Exposure

Predicted workplace exposures are not expected to exceed the DNEL when risk identification measures are implemented.

4. Guidance to check compliance with the exposure scenario (Environment 1)

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Required removal efficiency for waste water can be achieved using on-site/off-site technologies, either alone or in combination.

Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html).

4. Guidance to check compliance with the exposure scenario (Health 1)

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Benzyl alcohol

Substance identification
Chemical Name: Benzyl alcohol
CAS number: 100-51-6
Date: 07/12/2012

INDUSTRIAL USE

Exposure scenario for industrial use in adhesives, sealants, coatings and paints, fillers, finger paints, metallic and non-metallic surface treatment products, inks and toners (PC1, PC9a, PC9b, PC9c, PC14, PC15 , PC18)

1. TITLE

Systematic title based on the use descriptor: SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Processes, activities covered:

Mixing or dilution in batch processes
Processing by compression/pelletisation, calendering or use during foam production
Transfer operations from/to large or small containers
Treatment of objects by brush/roller application, spraying or immersion/pouring
Lubrication at high energy conditions
Use as a laboratory agent
Handling of substances bound in materials/articles

Evaluation method:

ECETOC TRA (April 2010), EUSES (v.2.1)

2. OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES

Process categories for human health and environmental release categories for exposure assessment:
PC1: PROC5, 7, 8a, 8b, 9, 10, 12, 13, 14 spERC ESVOC 5 (related to ERC4)
PC9a/b/c: PROC5, 7, 8a, 8b, 9, 10, 13 spERC ESVOC 5 (related to ERC4)
PC14: PROC5, 8a, 8b, 9, 15, 23, 24, 25 spERC ESVOC 5 (related to ERC4)
PC15: PROC5, 8a, 8b, 9, 15 spERC ESVOC 5 (related to ERC4)
PC18: PROC7, 8a, 8b, 9, 10, 13 spERC ESVOC 5 (related to ERC4)

2.1 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC12, PROC13, PROC14, PROC15

Product features

Concentration ≤ 40%
Physical state: liquid

Quantity used

Not applicable

Frequency and duration of use/exposure

Duration of exposure per day: 8h (full shift, indoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management

Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure

Internal use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker
Local vapor ventilation (efficiency > 90 %) or other adequate ventilation required

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation
PROC7:
Respiratory protection recommended (95% efficiency) as described in section 8.
Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.2 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC23, PROC24, PROC25

Product features
Concentration ≤ 40%
Physical state: liquid

Quantity used
Not applicable

Frequency and duration of use/exposure
Duration of exposure per day: 8h (full shift, indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management
Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure
Indoor use.
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker
Local vapor ventilation (efficiency > 90 %) or other adequate ventilation required.

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.3 EXPOSURE SCENARIO CONTROLLING ENVIRONMENTAL EXPOSURE FOR SPERC ESVOC 5 - RELATED TO ERC4

Product features
Not relevant

Quantity used
Number of sites: > 1
Yearly amount used in the region: PC 1, 9a, 9b, 9c, 14, 15, 18: 412 to: 570 to (10 % rule applies)

Frequency and duration of use
spERC ESVOC 5 (related to ERC4): 300 days/year

Environmental factors not influenced by risk management
Local fresh water dilution factor: 10
Receiving surface water flow: 18,000 m³/d
Local seawater dilution factor 100

Other operational conditions affecting environmental exposure
Indoor and outdoor use

Technical conditions and measures at process level (source) to prevent release
spERC ESVOC 5 (related to ERC4):
Fraction of tonnage released to air: 9,8 %
Fraction of tonnage released to wastewater: 2 %
Fraction of tonnage released into industrial ground: 0 %

Local technical conditions and measures to reduce and limit discharges, atmospheric emissions and soil release
Waste water must be sent to a dedicated treatment plant or treated with other suitable techniques. Floors should be waterproof and resistant to liquids.

Organizational measures to prevent/limit release from site
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures for the domestic sewage treatment plant
Dimensions of wastewater treatment plant: 2000 m^3/d (removal rate: 87.4 %)

Conditions and measures for external treatment of waste for disposal
No specific measures. For general conditions and measures, see section 13.

Conditions and measures for external recovery of waste
No specific measures. For general conditions and measures, see section 13.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

Workers

Exposure assessment (human):
ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been corrected for concentration.

Exposure estimation:
Individual and combined (skin and inhalation) exposure values are below the DNELs (RCR ratios < 1).

Environment

Exposure assessment (environment):
EUSES 2.1: ERC4 modified with ESVOC 5 (ESVOC SPERC 4.3a.v1)

Exposure estimation:
The predicted exposure concentrations for air, water and soil are lower than the derived PNECs, giving an RCR < 1.

4. GUIDANCE FOR DOWNSTREAM USERS TO ASSESS WHETHER THEY COMPLY WITH THE LIMITS SET BY THE EXPOSURE SCENARIO

Environment:
Under the conditions listed above the process is considered safe. Direct release to water and soil should be avoided, air emissions should be minimised. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Health:
Under the conditions listed above the process is considered safe. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Further good practice advice beyond the REACH CSA
Environment: Not applicable
Health: On possible contact with the product (sampling, use, spills, product leaks, cleaning): wear protective clothing. Wear protective gloves and safety goggles. See section 8 for information on appropriate personal protective equipment.

PROFESSIONAL USE

Exposure scenario for professional uses of benzyl alcohol consisting of mixing/ loading and charging/discharging, roller, brush, spray or dip application (PC0, PC1, PC09a, 9b, 9c, PC14, PC15, PC18, PC21, PC26, PC31, PC32).

1. TITLE

Systematic title based on the use descriptor: SU22 - Professional uses: Generalized use

Processes, activities covered:

Mixing or dilution in batch processes BY HAND
Transfer operations from/to large or small containers
Treatment of objects by brush/roller application, spraying or immersion/pouring
Hand mixing with intimate contact and only PSD available
Handling of substances bound in materials/articles

Evaluation method:

ECETOC TRA (April 2010), EUSES (v.2.1)

2. OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES

Process categories for human health and environmental release categories for exposure assessment:
PC0: PROC5, 8a, 8b, 9, 10, 11, 13, 19 - ERC8a, 8d
PC1: PROC5, 8a, 8b, 9, 10, 11, 13, 19 - ERC8a, 8d
PC9a, 9b, 9c: PROC5, 8a, 8b, 9, 10, 11, 13, 19 - ERC8a, 8d
PC14: PROC8a, 8b, 9, 10, 11, 13, 19, 23, 24, 25 - ERC8a, 8d
PC15: PROC8a, 8b, 9, 10, 11, 13, 19 - ERC8a, 8d
PC18: PROC5, 8a, 8b, 10, 11, 13, 19 - ERC8a, 8d
PC21: PROC8a, 8b, 15 - ERC8a, 8d
PC26: PROC5, 6, 8a, 8b, 11, 13, 14, 19, 21 - ERC8a, 8d
PC30: PROC8a, 8b - ERC8a, 8d
PC31: PROC8b, 10, 11 - ERC8a, 8d
PC32: PROC8a, 8b, 9, 10, 11 - ERC8a, 8d

Number of sites: > 1

2.1 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC12, PROC13, PROC14, PROC15

Product features

Concentration ≤ 40%
Physical state: liquid

Quantity used

Not applicable

Frequency and duration of use/exposure

Duration of exposure per day: 8h (full shift, indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management

Breathing volume in the conditions of use: 10 m^3/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure

Internal use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker

No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation
Personal protection:
PROC8b, PROC9, PROC14, PROC15: concentration ≤ 40 %: no RMM required.
PROC5, PROC8a, PROC13: > 25 % - ≤ 40 %: gloves (90 % efficiency) are required as described in section 8.
PROC6: > 5 % - ≤ 40 %: gloves (90 % efficiency) are required as described in section 8.
PROC10: < 5 % (indoor and outdoor environment): No RMMs required.
> 5 - ≤ 40 % (indoor and outdoor environment): gloves (90 % efficiency) are required as described in point 8.

Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.2 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC11

Product features
Concentration ≤ 40%
Physical state: liquid

Quantity used
Not applicable

Frequency and duration of use/exposure
Duration of exposure per day: 8h (full shift, indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management
Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure
Indoor and outdoor use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker
No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation
Personal protection:
≤ 5 % (indoor and outdoor environment): Respiratory protection (95 % efficiency) required as described in section 8.
> 5 % ≤ 40 % (indoor and outdoor environment): Respiratory protection (95 % efficiency) and gloves (90 % efficiency) required as described in section 8.
Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.3 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC19

Product features
Concentration ≤ 40%
Physical state: liquid

Quantity used
Not applicable

Frequency and duration of use/exposure
Duration of exposure per day (concentration ≤ 25 %): 8 hours (indoors and outdoors)
Duration of exposure per day (concentration >25% ≤40%): 4 hours (indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management
Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure
Indoor and outdoor use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker
No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation
Personal protection:
> 1 % (indoor): gloves (90 % efficiency) are required as described in section 8.
> 5% - 40% (outdoors): gloves (90 % efficiency) are required as described in section 8.
Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.4 EXPOSURE SCENARIO CONTROLLING ENVIRONMENTAL EXPOSURE FOR ERC8a, ERC8d

Product features
Not relevant

Quantity used
Yearly amount used in the region: the 10% rule applies
ERC8a PC0, 1, 9a, 9b, 9c, 14, 15, 18, 21, 26, 30, 31, 32, 34, 35: 1,785t
ERC8d PC0, 1, 9a, 9b, 9c, 14, 15, 18, 21, 26, 31, 32, 34, 35: 1,775t
Fraction of main local source: 0.002 (default)
Issue days per site: 365 days/year (default)

Frequency and duration of use
Continuous release: 365 days/year

Environmental factors not influenced by risk management
Local fresh water dilution factor: 10
Receiving surface water flow: 18,000 m³/d
Local seawater dilution factor local: 100

Other operational conditions affecting environmental exposure
Indoor / outdoor environment

Technical conditions and measures at process level (source) to prevent release
No special measures are required.

Local technical conditions and measures to reduce and limit discharges, atmospheric emissions and soil release
Waste water must be sent to a dedicated treatment plant or treated with other suitable techniques.

Organizational measures to prevent release from site
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures for the domestic sewage treatment plant
Dimensions of wastewater treatment plant: 2000 m³/d (removal rate: 87.4 %)

Conditions and measures for external treatment of waste for disposal
No specific measures. For general conditions and measures, see section 13.

Conditions and measures for external recovery of waste
No specific measures. For general conditions and measures, see section 13.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

Workers

PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC14, PROC15, PROC19

Exposure assessment (human):

PROC5, PROC6, PROC8b, PROC9, PROC11, PROC13, PROC14, PROC15

ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been linearly corrected for concentration.

PROC8a, PROC10

ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been linearly corrected for concentration. Local and systemic exposure via inhalation of ECETOC TRA has been linearly scaled based on the concentration.

PROC19

ECETOC TRA model (April 2010 version). The dermal exposure estimates of ECETOC TRA have been linearly corrected for the concentration and according to the EMFs of CEFIC for the duration of exposure. Local exposure via inhalation of ECETOC TRA has been linearly scaled based on the concentration and in accordance with the CEFIC EMFs for the duration of exposure. Systemic exposure via inhalation has been linearly scaled for the duration of exposure.

Exposure estimation:

Individual and combined (skin and inhalation) exposure values are below the DNELs (RCR ratios < 1).

Environment

ERC8a, ERC8d

Exposure assessment (environment):

EUSES 2.1.

Exposure estimation:

The predicted exposure concentrations for air, water and soil are lower than the derived PNECs, giving an RCR < 1.

4. GUIDANCE FOR DOWNSTREAM USERS TO ASSESS WHETHER THEY COMPLY WITH THE LIMITS SET BY THE EXPOSURE SCENARIO

Environment:

Under the conditions listed above the process is considered safe. Direct release to water and soil should be avoided, air emissions should be minimised. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Health:

Under the conditions listed above the process is considered safe. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Further good practice advice beyond the REACH CSA

Environment: Not applicable

Health: On possible contact with the product (sampling, use, spills, product leaks, cleaning): wear protective clothing. Wear protective gloves and safety goggles. See section 8 for information on appropriate personal protective equipment.

PROFESSIONAL USE

Exposure scenario for professional use in photochemicals (PC30)

1. TITLE

Systematic title based on the use descriptor: SU22 - Professional uses: Generalized use

Processes, activities covered:

Transfer operations from/to large or small containers

Evaluation method:

ECETOC TRA (April 2010), EUSES (v.2.1)

2. OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES

Human Health Exposure/Environmental Exposure:
PC30: PROC8a, 8b - ERC8a, 8d

Number of sites: > 1

2.1 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC8a E PROC8b

Product features

Concentration ≤ 40%
Physical state: liquid

Quantity used

Not applicable

Frequency and duration of use/exposure

Duration of exposure per day: 8h (full shift, indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management

Breathing volume in the conditions of use: 10 m^3/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure

Internal use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker

No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure

Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection:
PROC8b: concentration ≤ 40 %: no RMM required.
PROC8a: > 25 % - ≤ 40 %: gloves (90 % efficiency) are required as described in section 8.

Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.2 EXPOSURE SCENARIO CONTROLLING ENVIRONMENTAL EXPOSURE FOR ERC8a, ERC8b

Product features
Not relevant

Quantity used
Yearly amount used in the region: the 10% rule applies
ERC8a PC30: 1.785 t
ERC8d PC30: 190 t
Fraction of main local source: 0.002 (default)
Issue days per site: 365 days/year (default)

Frequency and duration of use
Continuous release: 365 days/year

Environmental factors not influenced by risk management
Local fresh water dilution factor: 10
Receiving surface water flow: 18,000 m³/d
Local seawater dilution factor local: 100

Other operational conditions affecting environmental exposure
No special measures are required.

Technical conditions and measures at process level (source) to prevent release
No special measures are required.

Local technical conditions and measures to reduce and limit discharges, atmospheric emissions and soil release
Waste water must be sent to a dedicated treatment plant or treated with other suitable techniques.

Organizational measures to prevent release from site
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures for the domestic sewage treatment plant
Dimensions of wastewater treatment plant: 2000 m³/d (removal rate: 87.4 %)

Conditions and measures for external treatment of waste for disposal
No specific measures. For general conditions and measures, see section 13.

Conditions and measures for external recovery of waste
No specific measures. For general conditions and measures, see section 13.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

Workers
PROC8a, PROC8b

Exposure assessment (human):
PROC8a
ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been linearly corrected for concentration. Local and systemic exposure via inhalation of ECETOC TRA has been linearly scaled based on the concentration.

PROC8b
ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been linearly corrected for concentration.

Exposure estimation:
Individual and combined (skin and inhalation) exposure values are below the DNELs (RCR ratios < 1).

Environment
ERC8a, ERC8b

Exposure assessment (environment):
EUSES 2.1.

Exposure estimation:
The predicted exposure concentrations for air, water and soil are lower than the derived PNECs, giving an RCR < 1.

4. GUIDANCE FOR DOWNSTREAM USERS TO ASSESS WHETHER THEY COMPLY WITH THE LIMITS SET BY THE EXPOSURE SCENARIO

Environment:
Under the conditions listed above the process is considered safe. Direct release to water and soil should be avoided, air emissions should be minimised. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Health:
Under the conditions listed above the process is considered safe. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Further good practice advice beyond the REACH CSA
Environment: Not applicable
Health: On possible contact with the product (sampling, use, spills, product leaks, cleaning): wear protective clothing. Wear protective gloves and safety goggles. See section 8 for information on appropriate personal protective equipment.

PROFESSIONAL USE

Exposure scenario for professional use in washing and cleaning products, cosmetics and personal care products (PC35, PC39)

1. TITLE

Systematic title based on the use descriptor: SU22 - Professional uses: Generalized use

Processes, activities covered:

Transfer operations from/to large or small containers
Treatment of objects by roller/brush, spray or dip/pour application
Mixing or dilution in batch processes or by hand

Evaluation method:

ECETOC TRA (April 2010), EUSES (v.2.1)

2. OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES

Human Health Exposure/Environmental Exposure:
PC35: PROC8a, 8b, 9, 10, 11, 13, 19 - ERC8a, 8b, 8d, 8e
PC39: PROC13 - ERC8a, 8b, 8d, 8e

Number of sites: > 1

2.1 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC8a, PROC8b, PROC9, PROC10, PROC13

Product features

Concentration ≤ 40%
Physical state: liquid

Quantity used

Not applicable

Frequency and duration of use/exposure

Duration of exposure per day: 8h (full shift, indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management

Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure

Internal use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker

No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure

Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection:
PROC8b, PROC9: concentration ≤ 40 %: no RMM required.
PROC8a, PROC13: > 25 % - ≤ 40 %: gloves (90 % efficiency) are required as described in section 8.
PROC10: < 5 % (indoor and outdoor environment): No RMMs required
> 5 - ≤ 40 % (indoor and outdoor environment): gloves (90 % efficiency) are required as described in section 8.

Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.2 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC11

Product features
Concentration ≤ 40%
Physical state: liquid

Quantity used
Not applicable

Frequency and duration of use/exposure
Duration of exposure per day: 8h (full shift, indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management
Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure
Internal use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker
No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation
Personal protection:
≤ 5 % (indoor and outdoor environment): Respiratory protection (95 % efficiency) required as described in section 8.
> 5 % - ≤ 40 % (indoor and outdoor environment): Respiratory protection (95 % efficiency) and gloves (90 % efficiency) required as described in section 8.

Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.3 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC19

Product features
Concentration ≤ 40%
Physical state: liquid

Quantity used
Not applicable

Frequency and duration of use/exposure
Duration of exposure per day (concentration ≤ 25 %): 8 h (indoor and outdoor)
Duration of exposure per day (concentration >25% - ≤40%): 4 hours (indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management
Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure
Internal use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker
No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation

Personal protection:
> 1 % (indoor): gloves (90 % efficiency) are required as described in section 8.
> 5% - 40% (outdoors): gloves (90 % efficiency) are required as described in section 8..

Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.4 EXPOSURE SCENARIO CONTROLLING ENVIRONMENTAL EXPOSURE FOR ERC8a, ERC8b, ERC8d, ERC8e

Product features

Not relevant

Quantity used

Yearly amount used in the region: the 10% rule applies
ERC8a PC35/PC39: 1,785 t
ERC8b PC35/PC39: 190 t
ERC8d PC35/PC39: 1,775 t
ERC8e PC35/PC39: 190 t
Fraction of main local source: 0.002 (default)
Issue days per site: 365 days/year (default)

Frequency and duration of use

Continuous release: 365 days/year

Environmental factors not influenced by risk management

Local fresh water dilution factor: 10
Receiving surface water flow: 18,000 m³/d
Local seawater dilution factor local: 100

Other operational conditions affecting environmental exposure

No special measures are required.

Technical conditions and measures at process level (source) to prevent release

No special measures are required.

Local technical conditions and measures to reduce and limit discharges, atmospheric emissions and soil release

Waste water must be sent to a dedicated treatment plant or treated with other suitable techniques.

Organizational measures to prevent release from site

Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures for the domestic sewage treatment plant

Dimensions of wastewater treatment plant: 2000 m³/d (removal rate: 87.4 %)

Conditions and measures for external treatment of waste for disposal

No specific measures. For general conditions and measures, see section 13.

Conditions and measures for external recovery of waste

No specific measures. For general conditions and measures, see section 13.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

Workers

Exposure assessment (human):

PROC8b, PROC9, PROC11, PROC13

ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been corrected for concentration.

PROC8a, PROC10

ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been linearly corrected for concentration. Local and systemic exposure via inhalation of ECETOC TRA has been linearly scaled based on the concentration.

PROC19

ECETOC TRA model (April 2010 version). The dermal exposure estimates of ECETOC TRA have been linearly corrected for the concentration and according to the EMFs of CEFIC for the duration of exposure. Local exposure via inhalation of ECETOC TRA has been linearly scaled based on the concentration and in accordance with the CEFIC EMFs for the duration of exposure. Systemic exposure via inhalation has been linearly scaled for the duration of exposure.

Exposure estimation:

Individual and combined (skin and inhalation) exposure values are below the DNELs (RCR ratios < 1).

Environment

ERC8a, ERC8b, ERC8d, ERC8e

Exposure assessment (environment):

EUSES 2.1.

Exposure estimation:

The predicted exposure concentrations for air, water and soil are lower than the derived PNECs, giving an RCR < 1.

4. GUIDANCE FOR DOWNSTREAM USERS TO ASSESS WHETHER THEY COMPLY WITH THE LIMITS SET BY THE EXPOSURE SCENARIO

Environment:

Under the conditions listed above the process is considered safe. Direct release to water and soil should be avoided, air emissions should be minimised. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Health:

Under the conditions listed above the process is considered safe. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Further good practice advice beyond the REACH CSA

Environment: Not applicable

Health: On possible contact with the product (sampling, use, spills, product leaks, cleaning): wear protective clothing. Wear protective gloves and safety goggles. See section 8 for information on appropriate personal protective equipment.

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine

Substance identification
Chemical Name: 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine
CAS number: 25513-64-8

1. STRUCTURED SHORT TITLE: ES8: WIDE DISPERSIVE INDOOR USE RESULTING IN INCLUSION IN OR APPLIED TO A MATRIX

Main user groups: **SU 22 -** Professional uses: public sector (administration, education, entertainment, services, crafts)
Environmental release category: **ERC8c -** Wide dispersive internal use resulting in being included in or applied to a matrix
Process category:
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (contact at different stages and/or important contact)
PROC8a - Transfer of a substance or a preparation (filling/ emptying) from/ to vessels/ large containers, in non-dedicated facilities
PROC8b - Transfer of a substance or a preparation (filling/ emptying) from/ to vessels/ large containers, in dedicated facilities.
PROC9 - Transfer of a substance or preparation into small containers (dedicated filling line, including weighing)
PROC10 - Application with rollers or brushes
PROC11 - Non-industrial spray application
PROC13 - Treatment of articles by dipping and pouring
PROC14 - Production of preparations or articles by tabletting, compression, extrusion, pelettisation
PROC19 - Hand-mixing with direct contact and only PPE available

2.1. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF ENVIRONMENTAL EXPOSURE FOR ERC8c: WIDE DISPERSIVE INDOOR USE RESULTING IN INCLUSION INTO OR ONTO A MATRIX

Quantity used
Daily quantity per site: 16.5 g/day
Fraction of amount used by region: 10%

Frequency and duration of use
Continuous exposure: 365 days/year

Environmental factors not influenced by risk management
Mobile phase efflux rate: 18000 m3/d
Dilution factor (river): 10
Dilution factor (coastal areas): 100

Other given operational conditions affecting environmental exposure
Number of days of issue per year: 365
Emission or Release Factor: Air: 0%
Emission or Release Factor: Water: 1.5 %
Emission or Release Factor: Soil: 0%

Preconditions and technical measures/Organisational measures

Preconditions and measures related to municipal sewage treatment plant
Type of wastewater treatment plant: Municipal STP
Flow rate of sewage plant emission: 2000 m3/d
Sewage sludge treatment: Controlled application of waste water sludge on agricultural land

2.2. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC5: MIXING OR BLENDING IN BATCH PROCESSES FOR FORMULATION OF PREPARATIONS AND ARTICLES (CONTACT AT DIFFERENT STAGES AND/OR IMPORTANT CONTACT)

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 480 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: internal

Pre-conditions and technical measures
Provide a good standard of general ventilation (not less than 1 air change per hour) with local aspiration.
Effectiveness: 80 %

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator in accordance with EN136 with filter type A/P2 or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.3. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC8a: TRANSFER OF A SUBSTANCE OR A PREPARATION (FILLING/ EMPTYING) FROM/ TO VESSELS/ LARGE CONTAINERS, IN NON-DEDICATED FACILITIES

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 960 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: internal

Pre-conditions and technical measures
Provide a good standard of general ventilation (not less than 1 air change per hour With local suction.
Effectiveness: 80 %

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator in accordance with EN136 with filter type A/P2 or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.4. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC8b: TRANSFER OF A SUBSTANCE OR A PREPARATION (FILLING/ EMPTYING) FROM/ TO VESSELS/ LARGE CONTAINERS, IN DEDICATED FACILITIES

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 960 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: internal

Pre-conditions and technical measures
Provide a good standard of general ventilation (not less than 1 air change per hour, use in semi-closed loading procedure with occasional controlled exposure With local suction.
Effectiveness: 90 %

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator in accordance with EN136 with filter type A/P2 or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.5. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC9: TRANSFER OF SUBSTANCE OR PREPARATION INTO SMALL CONTAINERS (DEDICATED FILLING LINE, INCLUDING WEIGHING)

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 480 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: internal

Pre-conditions and technical measures
Provide a good standard of general ventilation (not less than 1 air change per hour, use in semi-closed loading procedure with occasional controlled exposure With local suction.
Effectiveness: 90 %

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator in accordance with EN136 with filter type A/P2 or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.6. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC10: APPLICATION WITH ROLLERS OR BRUSHES

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 960 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: internal

Pre-conditions and technical measures
Provide a good standard of general ventilation (not less than 1 air change per hour With local suction.
Effectiveness: 80 %

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator in accordance with EN136 with filter type A/P2 or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.7. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC11: NON-INDUSTRIAL SPRAY APPLICATION

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 1500 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: internal

Pre-conditions and technical measures
Provide a good standard of general ventilation (not less than 1 air change per hour With local suction.
Effectiveness: 80 %

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator in accordance with EN136 with filter type A/P2 or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.8. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC13: TREATMENT OF ARTICLES BY DIPPING AND POURING

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 480 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: internal

Pre-conditions and technical measures
Provide a good standard of general ventilation (not less than 1 air change per hour With local suction.
Effectiveness: 80 %

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator in accordance with EN136 with filter type A/P2 or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.9. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC14: PRODUCTION OF PREPARATIONS OR ARTICLES BY TABLETTING, COMPRESSION, EXTRUSION, PELLETISATION

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 480 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: internal

Pre-conditions and technical measures
Provide a good standard of general ventilation (not less than 1 air change per hour With local suction.
Effectiveness: 80 %

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator in accordance with EN136 with filter type A/P2 or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.10. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC19: HAND-MIXING WITH DIRECT CONTACT AND ONLY PPE AVAILABLE

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 1980 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: internal

Pre-conditions and technical measures
Provide a good standard of general ventilation (not less than 1 air change per hour With local suction.
Effectiveness: 80 %

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator in accordance with EN136 with filter type A/P2 or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

3. EXPOSURE ESTIMATION AND REFERENCE TO RELATED SOURCE

Environment

Contributing scenario	Procedure for exposure assessment	Specific conditions	Sub-fund	Exposure level	RCR	Remarks
ERC8c	CHESAR model used	/	Fresh water	0.000033 mg/l	< 0.01	/
ERC8c	CHESAR model used	/	Fresh water sediment	0.000205 mg/kg dry weight	< 0.01	/
ERC8c	CHESAR model used	/	Sea water	0.0000034 mg/l	< 0.01	/
ERC8c	CHESAR model used	/	Marine sediment	0.0000211 mg/kg dry weight	< 0.01	/
ERC8c	CHESAR model used	/	STP	0.000122 mg/l	< 0.01	/
ERC8c	CHESAR model used	/	Soil	0.0000032 mg/kg dry weight	< 0.01	/
ERC8c	CHESAR model used	/	Man	0.0000011 mg/kg dry weight	< 0.01	/

Workers

Contributing scenario	Procedure for exposure assessment	Value type	Exposure level	Remarks
PROC5	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	0.396 mg/m³	/
PROC5	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	2.638 mg/m³	/
PROC5	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	1.371 mg/kg pc/day	/
PROC5	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC5	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.2 mg/kg pc/day	/
PROC5	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC5	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC8a	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	0.989 mg/m³	/
PROC8a	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	6.595 mg/m³	/
PROC8a	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	1.371 mg/kg pc/day	/
PROC8a	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC8a	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.1 mg/kg bw/day	/
PROC8a	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC8a	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC8b	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	0.198 mg/m³	/
PROC8b	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	1.319 mg/m³	/
PROC8b	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	1.371 mg/kg pc/day	/
PROC8b	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC8b	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.1 mg/kg bw/day	/

Contributing scenario	Procedure for exposure assessment	Value type	Exposure level	Remarks
PROC8b	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC8b	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC9	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	0.396 mg/m³	/
PROC9	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	2.638 mg/m³	/
PROC9	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	0.686 mg/kg bw/day	/
PROC9	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC9	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.1 mg/kg bw/day	/
PROC9	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC9	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC10	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	0.989 mg/m³	/
PROC10	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	6.595 mg/m³	/
PROC10	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	2.743 mg/kg bw/day	/
PROC10	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC10	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.2 mg/kg pc/day	/
PROC10	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC10	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC11	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	3.957 mg/m³	/
PROC11	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	26.38 mg/m³	/
PROC11	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	10.71 mg/kg bw/day	/
PROC11	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC11	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.5 mg/kg bw/day	/
PROC11	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC11	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC13	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	0.396 mg/m³	/
PROC13	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	2.638 mg/m³	/
PROC13	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	1.371 mg/kg pc/day	/
PROC13	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC13	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.2 mg/kg pc/day	/

Contributing scenario	Procedure for exposure assessment	Value type	Exposure level	Remarks
PROC13	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC13	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC14	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	0.396 mg/m³	/
PROC14	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	2.638 mg/m³	/
PROC14	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	0.343 mg/kg bw/day	/
PROC14	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC14	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.05 mg/kg bw/day	/
PROC14	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC14	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC19	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	0.989 mg/m³	/
PROC19	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	6.595 mg/m³	/
PROC19	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	14.14 mg/kg bw/day	/
PROC19	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC19	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.05 mg/kg bw/day	/
PROC19	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC19	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.

Guidance to downstream users to evaluate whether they work inside the boundaries set by the exposure scenario

ECETOC TRA, o, EUSES v2.1: Methods are based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e. RCR > 1), additional risk management measures or a site-specific chemical safety assessment are required.

1. STRUCTURED SHORT TITLE: ES9: WIDE DISPERSIVE OUTDOOR USE RESULTING IN INCLUSION INTO OR ONTO A MATRIX

Main user groups: **SU 22 -** Professional uses: public sector (administration, education, entertainment, services, crafts)
Environmental release category: **ERC8f** Wide dispersive external use resulting in being included in or applied to a matrix
Process category:
PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (contact at different stages and/or important contact)
PROC8a - Transfer of a substance or a preparation (filling/ emptying) from/ to vessels/ large containers, in non-dedicated facilities
PROC8b - Transfer of a substance or a preparation (filling/ emptying) from/ to vessels/ large containers, in dedicated facilities.
PROC9 - Transfer of a substance or preparation into small containers (dedicated filling line, including weighing)
PROC10 - Application with rollers or brushes
PROC11 - Non-industrial spray application
PROC13 - Treatment of articles by dipping and pouring
PROC14 - Production of preparations or articles by tabletting, compression, extrusion, pelettisation
PROC19 - Hand-mixing with direct contact and only PPE available

2.1. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF ENVIRONMENTAL EXPOSURE FOR FEICA SPERC 8f.1.v1: WIDE DISPERSIVE USE OF NON-SOLVENT SUBSTANCES IN CONSTRUCTION ADHESIVES FOR OUTDOOR APPLICATIONS (FEICA 14)

Quantity used
Daily quantity per site: 4 g/day
Fraction of amount used by region: 10%

Frequency and duration of use
Continuous exposure: 365 days/year

Environmental factors not influenced by risk management
Mobile phase efflux rate: 18000 m3/d
Dilution factor (river): 10
Dilution factor (coastal areas): 100

Other given operational conditions affecting environmental exposure
Number of days of issue per year: 365
Emission or Release Factor: Air: 0%
Emission or Release Factor: Water: 1.5 %
Emission or Release Factor: Soil: 0%

Preconditions and technical measures/Organisational measures

Preconditions and measures related to municipal sewage treatment plant
Type of wastewater treatment plant: Municipal STP
Flow rate of sewage plant emission: 2000 m3/d
Sewage sludge treatment: Controlled application of waste water sludge on agricultural land

2.2. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC5: MIXING OR BLENDING IN BATCH PROCESSES FOR FORMULATION OF PREPARATIONS AND ARTICLES (CONTACT AT DIFFERENT STAGES AND/OR IMPORTANT CONTACT)

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 480 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: outdoor

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator conforming to EN136 with type A filter or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.3. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC8a: TRANSFER OF A SUBSTANCE OR A PREPARATION (FILLING/ EMPTYING) FROM/ TO VESSELS/ LARGE CONTAINERS, IN NON-DEDICATED FACILITIES

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 960 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: outdoor

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator conforming to EN136 with type A filter or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.4. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC8b: TRANSFER OF A SUBSTANCE OR A PREPARATION (FILLING/ EMPTYING) FROM/ TO VESSELS/ LARGE CONTAINERS, IN DEDICATED FACILITIES

Product features
Remarks: Covers percentage substance in the product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 960 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: outdoor

Pre-conditions and technical measures
Use in semi-closed loading procedure with occasional controlled exposure.

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator conforming to EN136 with type A filter or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.5. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC9: TRANSFER OF SUBSTANCE OR PREPARATION INTO SMALL CONTAINERS (DEDICATED FILLING LINE, INCLUDING WEIGHING)

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 480 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: outdoor

Pre-conditions and technical measures
Use in semi-closed loading procedure with occasional controlled exposure.

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator conforming to EN136 with type A filter or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.6. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC10: APPLICATION WITH ROLLERS OR BRUSHES

Product features
Remarks: Covers percentage substance in the product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 960 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: outdoor

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator conforming to EN136 with type A filter or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.7. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC11: NON-INDUSTRIAL SPRAY APPLICATION

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 1500 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: outdoor

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator conforming to EN136 with type A filter or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.8. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC13: TREATMENT OF ARTICLES BY DIPPING AND POURING

Product features
Remarks: Covers percentage substance in the product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 480 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: outdoor

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator conforming to EN136 with type A filter or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.9. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC14: PRODUCTION OF PREPARATIONS OR ARTICLES BY TABLETTING, COMPRESSION, EXTRUSION, PELLETISATION

Product features
Remarks: Covers percentage substance in product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 480 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: outdoor

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator conforming to EN136 with type A filter or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

2.10. CONTRIBUTIVE SCENARIO FOR THE CONTROL OF OCCUPATIONAL EXPOSURE OF WORKERS FOR PROC19: HAND-MIXING WITH DIRECT CONTACT AND ONLY PPE AVAILABLE

Product features
Remarks: Covers percentage substance in the product up to 100 % (unless otherwise stated).
Physical Form (at time of use): liquid
Conditions: e ≤40°C

Frequency and duration of use
Duration of the activity: < 4 h

Human factors not influenced by risk management
Dermal exposure: ≤ 1980 cm²

Other operational conditions affecting worker exposure
Outdoors/in closed environments: outdoor

Organizational measures to prevent/limit releases, dispersion and exposure
Assumes a good basic standard of occupational hygiene is implemented.

Pre-conditions and measures related to body protection, hygiene and assessment of health aspects
Wear a full face respirator conforming to EN136 with type A filter or better.
Effectiveness: 95 %
During the basic training wear chemical resistant gloves (tested according to EN 374).
Effectiveness: 90 %

3. EXPOSURE ESTIMATION AND REFERENCE TO RELATED SOURCE

Environment

Contributing scenario	Procedure for exposure assessment	Specific conditions	Sub-fund	Exposure level	RCR	Remarks
ERC8f	CHESAR model used	/	Fresh water	0.000024 mg/l	< 0.01	/
ERC8f	CHESAR model used	/	Fresh water sediment	0.00014 mg/kg dry weight	< 0.01	/
ERC8f	CHESAR model used	/	Sea water	0.0000025 mg/l	< 0.01	/
ERC8f	CHESAR model used	/	Marine sediment	0.000015 mg/kg dry weight	< 0.01	/
ERC8f	CHESAR model used	/	STP	0.00003 mg/l	< 0.01	/
ERC8f	CHESAR model used	/	Soil	0.0000018 mg/kg dry weight	< 0.01	/
ERC8f	CHESAR model used	/	Man	0.0000007 mg/kg dry weight	< 0.01	/

Workers

Contributing scenario	Procedure for exposure assessment	Value type	Exposure level	Remarks
PROC5	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	1.385 mg/m³	/
PROC5	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	9.234 mg/m³	/
PROC5	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	1.371 mg/kg pc/day	/
PROC5	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC5	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.2 mg/kg pc/day	/
PROC5	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC5	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC8a	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	3.463 mg/m³	/
PROC8a	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	23.08 mg/m³	/
PROC8a	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	1.371 mg/kg pc/day	/
PROC8a	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC8a	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.1 mg/kg bw/day	/
PROC8a	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC8a	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC8b	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	1.385 mg/m³	/
PROC8b	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	9.234 mg/m³	/
PROC8b	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	1.371 mg/kg pc/day	/
PROC8b	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC8b	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.1 mg/kg bw/day	/
PROC8b	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC8b	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC9	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	1.385 mg/m³	/
PROC9	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	9.234 mg/m³	/
PROC9	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	0.686 mg/kg bw/day	/
PROC9	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC9	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.1 mg/kg bw/day	/
PROC9	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC9	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.

Contributing scenario	Procedure for exposure assessment	Value type	Exposure level	Remarks
PROC10	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	3.463 mg/m³	/
PROC10	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	23.08 mg/m³	/
PROC10	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	2.743 mg/kg bw/day	/
PROC10	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC10	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.2 mg/kg pc/day	/
PROC10	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC10	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC11	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	13.85 mg/m³	/
PROC11	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	92.34 mg/m³	/
PROC11	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	10.71 mg/kg bw/day	/
PROC11	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC11	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.5 mg/kg bw/day	/
PROC11	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC11	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC13	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	1.385 mg/m³	/
PROC13	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	9.234 mg/m³	/
PROC13	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	1.371 mg/kg pc/day	/
PROC13	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC13	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.2 mg/kg pc/day	/
PROC13	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC13	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC14	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	1.385 mg/m³	/
PROC14	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	9.234 mg/m³	/
PROC14	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	0.343 mg/kg bw/day	/
PROC14	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC14	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.05 mg/kg bw/day	/
PROC14	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC14	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.
PROC19	ECETOCTRA v3 (2012)	Worker - inhalation exposure, long-term - local	3.463 mg/m³	/

Contributing scenario	Procedure for exposure assessment	Value type	Exposure level	Remarks
PROC19	ECETOCTRA v3 (2012)	Worker - inhalative, short-term - systemic	23.08 mg/m³	/
PROC19	ECETOCTRA v3 (2012)	Worker - dermal, longterm - systemic	14.14 mg/kg bw/day	/
PROC19	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - systemic	/	See section 8.
PROC19	ECETOCTRA v3 (2012)	Worker - dermal, longterm - local	0.05 mg/kg bw/day	/
PROC19	Qualitative approach adopted to draw conclusions on safe use	worker - dermal, short term - local	/	See section 8.
PROC19	Qualitative approach adopted to draw conclusions on safe use	worker - contact with eyes	/	See section 8.

Guidance to downstream users to evaluate whether they work inside the boundaries set by the exposure scenario

ECETOC TRA, o, EUSES v2.1: Methods are based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e. RCR > 1), additional risk management measures or a site-specific chemical safety assessment are required.

m-phenylenebis(methylamine)

Substance identification
Chemical Name: m-phenylenebis(methylamine)
CAS number: CAS-1477-55-0
Date - Version: 10/03/2020 - 1.0

PROFESSIONAL USES - GENERALIZED USE BY PROFESSIONAL OPERATORS: VARIOUS PRODUCTS (PC9a, PC9b, PC1); CONSTRUCTION (SU19)

1. TITLE SECTION

Exposure scenario name: Professional use of coatings and paints - Use in composite and foundry materials
Life cycle stage: Professional uses
Sectors of use: Construction (SU19) - Professional uses (SU22)
Product categories: Coatings and paints, thinners, pickling solutions (PC9a) - Additives, fillers, plasters, modeling clay (PC9b) - Adhesives, Sealants (PC1)

CONTRIBUTION SCENARIO - ENVIRONMENT

CS1: Wet cure - Wet formulation ERC8c - ERC8f

CONTRIBUTION SCENARIO - WORKER

CS2: Application with rollers or brushes PROC10
CS3: Non-industrial spray application PROC11
CS4: Treatment of articles by dipping and pouring PROC13
CS5: Manual activities with direct contact PROC19
CS6: Low energy handling of substances included in or on materials and/or articles PROC21

2. CONDITIONS OF USE AFFECTING EXPOSURE

2.1. CS1: CONTRIBUTION SCENARIO - ENVIRONMENT: Wet cure - Wet formulation (ERC8c, ERC8f)

Environmental release categories

Widespread use resulting in inclusion in or on the surface of an article (indoor use) - Wide use leading to inclusion in/on article (outdoor use) (ERC8c, ERC8f)

Product features (article)

Physical form of the product: Liquid

Amount used, frequency and duration of use/(or duration of use)

Amounts used:
PROC10 ≤ 0,4 l/min
PROC11 ≤ 0,3 l/min
PROC13 ≤ 2 l/min
PROC19 ≤ 1 l/min
PROC21 ≤ 0,3 l/min

Measures and technical-organizational conditions

Control measures to prevent releases: No entry of substance into waste water.

Conditions and measures for waste treatment (including the product waste)

Waste treatment: This material and its container must be disposed of as hazardous.
Dispose of waste product or used containers according to local regulations.
Incineration of hazardous waste.

2.2. CS2: CONTRIBUTION SCENARIO - WORKER: Application with rollers or brushes (PROC10)

Product features (article)
Physical form of the product: Liquid.
Concentration of the substance in the product: Includes substance shares in the product up to 5%.

Amount used, frequency and duration of use/(or duration of use)
Amounts used: Quantity per use 0.4 l/min
Duration: ≤ 5 h/day
Frequency: 365 days/year

Technical organizational measures
Ensure that direct skin contact is avoided.
Avoid direct contact with the product, even with contaminated hands.
Ensure operating personnel are trained to minimize exposure.
See main part of the safety data sheet, Sections 7 and/or 8, for measures mitigating the risks deriving from the physical-chemical properties.
Ensure a sufficient amount of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection, hygiene and health verification
Personal protective equipment:
Wear suitable face protection.
Use adequate eye protection.
Wear a suitable apron to avoid skin exposure.
Wear suitable gloves, tested according to EN347.
Use a respiratory protective device according to EN140.
Dermal: minimum efficiency of 80%.
Inhalation: minimum efficiency of 95%.

2.3. CS3: CONTRIBUTION SCENARIO - WORKER: Non-industrial spray application (PROC11)

Product features (article)
Physical form of the product: Liquid.
Concentration of the substance in the product: Includes substance shares in the product up to 5%.

Amount used, frequency and duration of use/(or duration of use)
Amounts used: Quantity per use 0.3 l/min
Duration: ≤ 6 h/day
Frequency: 365 days/year

Technical organizational measures
Ensure that direct skin contact is avoided.
Avoid direct contact with the product, even with contaminated hands.
Ensure operating personnel are trained to minimize exposure.
See main part of the safety data sheet, Sections 7 and/or 8, for measures mitigating the risks deriving from the physical-chemical properties.
Ensure a sufficient amount of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection, hygiene and health verification
Personal protective equipment:
Wear suitable face protection.
Use adequate eye protection.
Wear a suitable apron to avoid skin exposure.
Wear suitable gloves, tested according to EN347.
Use a respiratory protective device according to EN140.
Dermal: minimum efficiency of 80%.
Inhalation: minimum efficiency of 95%.

2.4. CS4: CONTRIBUTION SCENARIO - WORKER: Treatment of articles by dipping and pouring (PROC13)

Product features (article)
Physical form of the product: Liquid.
Concentration of the substance in the product: Includes substance shares in the product up to 5%.

Amount used, frequency and duration of use/(or duration of use)
Amounts used: Quantity per use 2 l/min
Duration: ≤ 1 h/day
Frequency: 365 days/year

Technical organizational measures
Ensure that direct skin contact is avoided.
Avoid direct contact with the product, even with contaminated hands.
Ensure operating personnel are trained to minimize exposure.
See main part of the safety data sheet, Sections 7 and/or 8, for measures mitigating the risks deriving from the physical-chemical properties.
Ensure a sufficient amount of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection, hygiene and health verification
Personal protective equipment:
Wear suitable face protection.
Use adequate eye protection.
Wear a suitable apron to avoid skin exposure.
Wear suitable gloves, tested according to EN347.
Use a respiratory protective device according to EN140.
Dermal: minimum efficiency of 80%.
Inhalation: minimum efficiency of 95%.

2.5. CS5: CONTRIBUTION SCENARIO - WORKER: Manual activities with direct contact (PROC19)

Product features (article)
Physical form of the product: Liquid.
Concentration of the substance in the product: Includes substance shares in the product up to 40%.

Amount used, frequency and duration of use/(or duration of use)
Amounts used: Quantity per use 1 l/min
Duration: ≤ 2 h/day
Frequency: 365 days/year

Technical organizational measures
Ensure that direct skin contact is avoided.
Avoid direct contact with the product, even with contaminated hands.
Ensure operating personnel are trained to minimize exposure.
See main part of the safety data sheet, Sections 7 and/or 8, for measures mitigating the risks deriving from the physical-chemical properties.
Ensure a sufficient amount of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection, hygiene and health verification
Personal protective equipment:
Wear suitable face protection.
Use adequate eye protection.
Wear a suitable apron to avoid skin exposure.
Wear suitable gloves, tested according to EN347.
Use a respiratory protective device according to EN140.
Dermal: minimum efficiency of 80%.
Inhalation: minimum efficiency of 95%.

2.6. CS6: CONTRIBUTION SCENARIO - WORKER: Low energy handling of substances included in or on materials and/or articles (PROC21)

Product features (article)

Physical form of the product: Liquid.
Concentration of the substance in the product: Includes substance shares in the product up to 5%.

Amount used, frequency and duration of use/(or duration of use)

Amounts used: Quantity per use 0.3 l/min
Duration: ≤ 6 h/day
Frequency: 365 days/year

Technical organizational measures

Ensure that direct skin contact is avoided.
Avoid direct contact with the product, even with contaminated hands.
Ensure operating personnel are trained to minimize exposure.
See main part of the safety data sheet, Sections 7 and/or 8, for measures mitigating the risks deriving from the physical-chemical properties.
Ensure a sufficient amount of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection, hygiene and health verification

Personal protective equipment:
Wear suitable face protection.
Use adequate eye protection.
Wear a suitable apron to avoid skin exposure.
Wear suitable gloves, tested according to EN347.
Use a respiratory protective device according to EN140.
Dermal: minimum efficiency of 80%.
Inhalation: minimum efficiency of 95%.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1. CS1: CONTRIBUTION SCENARIO - ENVIRONMENT: Wet cure - Wet formulation (ERC8c, ERC8f)

Protection goal	Degree of exposure	Calculation method	Risk Characterization Ratio (RCR)
fresh water	N.d.	ECETOC TRA environment v2.0	0.169
fresh water sediment	N.d.	ECETOC TRA environment v2.0	0.411
sea water	N.d.	ECETOC TRA environment v2.0	0.089
Marine sediment	N.d.	ECETOC TRA environment v2.0	0.412
Agricultural land	N.d.	ECETOC TRA environment v2.0	0.004

3.2. CS2: CONTRIBUTION SCENARIO - ENVIRONMENT: Application with rollers or brushes (PROC10)

Route of exposure, Impact on health, Exposure indicator	Degree of exposure	Calculation method	Risk Characterization Ratio (RCR)
skin contact, systemic, long-term	N.d.	RISKOFDERM v2.1	0.83
by inhalation, systemic, long-term	N.d.	ECETOC TRA worker v2.0	0.2

1 - m-phenylenebis(methylamine) - 1

3.3. CS3 CONTRIBUTION SCENARIO - ENVIRONMENT: Non-industrial spray application (PROC11)

Route of exposure, Impact on health, Exposure indicator	Degree of exposure	Calculation method	Risk Characterization Ratio (RCR)
skin contact, systemic, long-term	N.d.	RISKOFDERM v2.1	0.83
by inhalation, systemic, long-term	N.d.	ECETOC TRA worker v2.0	0.2

3.4. CS4 CONTRIBUTION SCENARIO - ENVIRONMENT: Treatment of articles by dipping and pouring (PROC13)

Route of exposure, Impact on health, Exposure indicator	Degree of exposure	Calculation method	Risk Characterization Ratio (RCR)
skin contact, systemic, long-term	N.d.	RISKOFDERM v2.1	0.83
by inhalation, systemic, long-term	N.d.	ECETOC TRA worker v2.0	0.2

3.5. CS5 CONTRIBUTION SCENARIO - ENVIRONMENT: Manual activities with direct contact (PROC19)

Route of exposure, Impact on health, Exposure indicator	Degree of exposure	Calculation method	Risk Characterization Ratio (RCR)
skin contact, systemic, long-term	N.d.	RISKOFDERM v2.1	0.83
by inhalation, systemic, long-term	N.d.	ECETOC TRA worker v2.0	0.2

3.6. CS6 CONTRIBUTION SCENARIO - ENVIRONMENT: Low energy handling of substances included in or on materials and/or articles (PROC21)

Route of exposure, Impact on health, Exposure indicator	Degree of exposure	Calculation method	Risk Characterization Ratio (RCR)
skin contact, systemic, long-term	N.d.	RISKOFDERM v2.1	0.83
by inhalation, systemic, long-term	N.d.	ECETOC TRA worker v2.0	0.2

4. GUIDANCE FOR DOWNSTREAM USERS TO ASSESS WHETHER THEY COMPLY WITH THE LIMITS SET BY THE EXPOSURE SCENARIO

Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented.
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

phenol, styrenated

Substance identification
Chemical Name: phenol, styrenated
CAS number: 61788-44-1

COATINGS AND PAINTS - PROFESSIONAL USE

1. TITLE SECTION

Exposure scenario name: Professional use of coatings and paints
Date - Version: 10/03/2020 - 1.0
Life cycle stage: Generalized use by professional operators
Main user group: Professional uses
Sectors of use Professional uses (SU22)

Contributing scenario - Environment

CS1 Wet polymerization - wet formulation: ERC8c

Contributing scenario - Worker

CS2 Blend Operations: PROC5
CS3 Material Transfers: PROC8a
CS4 Material Transfers PROC8b
2. CONTRIBUTIVE SCENARIOS

2.1. Contributing Scenario CS1 - Environment: Wet polymerization - wet formulation (ERC8c)

Environmental release categories: Widespread use resulting in inclusion in or on the surface of an article (indoor use) (ERC8c)

Amount used, frequency and duration of use

Quantities used: Daily quantity per site 8.25E-06 ton/day

Conditions and measures relating to municipal sewage treatment plants

Type of sewage treatment plant (STP): Municipal STP Water - 92.56% minimum efficiency
STP effluent (m^3/day): 2000

Waste treatment conditions and measures (including product waste)

Waste treatment: No specific measures identified.

Other operational conditions affecting environmental exposure

Flow rate of receiving surface water: 18000 m^3/day

2.2. CS2 Contributing Scenario - Worker: Mixing Operations (PROC5)

Environmental release categories: Mixing or blending in batch processes (PROC5)

Product features (article)

Physical form of the product: Liquid
Concentration of the substance in the product: Substance as it is.

Amount used, frequency and duration of use

Duration: Covers exposure up to 8 hours.

Measures and technical-organizational conditions

Ensure a sufficient amount of general ventilation (1 to 3 air changes per hour).
Ensure operating personnel are trained to minimize exposure.
Dermal - minimum 80% efficiency.
Inhalation - minimum 80% efficiency.

Conditions and measures for personal protection, hygiene and health verification

Personal protective equipment: Wear suitable respiratory protection. Inhalation - minimum 90% efficiency.

Other operational conditions affecting worker exposure
Indoor use
Temperature: A process temperature of up to 40°C is assumed.
Body parts exposed: Possible skin contact is believed to be limited to the hands.

2.3. CS3 Contributing Scenario - Worker: Material transfers (PROC8a)
Process categories: Transfer of a substance or a preparation (filling/emptying) at non-dedicated facilities (PROC8a)

Product features (article)
Physical form of the product: Liquid
Concentration of the substance in the product: Substance as it is.

Amount used, frequency and duration of use/exposure
Duration: Covers a daily exposure of up to 1 hour.

Measures and technical-organizational conditions
Ensure a sufficient amount of general ventilation (1 to 3 air changes per hour).
Ensure operating personnel are trained to minimize exposure.
Dermal - minimum 80% efficiency.
Inhalation - minimum 80% efficiency.

Conditions and measures for personal protection, hygiene and health verification
Personal protective equipment: Wear suitable respiratory protection. Inhalation - minimum 90% efficiency.

Other operational conditions affecting worker exposure
Indoor use
Temperature: A process temperature of up to 40°C is assumed.
Body parts exposed: Possible skin contact is believed to be limited to the hands.

2.4. CS4 Contributing Scenario - Worker: Material transfers (PROC8b)
Process categories: Transfer of a substance or a preparation (filling/emptying) at dedicated facilities (PROC8b)

Product features (article)
Physical form of the product: Liquid
Concentration of the substance in the product: Substance as it is.

Amount used, frequency and duration of use/exposure
Duration: Covers a daily exposure of up to 1 hour.

Measures and technical-organizational conditions
Ensure a sufficient amount of general ventilation (1 to 3 air changes per hour).
Ensure operating personnel are trained to minimize exposure.
Dermal - minimum 80% efficiency.
Inhalation - minimum 80% efficiency.

Conditions and measures for personal protection, hygiene and health verification
Personal protective equipment: Wear suitable respiratory protection. Inhalation - minimum 90% efficiency.

Other operational conditions affecting worker exposure
Indoor use
Temperature: A process temperature of up to 40°C is assumed.
Body parts exposed: Possible skin contact is believed to be limited to the hands.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1. Contributing Scenario CS1 - Environment: Wet polymerization - Wet Formulation (ERC8c)

Release route	Release rate	Release evaluation method
Water	8.25E-05 kg/day	N.d.
Air	15%	N.d.

Protection target	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
fresh water	1.821E-06 mg/l	N.d.	<0.01
fresh water sediment	0.383 mg/kg dry weight	N.d.	<0.01
sewage treatement plant	3.578E-07 mg/l	N.d.	<0.01
Marine sediment	0.075 mg/kg dry weight	N.d.	<0.01
sewage treatement plant	3.071E-06 mg/l	N.d.	<0.01
agricultural land	0.004 mg/kg dry weight	N.d.	<0.01
environmentally exposed people - Inhalation	0.000288 mg/m³	N.d.	<0.01
environmentally exposed people - Oral	2.25E-06 mg/kg bw/day	N.d.	<0.01
all ways	N.d.	N.d.	<0.01

3.2. CS2 Contributing Scenario - Worker: Mixing Operations (PROC5)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, systemic, long-term	1.65 mg/m³	ECETOC TRA Worker v3	0.15
skin contact, systemic, long-term	2.742 mg/kg bw/day	ECETOC TRA Worker v3	0.439
combined routes, systemic, long-term	N.d.	ECETOC TRA Worker v3	0.588

3.3. CS3 Contributing Scenario - Worker: Material transfers (PROC8a)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, systemic, long-term	0.825 mg/m³	ECETOC TRA Worker v3	0.075
skin contact, systemic, long-term	2.742 mg/kg bw/day	ECETOC TRA Worker v3	0.439
combined routes, systemic, long-term	N.d.	ECETOC TRA Worker v3	0.514

2.3. CS4 Contributing Scenario - Worker: Material transfers (PROC8b)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, systemic, long-term	1.65 mg/m³	ECETOC TRA Worker v3	0.15
skin contact, systemic, long-term	2.742 mg/kg bw/day	ECETOC TRA Worker v3	0.439
combined routes, systemic, long-term	N.d.	ECETOC TRA Worker v3	0.588

4. GUIDANCE FOR DOWNSTREAM USERS TO ASSESS WHETHER THEY COMPLY WITH THE LIMITS SET BY THE EXPOSURE SCENARIO

Guidance to check compliance with the exposure scenario: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

2-methoxy-1-methylethyl acetate

Substance identification
Chemical Name: 2-methoxy-1-methylethyl acetate
CAS number: 108-65-6
Date - Version: 02/08/2021 18.0

4. USE IN COATINGS. - USE IN INDUSTRIAL PLANTS

Short title of the exposure scenario: Use in coatings. - Use in industrial plants
SU3; ERC4; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: ERC4: Industrial use of processing aids not becoming part of articles.

Operating conditions

Yearly amount used in EU: 63,050,000 kg
Daily amount per site: 105.087 kg
Minimum continuous emission days per year: 300
Emission factor to air: 27%
Emission factor in water: 2%
Emission factor in soil: 0.1%
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Treat air emissions to provide a typical removal efficiency of 70%.
Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the wastewater after Risk Management Measures and treatment in the treatment plant (5): 87.3%
Assumed treatment plant flow: 2,000 m³/day

Measures relative to the waste

Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source

Risk Characterization Ratio (RCR): 0.1338
Risk from environmental exposure is driven by freshwater and marine water.
Maximum safe use amount: 79,180 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC1: Use in closed process, no likelihood of exposure.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 0.04 mg/m³
Risk Characterization Ratio (RCR): 0.0001
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. General exposure. Continuous process (closed system) with sample collection.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. Film formation - Fast drying.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Operation is carried out at elevated temperature (> 20°C above ambient temperature).

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.5
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC3: Use in batch process (synthesis or formulation). Mixing operations. General exposure (closed system).

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 93.85 mg/m³
Risk Characterization Ratio (RCR): 0.25
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC4: Use in batch process (synthesis) where opportunity for exposure arises. Film formation - Air drying.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application. Mixing operations (open systems).

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC7: Industrial spray application. Spraying (automatic/robotic).

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Carry out in a vented booth or extracted enclosure. Effectiveness: 95%.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 46.93 mg/m³
Risk Characterization Ratio (RCR): 0.13
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 2.14 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.04

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC7: Industrial spray application. Spraying (manual).

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Effectiveness: 70%.
Wear suitable gloves compliant with EN ISO 374-1. Effectiveness: 80%.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 281.56 mg/m³
Risk Characterization Ratio (RCR): 0.76
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 8.57 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.17

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Non-dedicated system.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. Material transfers. Dedicated plant.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Material transfers. Drum/batch transfers. Transfer from containers. Dedicated plant.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes. Roller, spatula, jet application.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Wear suitable gloves compliant with EN ISO 374-1. Effectiveness: 80%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 5.49 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.11

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping, pouring, enamelling.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC14: Production of preparations or articles by tableting, compression, extrusion or pelletising. Production or preparation of articles by tableting, compression, extrusion.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 3.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.07

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC15: Use as laboratory reagent. Laboratory activities.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

5. USE IN COATINGS. - USE IN INDUSTRIAL PLANTS

Short title of the exposure scenario: Use in coatings. - Use in industrial plants
SU3; ERC4; PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC14, PROC15

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: ERC4: Industrial use of processing aids not becoming part of articles.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 430kg
Minimum continuous emission days per year: 300
Emission factor to air: 80%
Emission factor in water: 10%
Emission factor in soil: 0.1%
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the wastewater after Risk Management Measures and treatment in the treatment plant (5): 87.3%
Assumed treatment plant flow: 2,000 m³/day

Measures relative to the waste

Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source

Risk Characterization Ratio (RCR): 0.029
Risk from environmental exposure is driven by freshwater and marine water.
Maximum safe use amount: 140.104 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC1: Use in closed process, no likelihood of exposure (closed system). General exposure.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure.
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. General exposure. Continuous process (closed system) with sample collection.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 7.51 mg/m³
Risk Characterization Ratio (RCR): 0.02
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. Film formation - Fast drying.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Operation is carried out at elevated temperature (> 20°C above ambient temperature).

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC3: Use in batch process (synthesis or formulation). Mixing operations. General exposure (closed system).

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 18.77 mg/m³
Risk Characterization Ratio (RCR): 0.05
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC4: Use in batch process (synthesis) where opportunity for exposure arises. Film formation - Air drying.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 15.02 mg/m³
Risk Characterization Ratio (RCR): 0.04
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application. Mixing operations (open systems).

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC7: Industrial spray application. Spraying (automatic/robotic). Spraying (manual)

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Wear suitable gloves compliant with EN ISO 374-1. Effectiveness: 80%.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 8.57 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.17

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC7: Industrial spray application. Spraying (manual).

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Wear suitable gloves compliant with EN ISO 374-1.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Non-dedicated system.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. Material transfers. Dedicated plant.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Material transfers. Drum/batch transfers. Transfer from containers. Dedicated plant.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes. Roller, spatula, jet application.

Area of use: Industrial

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 27.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.54

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping, pouring, enamelling.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC14: Production of preparations or articles by tableting, compression, extrusion or pelletising. Production or preparation of articles by tableting, compression, extrusion.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 3.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.07

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC15: Use as laboratory reagent. Laboratory activities.

Area of use: Industrial

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 7.51 mg/m³
Risk Characterization Ratio (RCR): 0.02
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

7 USE IN COATINGS. - USE IN INDUSTRIAL PLANTS

Short title of the exposure scenario: Use in coatings. - Use in professional installations
SU22; ERC8a, ERC8d; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: ERC8a: Wide dispersive indoor use of processing aids in open systems.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 433 kg
Minimum continuous emission days per year: 300
Emission factor to air: 80%
Emission factor in water: 10%
Emission factor in soil: 0.1%
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the wastewater after Risk Management Measures and treatment in the treatment plant (5): 87.3%
Assumed treatment plant flow: 2,000 m³/day

Measures relative to the waste

Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source

Risk Characterization Ratio (RCR): 0.029
Risk from environmental exposure is driven by freshwater and marine water.
Maximum safe use amount: 15,141 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: ERC8d: Wide dispersive outdoor use of processing aids in open systems.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 433 kg
Minimum continuous emission days per year: 300
Emission factor to air: 80%
Emission factor in water: 10%
Emission factor in soil: 0.1%
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the wastewater after Risk Management Measures and treatment in the treatment plant (5): 87.3%
Assumed treatment plant flow: 2,000 m³/day

Measures relative to the waste
Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source
Risk Characterization Ratio (RCR): 0.029
Risk from environmental exposure is driven by freshwater and marine water.
Maximum safe use amount: 15,141 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC1: Use in closed process, no likelihood of exposure.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 0.04 mg/m³
Risk Characterization Ratio (RCR): 0.0001
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. Filling/Preparation of equipment required for drums and containers.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure.
The use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. General exposure. Use in confined systems (closed system). Filling/Preparation of equipment required for drums and containers.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Operation is carried out at elevated temperature (> 20°C above ambient temperature).

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC3: Use in batch process (synthesis or formulation). Preparation of material for application

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 93.85 mg/m³
Risk Characterization Ratio (RCR): 0.25
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC4: Use in batch process (synthesis) where opportunity for exposure arises. Film formation - Air drying.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Film formation - Air drying.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure.
The use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%.
Alternatively: Ensure that operations are carried out externally.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 269.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Ensure that operations are carried out externally.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Drum/batch transfers. Non-dedicated system.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. Material transfers. Drum/batch transfers Dedicated plant.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes. Roller, spatula, jet application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%.
Wear suitable gloves compliant with EN ISO 374-1. Effectiveness: 80%
If there is no general ventilation, ensure that operations are carried out outdoors.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 5.49 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.11

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes. Roller, spatula, jet application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Ensure that operations are carried out externally.
Wear suitable gloves compliant with EN ISO 374-1.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application. Spraying (manual).

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Carry out in a vented booth or extracted enclosure. Effectiveness: 80%.
Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 2.14 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.04

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application. Spraying (manual).

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Ensure that operations are carried out externally. Effectiveness: 30%.
Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%.
Wear suitable gloves compliant with EN ISO 374-1. Effectiveness: 80%.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 131.4 mg/m³
Risk Characterization Ratio (RCR): 0.36
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 21.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.42

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping, pouring, enamelling.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%.
Alternatively: Ensure that operations are carried out externally.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping, pouring, enamelling.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Ensure that operations are carried out externally.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC15: Use as laboratory reagent. Laboratory activities.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC19: Manual mixing with direct contact using only personal protective equipment. Hand application - fingerpaints, pastels, adhesives.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%.
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%.
If there is no general ventilation, ensure that operations are carried out outdoors.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 14.14 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.28

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC19: Manual mixing with direct contact using only personal protective equipment. Hand application - fingerpaints, pastels, adhesives.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤100%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Ensure that operations are carried out externally.
Wear chemically resistant gloves in combination with “basic” employee training.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

8. USE IN COATINGS. - USE IN INDUSTRIAL PLANTS

Short title of the exposure scenario: Use in coatings. - Use in professional installations
SU22; ERC8a, ERC8d; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19

EXPOSURE CONTROL AND RISK MANAGEMENT MEASURES

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: ERC8a: Wide dispersive indoor use of processing aids in open systems.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 433 kg
Minimum continuous emission days per year: 300
Emission factor to air: 80%
Emission factor in water: 10%
Emission factor in soil: 0.1%
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the wastewater after Risk Management Measures and treatment in the treatment plant (5): 87.3%
Assumed treatment plant flow: 2,000 m³/day

Measures relative to the waste

Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source

Risk Characterization Ratio (RCR): 0.029
Risk from environmental exposure is driven by freshwater and marine water.
Maximum safe use amount: 15,141 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: ERC8d: Wide dispersive outdoor use of processing aids in open systems.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 433 kg
Minimum continuous emission days per year: 300
Emission factor to air: 80%
Emission factor in water: 10%
Emission factor in soil: 0.1%
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the wastewater after Risk Management Measures and treatment in the treatment plant (5): 87.3%
Assumed treatment plant flow: 2,000 m³/day

Measures relative to the waste
Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source
Risk Characterization Ratio (RCR): 0.029
Risk from environmental exposure is driven by freshwater and marine water.
Maximum safe use amount: 15,141 kg/day

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC1: Use in closed process, no likelihood of exposure. General exposure (closed system).

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. Filling/Preparation of equipment required for drums and containers.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC2: Use in closed, continuous process with occasional controlled exposure. General exposure. Use in confined systems (closed system). Filling/Preparation of equipment required for drums and containers.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Operation is carried out at elevated temperature (> 20°C above ambient temperature).

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 15.02 mg/m³
Risk Characterization Ratio (RCR): 0.4
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC3: Use in batch process (synthesis or formulation). Preparation of material for application

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 18.77 mg/m³
Risk Characterization Ratio (RCR): 0.05
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Film formation - Air drying.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Film formation - Air drying.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Indoor use.
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Ensure that operations are carried out externally.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Drum/batch transfers. Non-dedicated system.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. Material transfers. Drum/batch transfers Dedicated plant.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes. Roller, spatula, jet application.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 27.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.54

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC10: Application with rollers or brushes. Roller, spatula, jet application.

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Indoor/Outdoor: Outdoor use.
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application. Spraying (manual).

Area of use: Professional

Operating conditions
Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%.
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%.
If there is no general ventilation, ensure that operations are carried out outdoors.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 10.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.21

Guidance for downstream users
http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC11: Non-industrial spray application. Spraying (manual).

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Ensure that operations are carried out externally.
Wear chemically resistant gloves in combination with “basic” employee training.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping, pouring, enamelling.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC13: Treatment of articles by dipping, pouring, enamelling.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Indoor use.
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Ensure that operations are carried out externally.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC15: Use as laboratory reagent. Laboratory activities.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 7.51 mg/m³
Risk Characterization Ratio (RCR): 0.02
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC19: Manual mixing with direct contact using only personal protective equipment. Hand application - fingerpaints, pastels, adhesives.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Wear suitable gloves compliant with EN ISO 374-1. Effectiveness: 80%.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Worker - inhalation, long-term - systemic.
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, Operator. Worker - dermal, long-term - systemic.
Exposure estimation: 28.29 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.56

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3

EXPOSURE SCENARIO CONSIDERED

Covered use descriptors: PROC19: Manual mixing with direct contact using only personal protective equipment. Hand application - fingerpaints, pastels, adhesives.

Area of use: Professional

Operating conditions

Substance concentration: 1-methoxy-2-propanol content: ≥0 - ≤5%
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days a week
Indoor/Outdoor: Outdoor use.
Assumes use at not more than 20°C above ambient temperature.

Risk management measures

Wear suitable gloves compliant with EN ISO 374-1.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, Operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

Guidance for downstream users

http://www.esig.org/en/regulatory-information/reach/ges-library/ges-library-3