

## Varnostni list

### FASSA EPOXY 200 COMP.A

Varnostni list z dne 19/02/2025 revizija 2



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

### 1.1 Identifikator izdelka

Identifikacija pripravka:

Komercialno ime: FASSA EPOXY 200 COMP.A

Komercialna koda: 1221

UFI: GUC3-X0A2-600G-ADN6

### 1.2 Pomembne identificirane uporabe snovi ali zmesi in odsvetovane uporabe

Priporočena uporaba: Epoksidna smola

### 1.3 Podrobnosti o dobavitelju varnostnega lista

Dobavitelj FASSA Srl

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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 Dam. 1	Povzroča hude poškodbe oči.
Skin Sens. 1	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.
H318	Povzroča hude poškodbe oči.
H360F	Lahko škoduje plodnosti.
H411	Strupeno za vodne organizme, z dolgotrajnimi učinki.

### Previdnostni stavki

P201	Pred uporabo pridobiti posebna navodila.
P273	Preprečiti sproščanje v okolje.
P280	Nadenite si zaščitne rokavice/obleke ter zaščitite oči/obraz.
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.  
P391 Prestreči razlito tekočino.

Posebne oznake:

EUH205 Vsebuje epoksidne sestavine. Lahko povzroči alergijski odziv.

Vsebuje:

bis-[4-(2,3-epoksi)propoksi]fenil]propan  
1,3-propandiol, 2-etil-2-(hidroksimetil)-,  
polimer z (klorometil)oksiran

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

benzil alkohol  
oksiran, mono[(C12-14-alkiloksi)metil]  
derivati

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 200 COMP.A

Nevarne sestavine, skladno z Uredbo CLP in njeno razvrstitvijo:

Količina	Ime	Ident. št.	Razvrstitev	Registracijska številka:
≥50 - <80 %	bis-[4-(2,3-epoksi)propoksi]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
≥3 - <5 %	1,3-propandiol, 2-etil-2-(hidroksimetil)-, polimer z (klorometil)oksiran	CAS:30499-70-8 EC:608-489-8	Skin Corr. 1C, H314; Eye Dam. 1, H318; Skin Sens. 1B, H317; Repr. 1B, H360F; Aquatic Chronic 2, H411	
≥1 - <3 %	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
≥0.5 - <1 %	oksiran, mono[(C12-14-alkiloksi)metil] derivati	CAS:68609-97-2 EC:271-846-8 Index:603-103-00-4	Skin Irrit. 2, H315; Skin Sens. 1, H317	01-2119485289-22-xxxx

≥0.5 - <1 %	Kristalni silicijev dioksid, kremen (vdihljiva frakcija)	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372	Izvzeti
≥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 %	1-metoksi-2-propanol	CAS:107-98-2 EC:203-539-1 Index:603-064-00-3	Flam. Liq. 3, H226; STOT SE 3, H336	01-2119457435-35-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

## 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.

TAKOJ SE POSVETUJTE Z ZDRAVNIKOM.

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 učinki so taki, kot je pričakovano 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<sub>2</sub>, 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 točki 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 Sklincevanje 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 naslov 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

Seznam sestavin z OEL vrednostmi

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	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

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	ACGIH	Latvija	Dolgotrajna 0.025 mg/m3
	Tip OPZ	EU		Dolgotrajna 0.1 mg/m3
	Tip OPZ	MAK	Avstrija	Dolgotrajna 0.05 mg/m3
	Tip OPZ	VLEP	Francija	Dolgotrajna 0.1 mg/m3 Opombe: Respirable aerosol
	Tip OPZ	VLA	Španija	Dolgotrajna 0.05 mg/m3
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 0.15 mg/m3 Opombe: Respirable aerosol
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 0.075 mg/m3 Opombe: Respirable dust
	Tip OPZ	SUVA	Švicar	Dolgotrajna 0.15 mg/m3 Opombe: Respirable aerosol

Tip OPZ	GVI	Hrvaška	Dolgotrajna 0.1 mg/m3
Tip OPZ	NDS	Poljska	Dolgotrajna 0.1 mg/m3
Tip OPZ	MV	Slovenija	Dolgotrajna 0.15 mg/m3
Tip OPZ	IPRV	Litva	Dolgotrajna 0.1 mg/m3

#### 2-metoksi-1-metiletil acetat

CAS: 108-65-6	Tip OPZ	ACGIH	Latvija	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3
	Tip OPZ	ACGIH	Švedska	Dolgotrajna 275 mg/m3 - 50 ppm; Kratkotrajna 550 mg/m3 - 100 ppm
	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
	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
	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 Opombe: Skin
	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
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 275 mg/m3; Kratkotrajna 550 mg/m3
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 550 mg/m3
	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 550 mg/m3 - 100 ppm
	Tip OPZ	WEL	U.K.	Dolgotrajna 274 mg/m3 - 50 ppm; Kratkotrajna 548 mg/m3 - 100 ppm
	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
	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

#### 1-metoksi-2-propanol

CAS: 107-98-2	Tip OPZ	ACGIH		Dolgotrajna 50 ppm; Kratkotrajna 100 ppm Opombe: A4 - Eye and URT irr
	Tip OPZ	EU		Dolgotrajna 375 mg/m3 - 100 ppm; Kratkotrajna 568 mg/m3 - 150 ppm Opombe: Skin
	Tip OPZ	MAK	Avstrija	Dolgotrajna 187 mg/m3 - 50 ppm; Kratkotrajna 187 mg/m3 - 50 ppm
	Tip OPZ	MAK	Nemčija	Dolgotrajna 370 mg/m3 - 100 ppm; Kratkotrajna 740 mg/m3 - 200 ppm
	Tip OPZ	VLEP	Belgija	Dolgotrajna 184 mg/m3 - 50 ppm; Kratkotrajna 369 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 188 mg/m3 - 50 ppm; Kratkotrajna 375 mg/m3 - 100 ppm
	Tip OPZ	VLEP	Italija	Dolgotrajna 375 mg/m3 - 100 ppm; Kratkotrajna 568 mg/m3 - 150 ppm
	Tip OPZ	VLEP	Romunija	Dolgotrajna 375 mg/m3 - 100 ppm; Kratkotrajna 568 mg/m3 - 150 ppm
	Tip OPZ	TLV	Češka	Dolgotrajna 270 mg/m3 - 72.09 ppm; Kratkotrajna 550 mg/m3 - 146.85 ppm

Opombe: Skin

Tip OPZ	VLA	Španija	Dolgotrajna 375 mg/m <sup>3</sup> - 100 ppm; Kratkotrajna 568 mg/m <sup>3</sup> - 150 ppm Opombe: Skin
Tip OPZ	ÁK	Madžarska	Dolgotrajna 375 mg/m <sup>3</sup> ; Kratkotrajna 568 mg/m <sup>3</sup>
Tip OPZ	VLE	Portugalska	Dolgotrajna 375 mg/m <sup>3</sup> - 100 ppm; Kratkotrajna 568 mg/m <sup>3</sup> - 150 ppm
Tip OPZ	SUVA	Švicar	Dolgotrajna 360 mg/m <sup>3</sup> - 100 ppm; Kratkotrajna 720 mg/m <sup>3</sup> - 200 ppm
Tip OPZ	WEL	U.K.	Dolgotrajna 375 mg/m <sup>3</sup> - 100 ppm; Kratkotrajna 560 mg/m <sup>3</sup> - 150 ppm
Tip OPZ	GVI	Hrvaška	Dolgotrajna 375 mg/m <sup>3</sup> - 100 ppm; Kratkotrajna 568 mg/m <sup>3</sup> - 150 ppm
Tip OPZ	AGW	Nemčija	Dolgotrajna 370 mg/m <sup>3</sup> - 100 ppm; Kratkotrajna 740 mg/m <sup>3</sup> - 200 ppm
Tip OPZ	NDS	Nizozemska	Dolgotrajna 375 mg/m <sup>3</sup> ; Kratkotrajna 563 mg/m <sup>3</sup>
Tip OPZ	NDS	Poljska	Dolgotrajna 180 mg/m <sup>3</sup> ; Kratkotrajna 360 mg/m <sup>3</sup> Opombe: Skin
Tip OPZ	MV	Slovenija	Dolgotrajna 375 mg/m <sup>3</sup> - 100 ppm; Kratkotrajna 568 mg/m <sup>3</sup> - 150 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/m <sup>3</sup> - 50 ppm; Kratkotrajna 723 mg/m <sup>3</sup> - 150 ppm
Tip OPZ	MAK	Avstrija	Dolgotrajna 480 mg/m <sup>3</sup> - 100 ppm; Kratkotrajna 480 mg/m <sup>3</sup> - 100 ppm
Tip OPZ	MAK	Nemčija	Dolgotrajna 480 mg/m <sup>3</sup> - 100 ppm; Kratkotrajna 960 mg/m <sup>3</sup> - 200 ppm
Tip OPZ	VLEP	Belgija	Dolgotrajna 238 mg/m <sup>3</sup> - 50 ppm; Kratkotrajna 712 mg/m <sup>3</sup> - 150 ppm Opombe: Butylacetates, all isomers
Tip OPZ	VLEP	Francija	Dolgotrajna 710 mg/m <sup>3</sup> - 150 ppm; Kratkotrajna 940 mg/m <sup>3</sup> - 200 ppm
Tip OPZ	VLEP	Romunija	Dolgotrajna 715 mg/m <sup>3</sup> - 150 ppm; Kratkotrajna 950 mg/m <sup>3</sup> - 200 ppm
Tip OPZ	TLV	Bolgarija	Dolgotrajna 710 mg/m <sup>3</sup> ; Kratkotrajna 950 mg/m <sup>3</sup>
Tip OPZ	TLV	Češka	Dolgotrajna 241 mg/m <sup>3</sup> ; Kratkotrajna 723 mg/m <sup>3</sup>
Tip OPZ	VLA	Španija	Dolgotrajna 724 mg/m <sup>3</sup> - 150 ppm; Kratkotrajna 965 mg/m <sup>3</sup> - 200 ppm
Tip OPZ	ÁK	Madžarska	Dolgotrajna 950 mg/m <sup>3</sup> ; Kratkotrajna 950 mg/m <sup>3</sup>
Tip OPZ	SUVA	Švicar	Dolgotrajna 240 mg/m <sup>3</sup> - 50 ppm; Kratkotrajna 720 mg/m <sup>3</sup> - 150 ppm
Tip OPZ	WEL	U.K.	Dolgotrajna 724 mg/m <sup>3</sup> - 150 ppm; Kratkotrajna 966 mg/m <sup>3</sup> - 200 ppm
Tip OPZ	GVI	Hrvaška	Dolgotrajna 724 mg/m <sup>3</sup> - 150 ppm; Kratkotrajna 966 mg/m <sup>3</sup> - 200 ppm
Tip OPZ	AGW	Nemčija	Dolgotrajna 300 mg/m <sup>3</sup> - 62 ppm; Kratkotrajna 600 mg/m <sup>3</sup> - 124 ppm
Tip OPZ	NDS	Poljska	Dolgotrajna 240 mg/m <sup>3</sup> ; Kratkotrajna 720 mg/m <sup>3</sup>
Tip OPZ	MV	Slovenija	Dolgotrajna 300 mg/m <sup>3</sup> - 62 ppm; Kratkotrajna 600 mg/m <sup>3</sup> - 124 ppm

### Mejna vrednost izpostavljenosti po PNEC

bis-[4-(2,3-epoksi)propoksi]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

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

oksiran, mono[(C12-14-alkiloksi)metil] derivati

CAS: 68609-97-2 Način izpostavitve: Sladka voda; PNEC Omejite: 0.106 mg/l

Način izpostavitve: Morska voda; PNEC Omejite: 0.011 mg/l

Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 10 mg/l

Način izpostavitve: Morski sedimenti; PNEC Omejite: 30.72 mg/kg

Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 307.16 mg/kg

Način izpostavitve: Prst; PNEC Omejite: 1.234 mg/kg

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

1-metoksi-2-propanol

CAS: 107-98-2 Način izpostavitve: Morska voda; PNEC Omejite: 1 mg/l

Način izpostavitve: Sladka voda; PNEC Omejite: 10 mg/l

Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 100 mg/l

Način izpostavitve: Morski sedimenti; PNEC Omejite: 5.2 mg/kg

Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 52.3 mg/kg

Način izpostavitve: Tla (kmetijska); PNEC Omejite: 4.59 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

### Izpeljane vrednosti brez učinka. (DNEL)

bis-[4-(2,3-epoksi)propoksi]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/m<sup>3</sup>; Uporabnik: 0.87 mg/m<sup>3</sup>

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/cm<sup>2</sup>

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek  
Strokovni delavec: 29.39 mg/m<sup>3</sup>; Uporabnik: 8.7 mg/m<sup>3</sup>

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

benzil alkohol

CAS: 100-51-6 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek  
Strokovni delavec: 110 mg/m<sup>3</sup>; Uporabnik: 27 mg/m<sup>3</sup>

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek  
Strokovni delavec: 22 mg/m<sup>3</sup>; Uporabnik: 5.4 mg/m<sup>3</sup>

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

oksiran, mono[(C12-14-alkiloksi)metil] derivati

CAS: 68609-97-2 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek  
Strokovni delavec: 3.6 mg/m<sup>3</sup>; Uporabnik: 0.87 mg/m<sup>3</sup>

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek  
Strokovni delavec: 1 mg/kg; Uporabnik: 0.5 mg/kg

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

2-metoksi-1-metiletil acetat

CAS: 108-65-6 Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek  
Strokovni 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  
Strokovni delavec: 275 mg/m<sup>3</sup>; Uporabnik: 33 mg/m<sup>3</sup>

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek  
Strokovni delavec: 550 mg/m<sup>3</sup>

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, lokalni učinek  
Uporabnik: 33 mg/m<sup>3</sup>

1-metoksi-2-propanol

CAS: 107-98-2 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek  
Strokovni delavec: 369 mg/m<sup>3</sup>; Uporabnik: 43.9 mg/m<sup>3</sup>

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek  
Strokovni delavec: 553.5 mg/m<sup>3</sup>

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek  
Strokovni delavec: 553.5 mg/m<sup>3</sup>

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek  
Strokovni delavec: 183 mg/kg; Uporabnik: 78 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek  
Uporabnik: 3.3 mg/kg

n-butil acetat

CAS: 123-86-4 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek  
Strokovni delavec: 300 mg/m<sup>3</sup>; Uporabnik: 35.7 mg/m<sup>3</sup>

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek  
Strokovni delavec: 600 mg/m<sup>3</sup>; Uporabnik: 300 mg/m<sup>3</sup>

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, lokalni učinek  
Strokovni delavec: 300 mg/m<sup>3</sup>; Uporabnik: 35.7 mg/m<sup>3</sup>

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek  
Strokovni delavec: 600 mg/m<sup>3</sup>; Uporabnik: 300 mg/m<sup>3</sup>

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



Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek  
Strokovni 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

## 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 166).

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  $\geq 0.4$  mm; permeacijski čas  $\geq 480$  min. NBR (Nitrilkaučuk): debelina  $\geq 0.4$  mm; permeacijski čas  $\geq 480$  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.

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## ODDELEK 9: Fizikalne in kemijske lastnosti

### 9.1 Podatki o osnovnih fizikalnih in kemijskih lastnostih

fizično stanje: Tekoče

Izgled: Tekoče

Barva: svetlo rumen

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: ni znano

Temperatura samovžiga: N.D.

Temperatura razgradnje: N.D.

pH: ni znano

Kinematična viskoznost: ni znano

Gostota in/ali relativna gostota: 1.24000 kg/l ( Interna metoda )

Relativna parna gostota: N.D.

Parni tlak: N.D.

Topnost v vodi: Netopno

Topnost v olju: ni znano

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

**Lastnosti delcev:**

Velikost delcev: ni znano

### 9.2 Drugi podatki

Prevodnost: N.D.

Eksplozivne lastnosti: ni znano ( Notranja evalvacija )

Oksidativne lastnosti: ni znano ( Notranja evalvacija )

Hitrost izparevanja: ni znano

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## ODDELEK 10: Obstočnost in reaktivnost

### 10.1 Reaktivnost

Stabilna v normalnih pogojih

## 10.2 Kemijska stabilnost

Stabilna 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 Dam. 1(H318)
d) preobčutljivost pri vdihavanju in preobčutljivost kože	Proizvod je razvrščen: Skin Sens. 1(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

1,3-propandiol, 2-etil-2-(hidroksimetil)-, polimer z (klorometil)oksiran

CAS: 30499-70-8 a) akutna strupenost LD50 Oralno Podgana > 2000 mg/kg  
LD50 Koža Podgana > 3170 mg/kg

benzil alkohol

CAS: 100-51-6 a) akutna strupenost ATE - Oralno: 1200 mg/kg tt  
LD50 Oralno Podgana 1620 mg/kg

oksiran, mono[(C12-14-alkiloksi)metil] derivati

CAS: 68609-97-2	a) akutna strupenost	LC0 Vdihavanje hlapov Podgana > 0.15 mg/l 7h LD50 Oralno Podgana > 2000 mg/kg LD50 Koža Zajec > 4000 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
1-metoksi-2-propanol		
CAS: 107-98-2	a) akutna strupenost	LD50 Oralno Podgana 4016 mg/kg LD50 Koža Podgana > 2000 mg/kg LC50 Vdihavanje hlapov Podgana > 7000 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

## 11.2 Podatki o drugih nevarnostih

### Lastnosti endokrinih motilcev:

Ni endokrinih motilcev v koncentraciji  $\geq 0,1\%$ .

## 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

1,3-propandiol, 2-etil-2-(hidroksimetil)-, polimer z (klorometil)oksiran

- CAS: 30499-70-8
- a) akutna strupenost za vodno okolje: LC50 Riba 75 mg/l 96h
  - a) akutna strupenost za vodno okolje: EC50 Vodna bolha 3.7 mg/l 48h
  - a) akutna strupenost za vodno okolje: EC50 Alge 9 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

oksiran, mono[(C12-14-alkiloksi)metil] derivati

- CAS: 68609-97-2
- a) akutna strupenost za vodno okolje: LL50 Riba > 100 mg/l 96h
  - a) akutna strupenost za vodno okolje: EL50 Vodna bolha 7.2 mg/l 48h
  - a) akutna strupenost za vodno okolje: IC50 Alge 843.75 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

1-metoksi-2-propanol

- CAS: 107-98-2     a) akutna strupenost za vodno okolje: LC50 Riba 6812 mg/l 96h  
a) akutna strupenost za vodno okolje: EC50 Vodna bolha 23300 mg/l 48h  
a) akutna strupenost za vodno okolje: EC50 Alge > 1000 mg/l 7d

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

## 12.2 Obstoječnost in razgradljivost

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

CAS: 1675-54-3     Ni hitro razgradljivo

benzil alkohol

CAS: 100-51-6     Hitro razgradljivo

oksiran, mono[(C12-14-alkiloksi)metil] derivati

CAS: 68609-97-2     Hitro razgradljivo

2-metoksi-1-metiletil acetat

CAS: 108-65-6     Hitro razgradljivo

1-metoksi-2-propanol

CAS: 107-98-2     Hitro razgradljivo

n-butil acetat

CAS: 123-86-4     Hitro razgradljivo

## 12.3 Zmožnost kopičenja v organizmih

ni znano

## 12.4 Mobilnost v tleh

ni znano

## 12.5 Rezultati ocene PBT in vPvB

Na podlagi razpoložljivih podatkov, preparat ne vsebuje snovi PBT/vPvB v procentu  $\geq$  0.1%.

## 12.6 Lastnosti endokrinih motilcev

Ni endokrinih motilcev v koncentraciji  $\geq$  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. Ravajte se po lokalnih in državnih normah.

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 odpretno ime ZN

ADR-uradno ime blaga: OKOLJU NEVARNA SNOV, TEKOČA, N.D.N. (bis-[4-(2,3-epoksi)propoksi]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-epoksi)propoksi]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-epoksi)propoksi]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) št. 2023/1434 (19. ATP CLP)
- Uredba (EU) št. 2023/1435 (20. ATP CLP)
- Uredba (EU) št. 2024/197 (21. ATP CLP)

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

- Obmedzenia vo vzťahu s výrobkom: 3
- Obmedzenia vo vzťahu s obsiahnutými látkami: 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 3: izjemno nevarna.

**SVHC snovi:**

Na podlagi razpoložljivih podatkov, preparat ne vsebuje snovi SVHC v procentu  $\geq 0.1\%$ .

**15.2 Ocena kemijske varnosti**

Ocena kemijske varnosti ni bila opravljena za mešanice

**ODDELEK 16: Drugi podatki**

Številka	Opis
EUH066	Ponavljajoča izpostavljenost lahko povzroči nastanek suhe ali razpokane kože.
H226	Vnetljiva tekočina in hlapi.
H302	Zdravju škodljivo pri zaužitju.
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.
H336	Lahko povzroči zaspanost ali omotico.
H360F	Lahko škoduje plodnosti.
H372	V primeru dolgotrajnega ali ponovljenega vdihavanja povzroča poškodbe notranjih organov.
H411	Strupeno za vodne organizme, z dolgotrajnimi učinki.

Številka	Razred in kategorija nevarnosti	Opis
2.6/3	Flam. Liq. 3	Vnetljiva tekočina, Kategorija 3
3.1/4/Oral	Acute Tox. 4	Akutna strupenost (oralno), Kategorija 4
3.2/1C	Skin Corr. 1C	Jedkost za kožo, Kategorija 1C
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
3.4.2/1B	Skin Sens. 1B	Preobčutljivost kože, Kategorija 1B
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
4.1/C2	Aquatic Chronic 2	Kronično (dolgotrajno) nevarnost za vodno okolje, Kategorija 2

**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 Dam. 1, H318	metoda izračuna
Skin Sens. 1, 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: Obstoje, 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:**

- Varnostni list
- ODDELEK 1: Identifikacija snovi/zmesi in družbe/podjetja
- ODDELEK 2: Določitev nevarnosti
- ODDELEK 3: Sestava/podatki o sestavinah
- ODDELEK 7: Ravnanje in skladiščenje
- ODDELEK 8: Nadzor izpostavljenosti/osebna zaščita
- ODDELEK 9: Fizikalne in kemijske lastnosti
- ODDELEK 11: Toksikološki podatki
- ODDELEK 12: Ekološki podatki
- ODDELEK 14: Podatki o prevozu
- ODDELEK 15: Zakonsko predpisani podatki
- ODDELEK 16: Drugi podatki



# 1-methoxy-2-propanol

## Substance identification

Chemical Name: 1-methoxy-2-propanol

CAS number: 107-98-2

Date - Version: 08/10/2019- 17.0

## USE IN COATINGS (USE IN INDUSTRIAL PLANTS).

### TITLE SECTION

**Short title of the exposure scenario:** Use in coatings. (Use in industrial plants).  
ERC4; PROC1, PROC7, PROC8a, PROC8b, PROC9

### EXPOSURE SCENARIO CONSIDERED - ERC4

#### 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 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 waste water after risk management measures and treatment in the treatment plant: 87.3 %

Assumed sewage treatment plant flow: 2,000 m³/d

#### 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 fresh water. Risk from environmental exposure is driven by marine water.

Maximum safe use amount: 79,180 kg/day

Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by water.

### EXPOSURE SCENARIO CONSIDERED - PROC1

#### Covered use descriptors

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

Area of use: industrial

#### Operating conditions

**Substance concentration:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days a week

It is assumed that the use does not exceed 20°C 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

Estimation of exposure 0.34 mg/kg/day (body weight)

Risk Characterization Ratio (RCR): 0.01

### EXPOSURE SCENARIO CONSIDERED - PROC7

#### Covered use descriptors

PROC7: Industrial spray application Spraying (automatic/robotic)

Area of use: industrial

#### Operating conditions

**Substance concentration:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days a week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## **EXPOSURE SCENARIO CONSIDERED - PROC7**

### **Covered use descriptors**

PROC7: Industrial spray application Spraying (manual)

Area of use: industrial

### **Operating conditions**

**Substance concentration:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

### **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 374. 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/m<sup>3</sup>

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

## **EXPOSURE SCENARIO CONSIDERED - PROC8a**

### **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:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## **EXPOSURE SCENARIO CONSIDERED - PROC8b**

### **Covered use descriptors**

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

Area of use: industrial

### **Operating conditions**

**Substance concentration:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## EXPOSURE SCENARIO CONSIDERED - PROC9

### **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:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## EXPOSURE SCENARIO CONSIDERED - PROC7

### **Covered use descriptors**

PROC7: Industrial spray application Spraying (automatic/robotic) Spraying (manual)

Area of use: industrial

### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature

### **Risk management measures**

Wear suitable gloves compliant with EN 374. 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/m<sup>3</sup>

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

## EXPOSURE SCENARIO CONSIDERED - PROC7

### **Covered use descriptors**

PROC7: Industrial spray application Spraying (manual)

Area of use: industrial

### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature

### **Risk management measures**

Wear suitable gloves compliant with EN 374.

### **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.

## EXPOSURE SCENARIO CONSIDERED - PROC8a

### **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:**  $\geq 0\%$  -  $< 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

Risk Characterization Ratio (RCR): 0.1

## USE IN COATINGS (USE IN INDUSTRIAL PLANTS).

### TITLE SECTION

**Short title of the exposure scenario:** Use in coatings. (Use in industrial plants).

ERC8a, ERC8d; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19

### EXPOSURE SCENARIO CONSIDERED - ERC8a

#### **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 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 waste water after risk management measures and treatment in the treatment plant: 87.3 %

Assumed sewage treatment plant flow: 2,000 m<sup>3</sup>/d

#### **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 fresh water. Risk from environmental exposure is driven by marine water.

Maximum safe use amount: 15,141 kg/day

Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.

### EXPOSURE SCENARIO CONSIDERED - ERC8d

#### **Covered use descriptors**

ERC8d: Wide dispersive external 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 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 waste water after risk management measures and treatment in the treatment plant: 87.3 %

Assumed sewage treatment plant flow: 2,000 m<sup>3</sup>/d

#### **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 fresh water. Risk from environmental exposure is driven by marine water.

Maximum safe use amount: 15,141 kg/day

Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.

### EXPOSURE SCENARIO CONSIDERED - PROC1

#### **Covered use descriptors**

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

Area of use: professional

#### **Operating conditions**

**Substance concentration:** ≥ 0 % - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

Risk Characterization Ratio (RCR): 0.0001

Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic

Estimation of exposure 0.34 mg/kg/day (body weight)

Risk Characterization Ratio (RCR): 0.01

## **EXPOSURE SCENARIO CONSIDERED - PROC2**

### **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:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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.

## **EXPOSURE SCENARIO CONSIDERED - PROC2**

### **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:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## **EXPOSURE SCENARIO CONSIDERED - PROC3**

### **Covered use descriptors**

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

Area of use: professional

### **Operating conditions**

**Substance concentration:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## **EXPOSURE SCENARIO CONSIDERED - PROC4**

### **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:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

### **EXPOSURE SCENARIO CONSIDERED - PROC4**

#### **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:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

Indoor/Outdoor: Indoor use.

It is assumed that the use does not exceed 20°C 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.

### **EXPOSURE SCENARIO CONSIDERED - PROC5**

#### **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:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature

#### **Risk management measures**

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

Otherwise, 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/m<sup>3</sup>

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

### **EXPOSURE SCENARIO CONSIDERED - PROC5**

#### **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:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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.

### **EXPOSURE SCENARIO CONSIDERED - PROC8a**

#### **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:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## **EXPOSURE SCENARIO CONSIDERED - PROC8b**

### **Covered use descriptors**

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

Area of use: professional

### **Operating conditions**

**Substance concentration:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## **EXPOSURE SCENARIO CONSIDERED - PROC10**

### **Covered use descriptors**

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

Area of use: professional

### **Operating conditions**

**Substance concentration:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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 374. 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/m<sup>3</sup>

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

## **EXPOSURE SCENARIO CONSIDERED - PROC10**

### **Covered use descriptors**

PROC10: Application with rollers or brushes Roller, spatula, jet application

Area of use: professional

### **Operating conditions**

**Substance concentration:** ≥ 0% - ≤ 100% 1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature.

### **Risk management measures**

Ensure that operations are carried out externally.

Wear suitable gloves compliant with EN 374.

### **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.



## EXPOSURE SCENARIO CONSIDERED - PROC11

### **Covered use descriptors**

PROC11: Non-industrial spray application. Spraying (manual).  
Area of use: professional

### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

Indoor/Outdoor: Indoor use.

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## EXPOSURE SCENARIO CONSIDERED - PROC11

### **Covered use descriptors**

PROC11: Non-industrial spray application. Spraying (manual).  
Area of use: professional

### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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 374. 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/m<sup>3</sup>

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

## EXPOSURE SCENARIO CONSIDERED - PROC13

### **Covered use descriptors**

PROC13: Treatment of articles by dipping, pouring, enamelling.  
Area of use: professional

### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature.

### **Risk management measures**

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

Otherwise, 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/m<sup>3</sup>

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



## EXPOSURE SCENARIO CONSIDERED - PROC13

### **Covered use descriptors**

PROC13: Treatment of articles by dipping and pouring.  
Area of use: professional

### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol  
Physical state: liquid, medium volatility  
Duration and frequency of application: 480 mins. 5 days/week  
It is assumed that the use does not exceed 20°C 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.

## EXPOSURE SCENARIO CONSIDERED - PROC15

### **Covered use descriptors**

PROC15: Use as laboratory reagent. Laboratory activities.  
Area of use: professional

### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol  
Physical state: liquid, medium volatility  
Duration and frequency of application: 480 mins. 5 days/week  
It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>  
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

## EXPOSURE SCENARIO CONSIDERED - PROC19

### **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:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol  
Physical state: liquid, medium volatility  
Duration and frequency of application: 480 mins. 5 days/week  
It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>  
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

## EXPOSURE SCENARIO CONSIDERED - PROC19

### **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:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol  
Physical state: liquid, medium volatility  
Duration and frequency of application: 480 mins. 5 days/week  
It is assumed that the use does not exceed 20°C 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.

## USE IN COATINGS (USE IN INDUSTRIAL PLANTS).

### TITLE SECTION

**Short title of the exposure scenario:** Use in coatings. (Use in industrial plants).

ERC8a, ERC8b; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19

### EXPOSURE SCENARIO CONSIDERED - ERC8a

#### **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 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 waste water after risk management measures and treatment in the treatment plant: 87.3 %

Assumed sewage treatment plant flow: 2,000 m<sup>3</sup>/d

#### **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 fresh water. Risk from environmental exposure is driven by marine water.

Maximum safe use amount: 15.141 kg/day

Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.

### EXPOSURE SCENARIO CONSIDERED - ERC8d

#### **Covered use descriptors**

ERC8d: Wide dispersive external 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 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 waste water after risk management measures and treatment in the treatment plant: 87.3 %

Assumed sewage treatment plant flow: 2,000 m<sup>3</sup>/d

#### **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 fresh water. Risk from environmental exposure is driven by marine water.

Maximum safe use amount: 15.141 kg/day

Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.

### EXPOSURE SCENARIO CONSIDERED - PROC1

#### **Covered use descriptors**

PROC1: Use in closed process, no likelihood of exposure. General exposure (closed systems)

Area of use: professional

#### **Operating conditions**

**Substance concentration:** ≥ 0 % - ≤ 5 % 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature

#### **Exposure estimation and reference to its source**

PROC1

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.

## EXPOSURE SCENARIO CONSIDERED - PROC2

### **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:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol  
Physical state: liquid, medium volatility.  
Duration and frequency of application: 480 mins. 5 days/week  
It is assumed that the use does not exceed 20°C 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.

## EXPOSURE SCENARIO CONSIDERED - PROC2

### **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:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol  
Physical state: liquid, medium volatility.  
Duration and frequency of application: 480 mins. 5 days/week  
It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>  
Risk Characterization Ratio (RCR): 0.04  
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

## EXPOSURE SCENARIO CONSIDERED - PROC3

### **Covered use descriptors**

PROC3: Use in batch process (synthesis or formulation) Preparation of material for application  
Area of use: professional

### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol  
Physical state: liquid, medium volatility.  
Duration and frequency of application: 480 mins. 5 days/week  
It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>  
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

## EXPOSURE SCENARIO CONSIDERED - PROC4

### **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:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol  
Physical state: liquid, medium volatility.  
Duration and frequency of application: 480 mins. 5 days/week  
It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>  
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

## EXPOSURE SCENARIO CONSIDERED - PROC4

### **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:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

Indoor/Outdoor: Indoor use.

It is assumed that the use does not exceed 20°C 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.

## EXPOSURE SCENARIO CONSIDERED - PROC5

### **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:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## EXPOSURE SCENARIO CONSIDERED - PROC5

### **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:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature

### **Risk management measures**

Ensure that operations are carried out externally.

### **Exposure estimation and reference to its source**

PROC5

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.

## EXPOSURE SCENARIO CONSIDERED - PROC8a

### **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:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## EXPOSURE SCENARIO CONSIDERED - PROC8b

### Covered use descriptors

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

### Operating conditions

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## EXPOSURE SCENARIO CONSIDERED - PROC10

### Covered use descriptors

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

Area of use: professional

### Operating conditions

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## EXPOSURE SCENARIO CONSIDERED - PROC10

### Covered use descriptors

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

Area of use: professional

### Operating conditions

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

Indoor/Outdoor: Outdoor use

It is assumed that the use does not exceed 20°C ambient temperature.

### Exposure estimation and reference to its source

PROC10

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.

## EXPOSURE SCENARIO CONSIDERED - PROC11

### Covered use descriptors

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

Area of use: professional

### Operating conditions

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## EXPOSURE SCENARIO CONSIDERED - PROC11

### **Covered use descriptors**

PROC11: Non-industrial spray application. Spraying (manual).  
Area of use: professional

### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol  
Physical state: liquid, medium volatility  
Duration and frequency of application: 480 mins. 5 days/week  
It is assumed that the use does not exceed 20°C 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.

## EXPOSURE SCENARIO CONSIDERED - PROC13

### **Covered use descriptors**

PROC13: Treatment of articles by dipping and pouring.  
Area of use: professional

### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol  
Physical state: liquid, medium volatility  
Duration and frequency of application: 480 mins. 5 days/week  
It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>  
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

## EXPOSURE SCENARIO CONSIDERED - PROC13

### **Covered use descriptors**

PROC13: Treatment of articles by dipping and pouring.  
Area of use: professional

### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol  
Physical state: liquid, medium volatility  
Duration and frequency of application: 480 mins. 5 days/week  
Indoor/Outdoor: Internal use  
It is assumed that the use does not exceed 20°C ambient temperature.

### **Exposure estimation and reference to its source**

PROC13  
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.

## EXPOSURE SCENARIO CONSIDERED - PROC15

### **Covered use descriptors**

PROC15: Use as a laboratory reagent Laboratory activities  
Area of use: professional

### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol  
Physical state: liquid, medium volatility  
Duration and frequency of application: 480 mins. 5 days/week  
It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>  
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

## EXPOSURE SCENARIO CONSIDERED - PROC19

### **Covered use descriptors**

PROC19: Manual mixing with direct contact using only personal protective equipment. Hand application, finger paints, crayons, stickers  
Area of use: professional

### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature.

### **Risk management measures**

Wear suitable gloves compliant with EN 374. 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/m<sup>3</sup>

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

## EXPOSURE SCENARIO CONSIDERED - PROC19

### **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:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

Indoor/Outdoor Outdoor use

It is assumed that the use does not exceed 20°C ambient temperature.

### **Risk management measures**

Wear suitable gloves compliant with EN 374.

### **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.

## USE IN DETERGENTS (USE IN INDUSTRIAL PLANTS).

### TITLE SECTION

**Short title of the exposure scenario:** Use in detergents. (Use in industrial plants).  
ERC8a, ERC8d; PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13

### EXPOSURE SCENARIO CONSIDERED - ERC8a

#### **Covered use descriptors**

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

#### **Operating conditions**

Yearly amount used in EU: 5,200,000 kg  
Daily amount per site: 0.71 kg  
Minimum emission days per year: 365  
Emission factor to air: 2 %  
Emission factor in water: 0.001 %  
Emission factor in soil: 0 %  
Releases based on information from ESVO/CEFIC  
Freshwater dilution factor: 10  
Marine water dilution factor: 100

#### **Risk management measures**

Treat air emissions to provide a typical removal efficiency of (%) 70 %  
Type of treatment plant: Municipal sewage treatment plant.  
Total removal efficiency of the substance from the waste water after risk management measures and treatment in the treatment plant: 87.3 %  
Assumed sewage treatment plant flow: 2,000 m<sup>3</sup>/d

#### **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): 0.00138  
Risk from environmental exposure is driven by marine water.  
Maximum safe use amount: 550 kg/day  
Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.

### EXPOSURE SCENARIO CONSIDERED - ERC8d

#### **Covered use descriptors**

ERC8d: Wide dispersive external use of processing aids in open systems.

#### **Operating conditions**

Yearly amount used in EU: 5,200,000 kg  
Daily amount per site: 0.71 kg  
Minimum emission days per year: 365  
Emission factor to air: 2 %  
Emission factor in water: 0.001 %  
Emission factor in soil: 0 %  
Releases based on information from ESVO/CEFIC  
Freshwater dilution factor: 10  
Marine water dilution factor: 100  
Other factors: Outdoor use.

#### **Risk management measures**

Treat air emissions to provide a typical removal efficiency of (%) 70 %  
Type of treatment plant: Municipal sewage treatment plant.  
Total removal efficiency of the substance from the waste water after risk management measures and treatment in the treatment plant: 87.3 %  
Assumed sewage treatment plant flow: 2,000 m<sup>3</sup>/d

#### **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): 0.00138  
Risk from environmental exposure is driven by marine water.  
Maximum safe use amount: 550 kg/day  
Risk from environmental exposure is driven by marine water.

### EXPOSURE SCENARIO CONSIDERED - PROC2

#### **Covered use descriptors**

PROC2: Use in closed, continuous process with occasional controlled exposure. Automated process with (semi) closed systems. Use in contained systems.  
Area of use: professional

#### **Operating conditions**

**Substance concentration:** ≥ 0 % - ≤ 100 % 1-methoxy-2-propanol  
Physical state: liquid, medium volatility.  
Duration and frequency of application: 480 mins. 5 days/week  
It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

### **EXPOSURE SCENARIO CONSIDERED - PROC3**

#### **Covered use descriptors**

PROC3: Use in batch process (synthesis or formulation). Use in contained systems. Drum/batch transfers. Automated process with (semi) closed systems.

Area of use: professional

#### **Operating conditions**

**Substance concentration:** ≥ 0% - ≤ 100 % 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

### **EXPOSURE SCENARIO CONSIDERED - PROC4**

#### **Covered use descriptors**

PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Semi-automatic process. Application of cleaning products in closed systems. Cleaning of medical devices.

Area of use: professional

#### **Operating conditions**

**Substance concentration:** ≥ 0% - ≤ 100 % 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

### **EXPOSURE SCENARIO CONSIDERED - PROC4**

#### **Covered use descriptors**

PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Application of cleaning products in closed systems.

Area of use: professional

#### **Operating conditions**

**Substance concentration:** ≥ 0% - ≤ 100 % 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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.

### **EXPOSURE SCENARIO CONSIDERED - PROC4**

#### **Covered use descriptors**

PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Cleaning of medical devices.

Area of use: professional

#### **Operating conditions**

**Substance concentration:** ≥ 0% - ≤ 100 % 1-methoxy-2-propanol

Physical state: liquid, medium volatility.

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature.

#### **Exposure estimation and reference to its source**

PROC4

Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure.

The use has been assessed as safe.

## EXPOSURE SCENARIO CONSIDERED - PROC8a

### Covered use descriptors

PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Filling/Preparation of equipment required for drums and containers. Non-dedicated system.

Area of use: professional

### Operating conditions

**Substance concentration:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 240 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature.

### Risk management measures

Ensure that operations are carried out externally. Effectiveness: 30%

### Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic

Exposure estimation: 157.68 mg/m<sup>3</sup>

Risk Characterization Ratio (RCR): 0.43

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

## EXPOSURE SCENARIO CONSIDERED - PROC8b

### Covered use descriptors

PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. Filling/Preparation of equipment required for drums and containers. Dedicated plant.

Area of use: professional

### Operating conditions

**Substance concentration:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C 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/m<sup>3</sup>

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

## EXPOSURE SCENARIO CONSIDERED - PROC10

### Covered use descriptors

PROC10: Application with rollers or brushes. Low pressure cleaning with detergents.

Area of use: professional

### Operating conditions

**Substance concentration:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature.

### Risk management measures

Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Effectiveness: 70%

### Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic

Exposure estimation: 112.63 mg/m<sup>3</sup>

Risk Characterization Ratio (RCR): 0.31

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

## EXPOSURE SCENARIO CONSIDERED - PROC10

### Covered use descriptors

PROC10: Application with rollers or brushes. Surface cleaning (manual) by fogging.

Area of use: professional

### Operating conditions

**Substance concentration:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature.

### Risk management measures

Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Effectiveness: 30%

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

#### **Exposure estimation and reference to its source**

Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic

Exposure estimation: 262.79 mg/m<sup>3</sup>

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

### **EXPOSURE SCENARIO CONSIDERED - PROC10**

#### **Covered use descriptors**

PROC10: Application with rollers or brushes. Manual application by fogging, dipping etc. Rolling/brushing

Area of use: professional

#### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature.

#### **Risk management measures**

Provide extract ventilation in points where emissions occur (LEV). 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/m<sup>3</sup>

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

### **EXPOSURE SCENARIO CONSIDERED - PROC11**

#### **Covered use descriptors**

PROC11: Non-industrial spray application. Cleaning with high pressure washers

Area of use: professional

#### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

Indoor/Outdoor Internal use

It is assumed that the use does not exceed 20°C 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 374. Effectiveness: 80%

#### **Exposure estimation and reference to its source**

Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic

Exposure estimation: 112.63 mg/m<sup>3</sup>

Risk Characterization Ratio (RCR): 0.31

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

### **EXPOSURE SCENARIO CONSIDERED - PROC11**

#### **Covered use descriptors**

PROC11: Non-industrial spray application. Cleaning with high pressure washers

Area of use: professional

#### **Operating conditions**

**Substance concentration:**  $\geq 0\%$  -  $\leq 5\%$  1-methoxy-2-propanol

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days/week

It is assumed that the use does not exceed 20°C ambient temperature.

#### **Risk management measures**

Ensure that operations are carried out externally. Effectiveness: 30%

Wear chemically resistant gloves in combination with "basic" employee training. Effectiveness: 90%

#### **Exposure estimation and reference to its source**

Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic

Exposure estimation: 262.79 mg/m<sup>3</sup>

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

## EXPOSURE SCENARIO CONSIDERED - PROC13

### ***Covered use descriptors***

PROC13: Treatment of articles by dipping and pouring. Surface cleaning (manual). Enamelling, dipping and pouring.  
Area of use: professional

### ***Operating conditions***

**Substance concentration:**  $\geq 0\%$  -  $\leq 100\%$  1-methoxy-2-propanol  
Physical state: liquid, medium volatility  
Duration and frequency of application: 480 mins. 5 days/week  
It is assumed that the use does not exceed 20°C ambient temperature.

### ***Risk management measures***

Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Effectiveness: 70%

### ***Exposure estimation and reference to its source***

Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic  
Exposure estimation: 112.63 mg/m<sup>3</sup>  
Risk Characterization Ratio (RCR): 0.31  
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

## 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 m<sup>3</sup>/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 m<sup>3</sup>/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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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 m<sup>3</sup>/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 m<sup>3</sup>/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/m<sup>3</sup>  
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/m<sup>3</sup>

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/m<sup>3</sup>

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 m<sup>3</sup>/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 m<sup>3</sup>/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 m<sup>3</sup>/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 m<sup>3</sup>/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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 45\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 45\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

Risk Characterization Ratio (RCR): 0.483993

### ***Guidance for downstream users***

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

# 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, calendaring 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 ESVO 5 (related to ERC4)

**PC9a/b/c:** PROC5, 7, 8a, 8b, 9, 10, 13 spERC ESVO 5 (related to ERC4)

**PC14:** PROC5, 8a, 8b, 9, 15, 23, 24, 25 spERC ESVO 5 (related to ERC4)

**PC15:** PROC5, 8a, 8b, 9, 15 spERC ESVO 5 (related to ERC4)

**PC18:** PROC7, 8a, 8b, 9, 10, 13 spERC ESVO 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 m<sup>3</sup>/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 m<sup>3</sup>/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 m<sup>3</sup>/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<sup>3</sup>/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<sup>3</sup>/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  $\leq 40$  %: no RMM required.

PROC5, PROC8a, PROC13:  $> 25$  % -  $\leq 40$  %: gloves (90 % efficiency) are required as described in section 8.

PROC6:  $> 5$  % -  $\leq 40$  %: gloves (90 % efficiency) are required as described in section 8.

PROC10:  $< 5$  % (indoor and outdoor environment): No RMMs required.

$> 5$  -  $\leq 40$  % (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  $\leq 40$  %

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<sup>3</sup>/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:

$\leq 5$  % (indoor and outdoor environment): Respiratory protection (95 % efficiency) required as described in section 8.

$> 5$  %  $\leq 40$  % (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  $\leq 40$  %

Physical state: liquid

### **Quantity used**

Not applicable

### **Frequency and duration of use/exposure**

Duration of exposure per day (concentration  $\leq 25$  %): 8 hours (indoors and outdoors)

Duration of exposure per day (concentration  $>25\% \leq 40\%$ ): 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 m<sup>3</sup>/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 m<sup>3</sup>/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 m<sup>3</sup>/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<sup>3</sup>/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 m<sup>3</sup>/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 m<sup>3</sup>/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 m<sup>3</sup>/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  $\leq 40\%$

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<sup>3</sup>/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:

$\leq 5\%$  (indoor and outdoor environment): Respiratory protection (95 % efficiency) required as described in section 8.

$> 5\% - \leq 40\%$  (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  $\leq 40\%$

Physical state: liquid

### **Quantity used**

Not applicable

### **Frequency and duration of use/exposure**

Duration of exposure per day (concentration  $\leq 25\%$ ): 8 h (indoor and outdoor)

Duration of exposure per day (concentration  $>25\% - \leq 40\%$ ): 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 m<sup>3</sup>/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 m<sup>3</sup>/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 m<sup>3</sup>/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.

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

## Substance identification

Chemical Name: bis-[4-(2,3-epoxipropoxy)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/m <sup>3</sup>	< 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/m <sup>3</sup>	0.201
inhalation	local	Long-term	0.993mg/m <sup>3</sup>	-
inhalation	local	Short term	0.993mg/m <sup>3</sup>	-
dermal	systemic	Long-term	0.172mg/kg bw/day	0.045
dermal	local	Short term	9.92E-3mg/cm <sup>2</sup>	-
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/m <sup>3</sup>	0.017
inhalation	local	Long-term	0.085mg/m <sup>3</sup>	-
inhalation	local	Short term	0.085mg/m <sup>3</sup>	-
dermal	systemic	Long-term	0.411mg/kgbw/day	0.548
dermal	local	Short term	0.06mg/cm <sup>2</sup>	-
combined routes	-	-	-	0.566



### 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/m <sup>3</sup>	0.201
inhalation	local	Long-term	0.993mg/m <sup>3</sup>	-
inhalation	local	Short term	0.993mg/m <sup>3</sup>	-
dermal	systemic	Long-term	0.172mg/kg bw/day	0.229
dermal	local	Short term	0.0025mg/cm <sup>2</sup>	-
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/m <sup>3</sup>	0.121
inhalation	local	Long-term	0.596mg/m <sup>3</sup>	-
inhalation	local	Short term	0.596mg/m <sup>3</sup>	-
dermal	systemic	Long-term	0.411mg/kgbw/day	0.548
dermal	local	Short term	0.03mg/cm <sup>2</sup>	-
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/m <sup>3</sup>	0.121
inhalation	local	Long-term	0.596mg/m <sup>3</sup>	-
inhalation	local	Short term	0.596mg/m <sup>3</sup>	-
dermal	systemic	Long-term	0.411mg/kgbw/day	0.548
dermal	local	Short term	0.03mg/cm <sup>2</sup>	-
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 m<sup>3</sup>/day

##### *Other conditions affecting environmental exposure*

Water flow on the receiving surface: 18,000 m<sup>3</sup>/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).

### ***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/m <sup>3</sup> (ART v1.5)	0.069
inhalation	local	Long-term	0.34mg/m <sup>3</sup> (ART v1.5)	-
inhalation	local	Short term	0.78mg/m <sup>3</sup> (ART v1.5)	-
dermal	systemic	Long-term	0.257mg/kgbw/day (ECETOC TRA worker v3)	0.343
dermal	local	Short term	0.012mg/cm <sup>2</sup> (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/m <sup>3</sup>	0.173
inhalation	local	Long-term	0.851mg/m <sup>3</sup>	-
inhalation	local	Short term	0.851mg/m <sup>3</sup>	-
dermal	systemic	Long-term	0.411mg/kgbw/day	0.548
dermal	local	Short term	0.03mg/cm <sup>2</sup>	-
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/m <sup>3</sup>	0.017
inhalation	local	Long-term	0.085mg/m <sup>3</sup>	-
inhalation	local	Short term	0.0851mg/m <sup>3</sup>	-
dermal	systemic	Long-term	0.411mg/kgbw/day	0.548
dermal	local	Short term	0.03mg/cm <sup>2</sup>	-
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/m <sup>3</sup>	0.02
inhalation	local	Long-term	0.099mg/m <sup>3</sup>	-
inhalation	local	Short term	0.993mg/m <sup>3</sup>	-
dermal	systemic	Long-term	0.343mg/kgbw/day	0.457
dermal	local	Short term	0.05mg/cm <sup>2</sup>	-
combined routes	-	-	-	0.659

### 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/m <sup>3</sup>	0.017
inhalation	local	Long-term	0.085mg/m <sup>3</sup>	-
inhalation	local	Short term	0.085mg/m <sup>3</sup>	-
dermal	systemic	Long-term	0.165mg/kgbw/day	0.219
dermal	local	Short term	0.012mg/cm <sup>2</sup>	-
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/m <sup>3</sup> (ART v1 .5)	0.069
inhalation	local	Long-term	0.34mg/m <sup>3</sup> (ART v1 .5)	-
inhalation	local	Short term	0.78mg/m <sup>3</sup> (ART v1 .5)	-
dermal	systemic	Long-term	0.643mg/kgbw/day (ECETOC TRA worker v3)	0.857
dermal	local	Short term	0.03mg/cm <sup>2</sup> (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.

## 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 m<sup>3</sup>/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/m<sup>3</sup>

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/m<sup>3</sup>

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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/m<sup>3</sup>

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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/m<sup>3</sup>

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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 m<sup>3</sup>/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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days a week

Operation is carried out at elevated temperature ( $> 20^\circ\text{C}$  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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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 m<sup>3</sup>/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 m<sup>3</sup>/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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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:  $\geq 0$  -  $\leq 100\%$

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days a week

Operation is carried out at elevated temperature ( $> 20^\circ\text{C}$  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/m<sup>3</sup>

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/m<sup>3</sup>

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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/m<sup>3</sup>

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 100\%$

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/m<sup>3</sup>

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 m<sup>3</sup>/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 m<sup>3</sup>/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:  $\geq 0$  -  $\leq 5\%$

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:  $\geq 0$  -  $\leq 5\%$

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:  $\geq 0$  -  $\leq 5\%$

Physical state: liquid, medium volatility

Duration and frequency of application: 480 mins. 5 days a week

Operation is carried out at elevated temperature ( $> 20^\circ\text{C}$  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/m<sup>3</sup>

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/m<sup>3</sup>

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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/m<sup>3</sup>

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:  $\geq 0$  -  $\leq 5\%$

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>

## Varnostni list

### FASSA EPOXY 200 COMP.B

Varnostni list z dne 19/02/2025 revizija 2



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

### 1.1 Identifikator izdelka

Identifikacija pripravka:

Komercialno ime: FASSA EPOXY 200 COMP.B

Komercialna koda: 1221.B

UFI: 59T2-V16E-Y00R-ET75

### 1.2 Pomembne identificirane uporabe snovi ali zmesi in odsvetovane uporabe

Priporočena uporaba: Epoksidna smola

### 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.
Acute Tox. 4	Zdravju škodljivo pri vdihavanju.
Skin Corr. 1B	Povzroča hude opekline kože in poškodbe oči.
Skin Sens. 1	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.
H332	Zdravju škodljivo pri vdihavanju.
H412	Škodljivo za vodne organizme, z dolgotrajnimi učinki.

### Previdnostni stavki

P260	Ne vdihavati dima/plina/meglvice/hlapov/razpršila
P264	Po uporabi temeljito umiti z vodo.
P280	Nadenite si zaščitne rokavice/obleke ter 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.



**Vsebuje:**

- 3-aminometil-3,5,5-trimetilcikloheksilamin
- m-phenylenebis(methylamine)
- benzil alkohol
- 3-aminopropiltrietskisilan

**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 200 COMP.B

**Nevarne sestavine, skladno z Uredbo CLP in njeno razvrstitvijo:**

Količina	Ime	Ident. št.	Razvrstitev	Registracijska številka:
≥50 - <80 %	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
≥30 - <50 %	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
≥3 - <5 %	3-aminometil-3,5,5-trimetilcikloheksilamin	CAS:2855-13-2 EC:220-666-8 Index:612-067-00-9	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317  Posebne mejne koncentracije: C ≥ 0.001%: Skin Sens. 1A H317  Ocena akutne strupenosti: ATE - Oralno: 1030mg/kg tt	01-2119514687-32-xxxx
≥0.5 - <1 %	3-aminopropiltrietskisilan	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

**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.
- 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.

V primeru neenakomernega ali odsotnosti dihanja izvajajte umetno dihanje.

Če pride do zaužitja, takoj poiskati zdravniško pomoč in pokazati embalažo ali etiketo.

#### **4.2 Najpomembnejši simptomi in učinki, akutni in zapozneli**

Simptomi in učinki so taki, kot je pričakovano 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).

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### **ODDELEK 5: Protipožarni ukrepi**

#### **5.1 Sredstva za gašenje**

Ustrezna sredstva za gašenje:

CO<sub>2</sub>, 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.

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### **ODDELEK 6: Ukrepi o nenamernih izpustih**

#### **6.1 Osebni varnostni ukrepi, zaščitna oprema in postopki v sili**

**Za neizučeno osebje:**

Nosite osebno varovalno opremo.

V primeru izpostavljenosti hlapom/prahu/aerosolom nosite dihalne aparate.

Omogočite primerno zračenje.

Uporabite ustrezno zaščito dihal.

Glejte v točki 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 Sklizevanje na druge oddelke**

Glejte tudi naslova 8 in 13

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### **ODDELEK 7: Ravnanje in skladiščenje**

#### **7.1 Varnostni ukrepi za varno ravnanje**

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

Uporabite lokaliziran sistem prezračevanja.

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 naslov 8 o priporočeni varovalni opremini.

#### **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

#### Seznam sestavin z OEL vrednostmi

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/m<sup>3</sup>

Tip OPZ VLEP Belgija Kratkotrajna 0.1 mg/m<sup>3</sup>

Tip OPZ VLEP Francija Kratkotrajna 0.1 mg/m<sup>3</sup>

Tip OPZ SUVA Švicar Dolgotrajna 0.1 mg/m<sup>3</sup>

benzil alkohol

CAS: 100-51-6 Tip OPZ MAK Nemčija Dolgotrajna 22 mg/m<sup>3</sup> - 5 ppm; Kratkotrajna 44 mg/m<sup>3</sup> - 10 ppm  
Opombe: Inhalable fraction and vapour, Skin

Tip OPZ TLV Češka Dolgotrajna 40 mg/m<sup>3</sup> - 8.88 ppm; Kratkotrajna 80 mg/m<sup>3</sup> - 17.76 ppm

Tip OPZ SUVA Švicar Dolgotrajna 22 mg/m<sup>3</sup> - 5 ppm

Tip OPZ AGW Nemčija Dolgotrajna 22 mg/m<sup>3</sup> - 5 ppm; Kratkotrajna 44 mg/m<sup>3</sup> - 10 ppm  
Opombe: Inhalable fraction and vapour

Tip OPZ NDS Poljska Dolgotrajna 240 mg/m<sup>3</sup>

Tip OPZ MV Slovenija Dolgotrajna 22 mg/m<sup>3</sup> - 5 ppm; Kratkotrajna 44 mg/m<sup>3</sup> - 10 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

3-aminometil-3,5,5-trimetilcikloheksilamin

CAS: 2855-13-2 Način izpostavitve: Sladka voda; PNEC Omejite: 0.06 mg/l

Način izpostavitve: Morska voda; PNEC Omejite: 0.006 mg/l

Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 3.18 mg/l

Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 5.784 mg/kg

Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.578 mg/kg

Način izpostavitve: Tla (kmetijska); PNEC Omejite: 1.121 mg/kg

3-aminopropiltrioksilan

CAS: 919-30-2 Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 1.3 mg/l

### 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/m<sup>3</sup>

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek  
Strokovni delavec: 1.2 mg/m<sup>3</sup>

benzil alkohol

CAS: 100-51-6 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek  
Strokovni delavec: 110 mg/m<sup>3</sup>; Uporabnik: 27 mg/m<sup>3</sup>

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek  
Strokovni delavec: 22 mg/m<sup>3</sup>; Uporabnik: 5.4 mg/m<sup>3</sup>

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

3-aminometil-3,5,5-trimetilcikloheksilamin

CAS: 2855-13-2 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, lokalni učinek  
Strokovni delavec: 0.073 mg/m<sup>3</sup>

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek  
Strokovni delavec: 0.073 mg/m<sup>3</sup>

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek  
Uporabnik: 0.3 mg/kg/day

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek  
Uporabnik: 0.3 mg/kg/day

3-aminopropiltrioksilan

CAS: 919-30-2 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek  
Strokovni delavec: 14 mg/m<sup>3</sup>; Uporabnik: 3.5 mg/m<sup>3</sup>

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

## 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 166).

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  $\geq$  0.4 mm; permeacijski čas  $\geq$  480 min. NBR (Nitrilkaučuk): debelina  $\geq$  0.4 mm; permeacijski čas  $\geq$  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.

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## ODDELEK 9: Fizikalne in kemijske lastnosti

### 9.1 Podatki o osnovnih fizikalnih in kemijskih lastnostih

fizično stanje: Tekoče

Izgled: Tekoče

Barva: jantaren

Vonj: amin

Tališče/ledišče: N.D.

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

Vnetljivost: ni znano

Spodnja in zgornja meja eksplozivnosti: N.D.

Plamenišče: ni znano

Temperatura samovžiga: N.D.

Temperatura razgradnje: N.D.

pH:  $\geq 10.50 \leq 11.50$  ( Interna metoda )

Kinematična viskoznost: ni znano

Gostota in/ali relativna gostota: 1.08 kg/l ( Interna metoda )

Relativna parna gostota: N.D.

Parni tlak: N.D.

Topnost v vodi: Rahlo topno

Topnost v olju: ni znano

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

**Lastnosti delcev:**

Velikost delcev: ni znano

### 9.2 Drugi podatki

Prevodnost: N.D.

Eksplozivne lastnosti: ni znano ( Notranja evalvacija )

Oksidativne lastnosti: ni znano ( Notranja evalvacija )

Hitrost izparevanja: ni znano

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## ODDELEK 10: Obstočnost in reaktivnost

### 10.1 Reaktivnost

Stabilna v normalnih pogojih

### 10.2 Kemijska stabilnost

Stabilna 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

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## 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), Acute Tox. 4(H332)

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. 1(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 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:

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

3-aminometil-3,5,5-trimetilcikloheksilamin

CAS: 2855-13-2 a) akutna strupenost ATE - Oralno: 1030 mg/kg tt  
LC50 Vdihavanje aerosola Podgana > 5.01 mg/l 4h  
LD50 Koža Podgana > 2000 mg/kg tt

3-aminopropiltrioksilan

CAS: 919-30-2 a) akutna strupenost ATE - Oralno: 500 mg/kg tt  
LD50 Oralno Podgana 1780 mg/kg  
LD50 Koža Zajec 4000 mg/kg  
LC50 Vdihavanje aerosola Podgana > 7.35 mg/l

#### 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

3-aminometil-3,5,5-trimetilcikloheksilamin

CAS: 2855-13-2

a) akutna strupenost za vodno okolje: LC50 Riba 110 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha 23 mg/l 48h

a) akutna strupenost za vodno okolje: EC50 Alge > 50 mg/l 72h

b) kronična strupenost za vodno okolje: NOEC Vodna bolha 3 mg/l 21d

3-aminopropiltrioksolan

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

## 12.2 Obstočnost in razgradljivost

m-phenylenebis(methylamine)

CAS: 1477-55-0 Ni hitro razgradljivo

benzil alkohol

CAS: 100-51-6 Hitro razgradljivo

3-aminometil-3,5,5-trimetilcikloheksilamin

CAS: 2855-13-2 Ni hitro razgradljivo

3-aminopropiltrioksolan

CAS: 919-30-2 Ni hitro razgradljivo

## 12.3 Zmožnost kopičenja v organizmih

ni znano

## 12.4 Mobilnost v tleh

ni znano

## 12.5 Rezultati ocene PBT in vPvB

Na podlagi razpoložljivih podatkov, preparat ne vsebuje snovi PBT/vPvB v procentu  $\geq 0.1\%$ .

## 12.6 Lastnosti endokrinih motilcev

Ni endokrinih motilcev v koncentraciji  $\geq 0,1\%$ .

## 12.7 Drugi škodljivi učinki

ni znano

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## 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 normah.

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.

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## 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. (m-phenylenebis(methylamine) - 3-aminometil-3,5,5-trimetilcikloheksilamin)

IATA-uradno ime blaga: AMINES, LIQUID, CORROSIVE, N.O.S. POLYAMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis(methylamine) - 3-aminometil-3,5,5-trimetilcikloheksilamin)

IMDG-uradno ime blaga: AMINES, LIQUID, CORROSIVE, N.O.S. POLYAMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis(methylamine) - 3-aminometil-3,5,5-trimetilcikloheksilamin)

#### 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

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### 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) št. 2023/1434 (19. ATP CLP)
- Uredba (EU) št. 2023/1435 (20. ATP CLP)
- Uredba (EU) št. 2024/197 (21. ATP CLP)

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

- Obmedzenia vo vzťahu s výrobkom: 3
- Obmedzenia vo vzťahu s obsiahnutými látkami: 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 2: ogroža vodo.

**SVHC snovi:**

Na podlagi razpoložljivih podatkov, preparat ne vsebuje snovi SVHC v procentu  $\geq 0.1\%$ .

**15.2 Ocena kemijske varnosti**

Ocena kemijske varnosti ni bila opravljena za mešanice

**ODDELEK 16: Drugi podatki**

Številka	Opis
EUH071	Jedko za dihalne poti.
H302	Zdravju škodljivo pri zaužitju.
H314	Povzroča hude opekline kože in poškodbe oči.
H317	Lahko povzroči alergijski odziv kože.
H318	Povzroča hude poškodbe oči.
H319	Povzroča hudo draženje oči.
H332	Zdravju škodljivo pri vdihavanju.
H412	Škodljivo za vodne organizme, z dolgotrajnimi učinki.

Številka	Razred in kategorija nevarnosti	Opis
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
3.2/1B	Skin Corr. 1B	Jedkost za kožo, Kategorija 1B
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
3.4.2/1B	Skin Sens. 1B	Preobčutljivost kože, Kategorija 1B
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
Acute Tox. 4, H332	metoda izračuna
Skin Corr. 1B, H314	metoda izračuna
Skin Sens. 1, 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:

- Varnostni list
- ODDELEK 1: Identifikacija snovi/zmesi in družbe/podjetja
- ODDELEK 2: Določitev nevarnosti
- ODDELEK 3: Sestava/podatki o sestavinah
- ODDELEK 7: Ravnanje in skladiščenje
- ODDELEK 8: Nadzor izpostavljenosti/osebna zaščita
- ODDELEK 9: Fizikalne in kemijske lastnosti

- ODDELEK 11: Toksikološki podatki
- ODDELEK 12: Ekološki podatki
- ODDELEK 14: Podatki o prevozu
- ODDELEK 15: Zakonsko predpisani podatki
- ODDELEK 16: Drugi podatki

## 3-aminomethyl-3,5,5-trimethylcyclohexylamine

### Substance identification

Chemical Name: 3-aminomethyl-3,5,5-trimethylcyclohexylamine

CAS number: 2855-13-2

EU index number: 612-067-00-9

EINECS number: 220-666-8

## ES1 Formulation or repackaging - INDUSTRIAL USES

### 1. TITLE SECTION

**Exposure scenario name:** Preparation and repackaging of substances and mixtures

**Date - Version:** 15/07/2020 - 1.0

**Life cycle stage:** Formulation or repackaging

**Main user group:** Industrial uses

**Sector(s) of use:** Industrial uses (SU3) - Large-scale production of basic chemicals (including petroleum products) (SU8) - Formulation [blending] of preparations and/or repackaging (SU10)

#### **Contributing scenario - Environment**

**CS1 Wet formulation:** ERC2

#### **Contributing scenario - Worker**

**CS2 Use in closed systems:** PROC3

**CS3 Material Transfers:** PROC8a

**CS4 Material Transfers:** PROC8b

**CS5 Material Transfers:** PROC9

**CS6 Blend Operations:** PROC5

### 2. CONDITIONS OF USE AFFECTING EXPOSURE

#### 2.1. CS1 Environment Contributing Scenario: Wet Formulation (ERC2)

**Environmental release categories:** Formulation of mixtures (ERC2)

#### **Product features (article)**

**Physical form of the product:** Liquid

**Vapor pressure:** 1.57 Pa

#### **Amount used, frequency and duration of use**

**Amounts used:** Annual amount per site 2500 t

**Release Type:** Continuous release

**Issue days:** 300 days/year

**Further environmental conditions:**

Wet formulation

Air - minimum efficiency of: 0.25 %

Ground - minimum efficiency of: 0.01 %

Water - minimum efficiency of: 0.5 %

#### **Measures and technical-organizational conditions**

**Control measures to prevent releases:**

Air - minimum efficiency of: 0.25 %

Ground - minimum efficiency of: 0.01 %

Water - minimum efficiency of: 0.5 %

#### **Conditions and measures for the municipal sewage treatment plant**

**Type of sewage treatment plant (STP):** Municipal STP

**STP effluent (m<sup>3</sup>/day):** 8640

#### **Conditions and measures for waste treatment (including the product waste)**

**Waste treatment:** Do not spread industrial sludge on natural soils.

### ***Other operational conditions affecting environmental exposure***

Local seawater dilution factor: 100

Local fresh water dilution factor: 11

Flow rate of receiving surface water: 86400

Indoor use

## **2.2. CS2 Worker Contributing Scenario: Use in Closed Systems (PROC3)**

**Process categories:** Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions (PROC3)

### ***Product features (article)***

**Physical form of the product:** Liquid

**Vapor pressure:** 1.57 Pa

### ***Amount used, frequency and duration of use/exposure***

**Duration:** 480 min

**Frequency:** 5 days/week

### ***Measures and technical-organizational conditions***

**Technical organizational measures:** For further data, see section 8 of the safety data sheet.

### ***Conditions and measures related to personal protection, hygiene and health verification***

**Personal protective equipment:**

Wear suitable gloves, tested according to EN347.

Dermal - minimum efficiency of: 95 %

### ***Other operational conditions affecting worker exposure***

Indoor use

**Ventilation Rate:** Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%

**Body parts exposed:** Palm of a hand.

***Learn more about good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.***

**Further information on good practices:** Wear waterproof clothing. Ensure regular inspection, cleaning and maintenance of machines and systems. Wear a suitable apron to avoid skin exposure.

## **2.3. CS3 Worker Contributing Scenario: 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

**Vapor pressure:** 1.57 Pa

### ***Amount used, frequency and duration of use/exposure***

**Duration:** 240 min

**Frequency:** 5 days/week

### ***Measures and technical-organizational conditions***

**Technical organizational measures:** For further data, see section 8 of the safety data sheet.

### ***Conditions and measures related to personal protection, hygiene and health verification***

**Personal protective equipment:** Wear suitable gloves, tested according to EN347. Dermal - minimum efficiency of: 98 %

### ***Other operational conditions affecting worker exposure***

Indoor use

**Ventilation Rate:** Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%

**Body parts exposed:** Palm of a hand.

**Learn more about good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.**

**Further information on good practices:** Wear waterproof clothing. Ensure regular inspection, cleaning and maintenance of machines and systems. Wear a suitable apron to avoid skin exposure.

## 2.4. CS4 orker Contributing Scenario: 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

**Vapor pressure:** 1.57 Pa

### **Amount used, frequency and duration of use/exposure**

**Duration:** 480 min

**Frequency:** 5 days/week

### **Measures and technical-organizational conditions**

**Technical organizational measures:** For further data, see section 8 of the safety data sheet.

### **Conditions and measures related to personal protection, hygiene and health verification**

**Personal protective equipment:** Wear suitable gloves, tested according to EN347.

Dermal - minimum efficiency of: 98 %

### **Other operational conditions affecting worker exposure**

Indoor use

**Ventilation Rate:** Provide a basic level of general ventilation (1 to 3 air changes per hour). 97%

**Body parts exposed:** Palm of a hand. Possible skin contact is believed to be limited to the hands.

**Learn more about good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.**

**Further information on good practices:** Wear waterproof clothing. Ensure regular inspection, cleaning and maintenance of machines and systems. Wear a suitable apron to avoid skin exposure. Wear suitable face protection.

## 2.5. CS5 Worker Contributing Scenario: Material Transfers (PROC9)

**Process categories:** Transfer of a substance or preparation (filling/emptying) (dedicated filling line, including weighing) (PROC9)

### **Product features (article)**

**Physical form of the product:** Liquid

**Vapor pressure:** 1.57 Pa

### **Amount used, frequency and duration of use/exposure**

**Duration:** 480 min

**Frequency:** 5 days/week

### **Measures and technical-organizational conditions**

**Technical organizational measures:** For further data, see section 8 of the safety data sheet.

### **Conditions and measures related to personal protection, hygiene and health verification**

**Personal protective equipment:** Wear suitable gloves, tested according to EN347.

Dermal - minimum efficiency of: 98 %

### **Other operational conditions affecting worker exposure**

Indoor use

**Ventilation Rate:** Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%

**Body parts exposed:** Palm of a hand. Possible skin contact is believed to be limited to the hands.

**Learn more about good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.**

**Further information on good practices:** Wear waterproof clothing. Ensure regular inspection, cleaning and maintenance of machines and systems. Wear a suitable apron to avoid skin exposure. Wear suitable face protection.

## 2.6. CS6 Worker Contributing Scenario: Mixing Operations (PROC5)

**Process categories:** Mixing or Blending in Batch Processes (PROC5)

### **Product features (article)**

**Physical form of the product:** Liquid

**Vapor pressure:** 1.57 Pa

### **Amount used, frequency and duration of use/exposure**

**Duration:** 480 min

**Frequency:** 5 days/week

### **Measures and technical-organizational conditions**

**Technical organizational measures:** For further data, see section 8 of the safety data sheet.

### **Conditions and measures related to personal protection, hygiene and health verification**

**Personal protective equipment:** Wear suitable gloves, tested according to EN347. Dermal - minimum efficiency of: 98 %

### **Other operational conditions affecting worker exposure**

Indoor use

**Ventilation Rate:** Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%

**Body parts exposed:** Palm of a hand.

**Learn more about good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.**

**Further information on good practices:** Wear waterproof clothing. Ensure regular inspection, cleaning and maintenance of machines and systems. Wear a suitable apron to avoid skin exposure.

## 3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

### 3.1. CS1 Environment Contributing Scenario: Wet Formulation (ERC2)

Protection target	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
sea water	1,025 kg/day	ECETOC TRA environment v2.0	0.81

### 3.2. CS2 Worker Contributing Scenario: Use in Closed Systems (PROC3)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, local, short-term	4,258 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.212

### 3.3. CS3 Worker Contributing Scenario: Material Transfers (PROC8a)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, local, short-term	14,192 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.706
by inhalation, systemic, short-term	14,192 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.706

### 3.4. CS4 orker Contributing Scenario: Material Transfers (PROC8b)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, local, short-term	2,129 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.106
by inhalation, systemic, short-term	2,129 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.106

### 3.5. CS5 Worker Contributing Scenario: Material Transfers (PROC9)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, local, short-term	7,096 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.353
by inhalation, systemic, short-term	7,096 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.353

### 3.6. CS6 Worker Contributing Scenario: Mixing Operations (PROC5)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, local, short-term	7,096 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.353
by inhalation, systemic, short-term	7,096 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.353

## 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.



## ES2 Formulation or repackaging - PROFESSIONAL USES

### 1. TITLE SECTION

**Exposure scenario name:** Preparation and repackaging of substances and mixtures

**Date - Version:** 10/03/2020 - 1.0

**Life cycle stage:** Formulation or repackaging

**Main user group:** Professional uses

**Sector(s) of use:** Manufacture of bulk, large scale chemicals (including petroleum products) (SU8) - Formulation [mixing] of preparations and/or re-packaging (SU10) - Professional uses (SU22)

#### ***Contributing scenario - Environment***

**CS1 Wet formulation:** ERC2

#### ***Contributing scenario - Worker***

**CS2 Use in closed systems:** PROC3

**CS3 Material Transfers:** PROC8a

**CS3 Material Transfers:** PROC8b

**CS3 Material Transfers:** PROC9

**CS6 Blend Operations:** PROC5

### 2. CONDITIONS OF USE AFFECTING EXPOSURE

#### 2.2. CS1 Environment Contributing Scenario: Wet Formulation (ERC2)

**Environmental release categories:** Formulation of mixtures (ERC2)

#### ***Product features (article)***

**Physical form of the product:** Liquid

**Vapor pressure:** 1.57 Pa

#### ***Amount used, frequency and duration of use***

**Amounts used:** Annual amount per site 2500 t

**Release Type:** Continuous release

**Issue days:** 300 days/year

**Further environmental conditions:**

Wet formulation

Air - minimum efficiency of: 0.25 %

Ground - minimum efficiency of: 0.01 %

Water - minimum efficiency of: 0.5 %

#### ***Measures and technical-organizational conditions***

**Control measures to prevent releases:**

Air - minimum efficiency of: 0.25 %

Ground - minimum efficiency of: 0.01 %

Water - minimum efficiency of: 0.5 %

#### ***Conditions and measures for the municipal sewage treatment plant***

**Type of sewage treatment plant (STP):** Municipal STP

**STP effluent (m<sup>3</sup>/day):** 8640

#### ***Conditions and measures for waste treatment (including the product waste)***

**Waste treatment:** Do not spread industrial sludge on natural soils.

#### ***Other operational conditions affecting environmental exposure***

**Local seawater dilution factor:** 100

**Local fresh water dilution factor:** 11

**Flow rate of receiving surface water:** 86400

Indoor use

## 2.2. CS2 Worker Contributing Scenario: Use in Closed Systems (PROC3)

**Process categories:** Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment conditions (PROC3)

### **Product features (article)**

**Physical form of the product:** Liquid

**Vapor pressure:** 1.57 Pa

### **Amount used, frequency and duration of use/exposure**

**Duration:** 480 min

**Frequency:** 5 days/week

### **Measures and technical-organizational conditions**

**Technical organizational measures:** For further data, see section 8 of the safety data sheet.

### **Conditions and measures related to personal protection, hygiene and health verification**

**Personal protective equipment:** Wear suitable gloves, tested according to EN347. Dermal - minimum efficiency of: 95 %

### **Other operational conditions affecting worker exposure**

Indoor use

**Ventilation Rate:** Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%

**Body parts exposed:** Palm of a hand.

**Learn more about good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.**

**Further information on good practices:** Wear waterproof clothing. Ensure regular inspection, cleaning and maintenance of machines and systems. Wear a suitable apron to avoid skin exposure.

## 2.3. CS3 Worker Contributing Scenario: 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

**Vapor pressure:** 1.57 Pa

### **Amount used, frequency and duration of use/exposure**

**Duration:** 240 min

**Frequency:** 5 days/week

### **Measures and technical-organizational conditions**

**Technical organizational measures:** For further data, see section 8 of the safety data sheet.

### **Conditions and measures related to personal protection, hygiene and health verification**

**Personal protective equipment:** Wear suitable gloves, tested according to EN347. Dermal - minimum efficiency of: 98 %

### **Other operational conditions affecting worker exposure**

Indoor use

**Ventilation Rate:** Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%

**Body parts exposed:** Palm of a hand.

**Learn more about good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.**

**Further information on good practices:** Wear waterproof clothing. Ensure regular inspection, cleaning and maintenance of machines and systems. Wear a suitable apron to avoid skin exposure.

## 2.4. CS4 orker Contributing Scenario: 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

**Vapor pressure:** 1.57 Pa

### **Amount used, frequency and duration of use/exposure**

**Duration:** 240 min

**Frequency:** 5 days/week

### **Measures and technical-organizational conditions**

**Technical organizational measures:** For further data, see section 8 of the safety data sheet.

### **Conditions and measures related to personal protection, hygiene and health verification**

**Personal protective equipment:** Wear suitable gloves, tested according to EN347. Dermal - minimum efficiency of: 98 %

### **Other operational conditions affecting worker exposure**

Indoor use

**Ventilation Rate:** Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%

**Body parts exposed:** Palm of a hand. Possible skin contact is believed to be limited to the hands.

**Learn more about good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.**

**Further information on good practices:** Wear waterproof clothing. Ensure regular inspection, cleaning and maintenance of machines and systems. Wear a suitable apron to avoid skin exposure. Wear suitable face protection.

## 2.5. CS5 Worker Contributing Scenario: Material Transfers (PROC9)

**Process categories:** Transfer of a substance or preparation (filling/emptying) (dedicated filling line, including weighing) (PROC9)

### **Product features (article)**

**Physical form of the product:** Liquid

**Vapor pressure:** 1.57 Pa

### **Amount used, frequency and duration of use/exposure**

**Duration:** 240 min

**Frequency:** 5 days/week

### **Measures and technical-organizational conditions**

**Technical organizational measures:** For further data, see section 8 of the safety data sheet.

### **Conditions and measures related to personal protection, hygiene and health verification**

**Personal protective equipment:** Wear suitable gloves, tested according to EN347. Dermal - minimum efficiency of: 98 %

### **Other operational conditions affecting worker exposure**

Indoor use

**Ventilation Rate:** Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%

**Body parts exposed:** Palm of a hand. Possible skin contact is believed to be limited to the hands.

**Learn more about good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.**

**Further information on good practices:** Wear waterproof clothing. Ensure regular inspection, cleaning and maintenance of machines and systems. Wear a suitable apron to avoid skin exposure. Wear suitable face protection.

## 2.6. CS6 Worker Contributing Scenario: Mixing Operations (PROC5)

**Process categories:** Mixing or Blending in Batch Processes (PROC5)

### **Product features (article)**

**Physical form of the product:** Liquid

**Vapor pressure:** 1.57 Pa

### **Amount used, frequency and duration of use/exposure**

**Duration:** 60 min

**Frequency:** 5 days/week

### **Measures and technical-organizational conditions**

**Technical organizational measures:** For further data, see section 8 of the safety data sheet.

### **Conditions and measures related to personal protection, hygiene and health verification**

**Personal protective equipment:** Wear suitable gloves, tested according to EN347. Dermal - minimum efficiency of: 98 %

### **Other operational conditions affecting worker exposure**

Indoor use

**Ventilation Rate:** Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%

**Body parts exposed:** Palm of a hand. Possible skin contact is believed to be limited to the hands.

**Learn more about good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.**

**Further information on good practices:** Wear waterproof clothing. Ensure regular inspection, cleaning and maintenance of machines and systems. Wear a suitable apron to avoid skin exposure. Wear suitable face protection.

## 3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

### 3.1. CS1 Environment Contributing Scenario: Wet Formulation (ERC2)

Protection target	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
sea water	1,025 kg/day	ECETOC TRA environment v2.0	0.81

### 3.2. CS2 Worker Contributing Scenario: Use in Closed Systems (PROC3)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, local, short-term	8,515 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.424

### 3.3. CS3 Worker Contributing Scenario: Material Transfers (PROC8a)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, local, short-term	7,096 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.353
by inhalation, systemic, short-term	7,096 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.353

### 3.4. CS4 orker Contributing Scenario: Material Transfers (PROC8b)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, local, short-term	14,192 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.706
by inhalation, systemic, short-term	14,192 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.706

### 3.5. CS5 Worker Contributing Scenario: Material Transfers (PROC9)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, local, short-term	14,192 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.706
by inhalation, systemic, short-term	14,192 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.706

### 3.6. CS6 Worker Contributing Scenario: Mixing Operations (PROC5)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, local, short-term	14,192 mg/m <sup>3</sup>	ECETOC TRA worker v2.0	0.706

## 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.

# 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, calendaring 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 ESVOG 5 (related to ERC4)

**PC9a/b/c:** PROC5, 7, 8a, 8b, 9, 10, 13 spERC ESVOG 5 (related to ERC4)

**PC14:** PROC5, 8a, 8b, 9, 15, 23, 24, 25 spERC ESVOG 5 (related to ERC4)

**PC15:** PROC5, 8a, 8b, 9, 15 spERC ESVOG 5 (related to ERC4)

**PC18:** PROC7, 8a, 8b, 9, 10, 13 spERC ESVOG 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 m<sup>3</sup>/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 m<sup>3</sup>/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 m<sup>3</sup>/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<sup>3</sup>/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<sup>3</sup>/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  $\leq 40$  %: no RMM required.

PROC5, PROC8a, PROC13:  $> 25$  % -  $\leq 40$  %: gloves (90 % efficiency) are required as described in section 8.

PROC6:  $> 5$  % -  $\leq 40$  %: gloves (90 % efficiency) are required as described in section 8.

PROC10:  $< 5$  % (indoor and outdoor environment): No RMMs required.

$> 5$  -  $\leq 40$  % (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  $\leq 40$  %

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<sup>3</sup>/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:

$\leq 5$  % (indoor and outdoor environment): Respiratory protection (95 % efficiency) required as described in section 8.

$> 5$  %  $\leq 40$  % (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  $\leq 40$  %

Physical state: liquid

### **Quantity used**

Not applicable

### **Frequency and duration of use/exposure**

Duration of exposure per day (concentration  $\leq 25$  %): 8 hours (indoors and outdoors)

Duration of exposure per day (concentration  $>25\% \leq 40\%$ ): 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 m<sup>3</sup>/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 m<sup>3</sup>/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 m<sup>3</sup>/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  $\leq 40\%$

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<sup>3</sup>/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  $\leq 40\%$ : no RMM required.

PROC8a: > 25 % -  $\leq 40\%$ : 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 m<sup>3</sup>/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 m<sup>3</sup>/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 m<sup>3</sup>/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  $\leq 40\%$

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<sup>3</sup>/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:

$\leq 5\%$  (indoor and outdoor environment): Respiratory protection (95 % efficiency) required as described in section 8.

$> 5\% - \leq 40\%$  (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  $\leq 40\%$

Physical state: liquid

### **Quantity used**

Not applicable

### **Frequency and duration of use/exposure**

Duration of exposure per day (concentration  $\leq 25\%$ ): 8 h (indoor and outdoor)

Duration of exposure per day (concentration  $>25\% - \leq 40\%$ ): 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 m<sup>3</sup>/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 m<sup>3</sup>/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 m<sup>3</sup>/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.

# 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

### 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.