ODDELEK 1: Identifikacija snovi/zmesi in družbe/podjetja

1.1 Identifikator izdelka

Identifikacija pripravka:

Komercialno ime: AQUAZIP BARRIER
Komercialna koda: 1320
UFI: 6U99-D9K4-7K03-5HGG

1.2 Pomembne identificirane uporabe snovi ali zmesi in odsvetovane uporabe

Priporočena uporaba: Vodotesna tekoča membrana za gradbeništvo; Samo za profesionalno uporabo
Odsvetovane uporabe: Ni namenjeno za potrošniško uporabo

1.3 Podrobnosti o dobavitelju varnostnega lista

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

Odgovorni: laboratorio.spresiano@fassabortolo.it

1.4 Telefonska številka za nujne primere

112 - Center za obveščanje (na voljo 24 ur)

ODDELEK 2: Določitev nevarnosti



2.1 Razvrstitev snovi ali zmesi

Uredba (ES) št. 1272/2008 (CLP)

Skin Sens. 1 Lahko povzroči alergijski odziv kože.

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



Pozor

Stavki o nevarnosti

H317 Lahko povzroči alergijski odziv kože.

Previdnostni stavki

P261 Ne vdihavati dima/plina/meglice/hlapov/razpršila.
P280 Nadenite si zaščitne rokavice/obleke.
P333+P313 Če nastopi draženje kože ali se pojavi izpuščaj: poiščite zdravniško pomoč/oskrbo.
P362+P364 Sleči kontaminirana oblačila in jih oprati pred ponovno uporabo.
P501 Odstraniti vsebino/posodo v skladu z nacionalnimi predpisi.

Vsebuje:

1,2-benzizotiazol-3(2H)-on

reakcijska zmes 5-kloro-2-metil-2h-izotiazol-3-ona in 2-metil-2h-izotiazol-3-ona (3:1)

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%.

Vsebuje biocid. Za ohranjanje lastnosti pri skladiščenju: reakcijska zmes 5-kloro-2-metil-2h-izotiazol-3-ona in 2-metil-2h-izotiazol-3-ona (3:1)

Vsebuje biocid. Za ohranjanje lastnosti pri skladiščenju: 1,2-benzizotiazol-3(2H)-on

Ni drugih tveganj

ODDELEK 3: Sestava/podatki o sestavinah

3.1 Snovi

ni znano

3.2 Zmesi

Identifikacija pripravka: AQUAZIP BARRIER

Nevarne sestavine, skladno z Uredbo CLP in njeno razvrstitvijo:

Količina	Ime	Ident. št.	Razvrstitev	Registracijska številka:
≥0.3 - <0.5 %	Kristalni silicijev dioksid, kremen (vdihljiva frakcija)	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372	Izvzeti
≥0.036 - <0.05 %	1,2-benzizotiazol-3(2H)-on	CAS:2634-33-5 EC:220-120-9 Index:613-088-00-6	Acute Tox. 2, H330 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410, M-Chronic:1, M-Acute:1 Posebne mejne koncentracije: C ≥ 0.036%: Skin Sens. 1A H317 Ocena akutne strupenosti: ATE - Oralno: 450mg/kg tt ATE - Vdihavanje (Prahom/meglice): 0.21mg/l	
≥0.005 - <0.025 %	2-butoksietanol	CAS:111-76-2 EC:203-905-0 Index:603-014-00-0	Acute Tox. 3, H331 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Ocena akutne strupenosti: ATE - Oralno: 1200mg/kg tt ATE - Vdihavanje (Hlapi): 3mg/l	01-2119475108-36-xxxx
≥0.005 - <0.025 %	cinkov pirition	CAS:13463-41-7 EC:236-671-3 Index:613-333-00-7	Acute Tox. 2, H330 Acute Tox. 3, H301 Eye Dam. 1, H318 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Repr. 1B, H360D, M-Chronic:10, M-Acute:1000 Ocena akutne strupenosti: ATE - Oralno: 221mg/kg tt ATE - Vdihavanje (Prahom/meglice): 0.14mg/l	
≥0.00015 - <0.0015 %	reakcijska zmes 5-kloro-2-metil-2h-izotiazol-3-ona in 2-metil-2h-izotiazol-3-ona (3:1)	CAS:55965-84-9 Index:613-167-00-5	Acute Tox. 2, H310 Acute Tox. 2, H330 Acute Tox. 3, H301 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410, M-Chronic:100, M-Acute:100, EUH071 Posebne mejne koncentracije: C ≥ 0.6%: Skin Corr. 1C H314 0.06% ≤ C < 0.6%: Skin Irrit. 2 H315 C ≥ 0.6%: Eye Dam. 1 H318 0.06% ≤ C < 0.6%: Eye Irrit. 2 H319 C ≥ 0.0015%: Skin Sens. 1A H317 Ocena akutne strupenosti:	

ATE - Oralno: 64mg/kg tt
ATE - Dermalno: 92.4mg/kg tt
ATE - Vdihavanje
(Prahom/meglice): 0.17mg/l

ODDELEK 4: Ukrepi za prvo pomoč

4.1 Opis ukrepov za prvo pomoč

V primeru stika s kožo:

Kontaminirana oblačila takoj slecite in jih na varen način odstranite.

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

Umijte celotno telo (tuširanje ali kopel).

V primeru stika z očmi:

Če pride v oči, takoj izpirati z obilo vode in poiskati zdravniško pomoč.

V primeru zaužitja:

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

V primeru vdihavanja:

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

4.2 Najpomembnejši simptomi in učinki, akutni in zapozneli

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

4.3 Navedba kakršne koli takojšnje medicinske oskrbe in posebnega zdravljenja

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

ODDELEK 5: Protipožarni ukrepi

5.1 Sredstva za gašenje

Ustrezna sredstva za gašenje:

Proizvod ni vnetljiv

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

Noben posebej.

5.2 Posebne nevarnosti v zvezi s snovjo ali zmesjo

Pri gorenju nastajajo težki dimni plini.

V primeru požara in/ali eksplozije ne vdihavajte dima.

5.3 Nasvet za gasilce

Uporabiti ustrezne dihalne naprave.

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

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

ODDELEK 6: Ukrepi o nenamernih izpustih

6.1 Osebni varnostni ukrepi, zaščitna oprema in postopki v sili

Za neizučeno osebje:

Nosite osebno varovalno opremo.

Osebe umaknite na varno mesto.

Glejte v oddelku 7 in 8 navedene zaščitne ukrepe.

Za reševalce:

Nosite osebno varovalno opremo.

6.2 Okoljevarstveni ukrepi

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

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

6.3 Metode in materiali za zadrževanje in čiščenje

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

Po pobiranju z vodo izperite območje in prizadete materiale.

Kontaminirano vodo za pranje shranite in odstranite.

6.4 Sklicevanje na druge oddelke

Glejte tudi naslova 8 in 13

ODDELEK 7: Ravnanje in skladiščenje

7.1 Varnostni ukrepi za varno ravnanje

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

Prazne vsebnike ne uporabite dokler niso očiščeni.

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

Nasveti o splošni higieni dela:

Kontaminirana oblačila se mora pred vstopom v jedilnico zamenjati.

Med delom ne jejte in ne pijte.

Glejte tudi oddelek 8 o priporočeni varovalni opremi.

7.2 Pogoji za varno skladiščenje, vključno z nezdružljivostjo

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

Hranite stran od hrane, pijač in krme.

Inkompaktibilne snovi:

Glejte točko 10.5

Navodila za prostore:

Primerno zračeni prostori.

Zaščitite pred zmrzaljo.

7.3 Posebne končne uporabe

Priporočila

Glejte točko 1.2

Specifične rešitve za industrijski sektor

Nobena posebna uporaba

ODDELEK 8: Nadzor izpostavljenosti/osebna zaščita

8.1 Parametri nadzora

Mejne vrednosti za poklicno izpostavljenost

Kristalni silicijev dioksid, kremen (vdihljiva frakcija)

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

2-butoksietanol

CAS: 111-76-2	Tip OPZ	ACGIH		Dolgotrajna 20 ppm

				Opombe: A3, BEI - Eye and URT irr
	Tip OPZ	EU		Dolgotrajna 98 mg/m3 - 20 ppm; Kratkotrajna 246 mg/m3 - 50 ppm Opombe: Skin
	Tip OPZ	MAK	Avstrija	Dolgotrajna 98 mg/m3 - 20 ppm; Kratkotrajna 200 mg/m3 - 40 ppm Opombe: Skin
	Tip OPZ	MAK	Nemčija	Dolgotrajna 49 mg/m3 - 10 ppm; Kratkotrajna 98 mg/m3 - 20 ppm Opombe: Skin
	Tip OPZ	VLEP	Belgija	Dolgotrajna 98 mg/m3 - 20 ppm; Kratkotrajna 246 mg/m3 - 50 ppm
	Tip OPZ	VLEP	Francija	Dolgotrajna 49 mg/m3 - 10 ppm; Kratkotrajna 246 mg/m3 - 50 ppm Opombe: Skin
	Tip OPZ	VLEP	Italija	Dolgotrajna 98 mg/m3 - 20 ppm; Kratkotrajna 246 mg/m3 - 50 ppm Opombe: Skin
	Tip OPZ	VLEP	Romunija	Dolgotrajna 98 mg/m3 - 20 ppm; Kratkotrajna 246 mg/m3 - 50 ppm
	Tip OPZ	TLV	Bolgarija	Dolgotrajna 98 mg/m3 - 20 ppm; Kratkotrajna 246 mg/m3 - 50 ppm Opombe: Skin
	Tip OPZ	TLV	Češka	Dolgotrajna 100 mg/m3 - 20.4 ppm; Kratkotrajna 200 mg/m3 - 40.8 ppm Opombe: Skin
	Tip OPZ	VLA	Španija	Dolgotrajna 98 mg/m3 - 20 ppm; Kratkotrajna 245 mg/m3 - 50 ppm Opombe: Skin
	Tip OPZ	ÁK	Madžarska	Dolgotrajna 98 mg/m3; Kratkotrajna 246 mg/m3 Opombe: Skin
	Tip OPZ	MAC	Nizozemska	Dolgotrajna 100 mg/m3 - 20 ppm; Kratkotrajna 246 mg/m3 - 50 ppm Opombe: Skin
	Tip OPZ	VLE	Portugalska	Dolgotrajna 98 mg/m3 - 20 ppm; Kratkotrajna 246 mg/m3 - 50 ppm Opombe: Skin
	Tip OPZ	SUVA	Švicar	Dolgotrajna 49 mg/m3 - 10 ppm; Kratkotrajna 98 mg/m3 - 20 ppm
	Tip OPZ	WEL	U.K.	Dolgotrajna 123 mg/m3 - 25 ppm; Kratkotrajna 246 mg/m3 - 50 ppm
	Tip OPZ	GVI	Hrvaška	Dolgotrajna 98 mg/m3 - 20 ppm; Kratkotrajna 246 mg/m3 - 50 ppm Opombe: Skin
	Tip OPZ	AGW	Nemčija	Dolgotrajna 49 mg/m3 - 10 ppm; Kratkotrajna 98 mg/m3 - 20 ppm Opombe: Skin
	Tip OPZ	NDS	Poljska	Dolgotrajna 98 mg/m3; Kratkotrajna 200 mg/m3 Opombe: Skin
	Tip OPZ	MV	Slovenija	Dolgotrajna 98 mg/m3 - 20 ppm; Kratkotrajna 246 mg/m3 - 50 ppm Opombe: Skin
	Tip OPZ	IPRV	Litva	Dolgotrajna 50 mg/m3 - 100 ppm; Kratkotrajna 100 mg/m3 - 20 ppm Opombe: Skin

reakcijska zmes 5-kloro-2-metil-2h-izotiazol-3-ona in 2-metil-2h-izotiazol-3-ona (3:1)

CAS: 55965-84-9	Tip OPZ	MAK	Avstrija	Dolgotrajna 0.05 mg/m3
	Tip OPZ	MAK	Nemčija	Dolgotrajna 0.2 mg/m3; Kratkotrajna 0.4 mg/m3 Opombe: Inhalable fraction
	Tip OPZ	SUVA	Švicar	Dolgotrajna 0.2 mg/m3; Kratkotrajna 0.4 mg/m3 Opombe: Inhalable fraction

Mejna vrednost izpostavljenosti po PNEC

2-butoksietanol

CAS: 111-76-2 Način izpostavitve: Sladka voda; PNEC Omejite: 8.8 mg/l

Način izpostavitve: Morska voda; PNEC Omejite: 0.88 mg/l

Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 463 mg/l

Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 34.6 mg/kg

Način izpostavitve: Morski sedimenti; PNEC Omejite: 3.46 mg/kg

Način izpostavitve: Tla (kmetijska); PNEC Omejite: 2.33 mg/kg

Način izpostavitve: Prehranska veriga; PNEC Omejite: 20 mg/kg

Izpeljane vrednosti brez učinka. (DNEL)

2-butoksietanol

CAS: 111-76-2 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 98 mg/m3; Uporabnik: 59 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Strokovni delavec: 1091 mg/m3; Uporabnik: 426 mg/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek
Strokovni delavec: 246 mg/m3; Uporabnik: 147 mg/m3

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 6.3 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Kratkotrajna, sistemski učinek
Uporabnik: 26.7 mg/kg

8.2 Nadzor izpostavljenosti

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

Zaščita oči:

Očala s stranskimi varovali (EN 16321).

Zaščita kože:

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

Zaščita rok:

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

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

Ustrezne rokavice tipa (EN 374/EN 16523); Butil kavčuk (butil guma): debelina >= 0.4 mm; permeacijski čas >= 480 min. NBR (Nitrilkaučuk): debelina >= 0.4 mm; permeacijski čas >= 480 min

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

Zaščita dihalnih poti:

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

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

Nadzor izpostavljenosti okolja:

Glejte točko 6.2

Higienski in tehnični ukrepi

Glejte poglavje 7.

ODDELEK 9: Fizikalne in kemijske lastnosti

9.1 Podatki o osnovnih fizikalnih in kemijskih lastnostih

fizično stanje: Tekoče

Izgled: Viskozni

Barva: bel

Vonj: značilnost

Prag vonja: N.D.

Tališče/ledišče: N.D.

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

Vnetljivost: ni gorljivo

Spodnja in zgornja meja eksplozivnosti: N.D.

Plamenišče: > 93°C (Notranja evalvacija)

Temperatura samovžiga: N.D.

Temperatura razgradnje: ni znano

pH: >=7.50<=8.50 (Interna metoda)

Kinematična viskoznost: > 20.5 mm²/s (40 °C)

Topnost v vodi: Netopno

Topnost v olju: Podatki niso na voljo

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

Parni tlak: N.D.

Gostota in/ali relativna gostota: 1.28 ± 0.02 kg/l (Interna metoda)

Relativna parna gostota: N.D.

Lastnosti delcev:

Velikost delcev: ni znano

9.2 Drugi podatki

Eksplozivne lastnosti: N.A. (Notranja evalvacija)
Oksidativne lastnosti: N.A. (Notranja evalvacija)

ODDELEK 10: Obstojnost in reaktivnost

10.1 Reaktivnost

Stabilen v normalnih pogojih

10.2 Kemijska stabilnost

Stabilen v normalnih pogojih

10.3 Možnost poteka nevarnih reakcij

Nobeden.

10.4 Pogoji, ki se jim je treba izogniti

Izogibajte se bližine toplotnih virov.

10.5 Nezdružljivi materiali

Nobeno posebej.

10.6 Nevarni produkti razgradnje

V primeru pravilnega skladiščenja in ravnanja ne pride do razvoja nevarnih produktov razgradnje.
Glejte točko 5.2

ODDELEK 11: Toksikološki podatki

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

Toksikološki podatki izdelka:

a) akutna strupenost	Ni klasificirano
	Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.
b) jedkost za kožo/draženje kože	Ni klasificirano
	Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.
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:

1,2-benzizotiazol-3(2H)-on

CAS: 2634-33-5	a) akutna strupenost	ATE - Oralno: 450 mg/kg tt
		ATE - Vdihavanje (Prahom/meglice): 0.21 mg/l

2-butoksietanol

CAS: 111-76-2	a) akutna strupenost	ATE - Oralno: 1200 mg/kg tt
		ATE - Vdihavanje (Hlapi): 3 mg/l
		LD50 Koža Morski prašiček > 2000 mg/kg

cinkov pirition

CAS: 13463-41-7	a) akutna strupenost	ATE - Oralno: 221 mg/kg tt
		ATE - Vdihavanje (Prahom/meglice): 0.14 mg/l

reakcijska zmes 5-kloro-2-metil-2h-izotiazol-3-ona in 2-metil-2h-izotiazol-3-ona (3:1)

CAS: 55965-84-9	a) akutna strupenost	ATE - Oralno: 64 mg/kg tt

ATE - Dermalno: 92.4 mg/kg tt

ATE - Vdihavanje (Prahom/meglice): 0.17 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:

Ekotoksikoloških lastnosti izdelka

Ni razvrščeno kot nevarno za okolje

Za izdelek ni razpoložljivih podatkov

Seznam sestavin z ekotoksikološkimi lastnostmi

1,2-benzizotiazol-3(2H)-on

CAS: 2634-33-5
- a) akutna strupenost za vodno okolje: LC50 Riba 2.2 mg/l 96h
- a) akutna strupenost za vodno okolje: EC50 Vodna bolha 3.27 mg/l 48h
- a) akutna strupenost za vodno okolje: EC50 Alge 0.11 mg/l 72h
- b) kronična strupenost za vodno okolje: NOEC Riba 0.21 mg/l - 28d
- b) kronična strupenost za vodno okolje: NOEC Vodna bolha 1.2 mg/l - 21d
- b) kronična strupenost za vodno okolje: NOEC Alge 0.04 mg/l 72h

2-butoksietanol

CAS: 111-76-2
- a) akutna strupenost za vodno okolje: LC50 Riba 1474 mg/l 96h
- a) akutna strupenost za vodno okolje: EC50 Vodna bolha 1550 mg/l 48h
- a) akutna strupenost za vodno okolje: EC50 Alge 1840 mg/l 72h
- b) kronična strupenost za vodno okolje: NOEC Riba > 100 mg/l 21d
- b) kronična strupenost za vodno okolje: NOEC Vodna bolha 100 mg/l 21d

cinkov pirition

CAS: 13463-41-7
- a) akutna strupenost za vodno okolje: LC50 Riba 0.0104 mg/l 96h
- a) akutna strupenost za vodno okolje: EC50 Vodna bolha 0.051 mg/l 48h
- a) akutna strupenost za vodno okolje: EC50 Alge 0.0013 mg/l 72h
- a) akutna strupenost za vodno okolje: EC50 Sladkovodne alge 0.051 mg/l 72h
- b) kronična strupenost za vodno okolje: NOEC Riba 0.00125 mg/l 28d
- b) kronična strupenost za vodno okolje: NOEC Vodna bolha 0.0022 mg/l 21d
- b) kronična strupenost za vodno okolje: NOEC Alge 0.00046 mg/l 96h
- b) kronična strupenost za vodno okolje: NOEC Sladkovodne alge 0.0149 mg/l 72h

reakcijska zmes 5-kloro-2-metil-2h-izotiazol-3-ona in 2-metil-2h-izotiazol-3-ona (3:1)

CAS: 55965-84-9
- a) akutna strupenost za vodno okolje: LC50 Riba 0.22 mg/l 96h
- a) akutna strupenost za vodno okolje: EC50 Vodna bolha 0.1 mg/l 48h
- a) akutna strupenost za vodno okolje: EC50 Alge 0.0052 mg/l 48h
- a) akutna strupenost za vodno okolje: EC50 Sladkovodne alge 0.048 mg/l 72h
- b) kronična strupenost za vodno okolje: NOEC Riba 0.098 mg/l - 28d
- b) kronična strupenost za vodno okolje: NOEC Vodna bolha 0.004 mg/l - 21d
- b) kronična strupenost za vodno okolje: NOEC Sladkovodne alge 0.0012 mg/l 72h

12.2 Obstojnost in razgradljivost

1,2-benzizotiazol-3(2H)-on

CAS: 2634-33-5 Ni hitro razgradljivo

2-butoksietanol

CAS: 111-76-2 Hitro razgradljivo

cinkov pirition

CAS: 13463-41-7 Hitro razgradljivo

reakcijska zmes 5-kloro-2-metil-2h-izotiazol-3-ona in 2-metil-2h-izotiazol-3-ona (3:1)

CAS: 55965-84-9 Ni hitro razgradljivo

12.3 Zmožnost kopičenja v organizmih

1,2-benzizotiazol-3(2H)-on

CAS: 2634-33-5 Se ne kopiči v organizmih

2-butoksietanol

CAS: 111-76-2 Se ne kopiči v organizmih

cinkov pirition

CAS: 13463-41-7 Se ne kopiči v organizmih

reakcijska zmes 5-kloro-2-metil-2h-izotiazol-3-ona in 2-metil-2h-izotiazol-3-ona (3:1)

CAS: 55965-84-9 Se ne kopiči v organizmih

12.4 Mobilnost v tleh

1,2-benzizotiazol-3(2H)-on

CAS: 2634-33-5 Testiranje: Log Koc; Vrednost: 1.150

cinkov pirition

CAS: 13463-41-7 Testiranje: Log Koc; Vrednost: 2.900

reakcijska zmes 5-kloro-2-metil-2h-izotiazol-3-ona in 2-metil-2h-izotiazol-3-ona (3:1)

CAS: 55965-84-9 Testiranje: Log Koc; Vrednost: < 2.000

12.5 Rezultati ocene PBT in vPvB

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

12.6 Lastnosti endokrinih motilcev

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

12.7 Drugi škodljivi učinki

ni znano

ODDELEK 13: Odstranjevanje

13.1 Metode ravnanja z odpadki

Če je mogoče, predelajte. 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.

ODDELEK 14: Podatki o prevozu

Blago ni nevarno smislu normativ o transportu.

14.1 Številka ZN in številka ID

N/A

14.2 Pravilno odpremno ime ZN

ADR-uradno ime blaga: N/A

IATA-uradno ime blaga: N/A

IMDG-uradno ime blaga: N/A

14.3 Razredi nevarnosti prevoza

ADR-Razred: N/A

IATA-razred: N/A

IMDG-razred: N/A

14.4 Skupina embalaže

ADR-embalažna skupina: N/A

IATA-embalažna skupina: N/A

IMDG-embalažna skupina: N/A

14.5 Nevarnosti za okolje

Onesnaževalec morja: Ne

Onesnažuje okolje po: Ne

IMDG-EMS: N/A

14.6 Posebni previdnostni ukrepi za uporabnika

Cestni in železniški transport (ADR-RID):

ADR-nalepka nevarnosti: N/A

ADR - Identifikacijska številka nevarnosti: N/A

ADR-posebni ukrepi: N/A

ADR-Pravilnik o cestnem prevozu nevarnega blaga:

Zračni transport (IATA):

IATA-potniška letala: N/A

IATA-tovorna letala: N/A

IATA-nalepka: N/A

IATA-dodatne nevarnosti: N/A

IATA-Erg: N/A

IATA-posebni ukrepi: N/A

Morski transport (IMDG):

IMDG-Zlaganje in ravnanje: N/A

IMDG-Segregacija: N/A

IMDG-dodatne nevarnosti: N/A

IMDG-posebni ukrepi: N/A

14.7 Pomorski prevoz v razsutem stanju v skladu z instrumenti IMO

ni znano

ODDELEK 15: Zakonsko predpisani podatki

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

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

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

Omejitve v zvezi z izdelkom: 3

Omejitve v zvezi z vsebovanimi snovmi: 30, 75

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

Nobena

Uredba (EU) št. 649/2012 (uredba PIC)

Snovi niso navedene

Nemški razred nevarnosti za vodo.

Razred 3: izjemno nevarna.

SVHC snovi:

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

Mejna vrednost EU za vsebnost HOS (Direktiva 2004/42/ES) Kat. A/i: 140 g/l; HOS < 140 g/l

15.2 Ocena kemijske varnosti

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

ODDELEK 16: Drugi podatki

Številka	Opis
EUH071	Jedko za dihalne poti.
H301	Strupeno pri zaužitju.
H302	Zdravju škodljivo pri zaužitju.
H310	Smrtno v stiku s kožo.
H314	Povzroča hude opekline kože in poškodbe oči.
H315	Povzroča draženje kože.
H317	Lahko povzroči alergijski odziv kože.
H318	Povzroča hude poškodbe oči.
H319	Povzroča hudo draženje oči.
H330	Smrtno pri vdihavanju.
H331	Strupeno pri vdihavanju.
H372	V primeru dolgotrajnega ali ponovljenega vdihavanja povzroča poškodbe notranjih organov.
H400	Zelo strupeno za vodne organizme.
H410	Zelo strupeno za vodne organizme, z dolgotrajnimi učinki.

Številka	Razred in kategorija nevarnosti	Opis
3.1/2/Dermal	Acute Tox. 2	Akutna strupenost (dermalno), Kategorija 2
3.1/2/Inhal	Acute Tox. 2	Akutna strupenost (pri vdihavanju), Kategorija 2
3.1/3/Inhal	Acute Tox. 3	Akutna strupenost (pri vdihavanju), Kategorija 3
3.1/3/Oral	Acute Tox. 3	Akutna strupenost (oralno), 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
3.9/1	STOT RE 1	Specifična strupenost za ciljne organe (STOT) – ponavljajoča se izpostavljenost, Kategorija 1
4.1/A1	Aquatic Acute 1	Akutno nevarnost za vodno okolje, Kategorija 1
4.1/C1	Aquatic Chronic 1	Kronično (dolgotrajno) nevarnost za vodno okolje, Kategorija 1

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 Sens. 1, H317	metoda izračuna

Ta dokument je pripravila pristojna oseba, ki je ustrezno usposobljena

Glavni bibliografski viri:

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

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

Varnostni listi dobaviteljev surovin.

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

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

Ta list razveljavlja in nadomešča vsako predhodno izdajo

Legenda okrajšav in kratic, uporabljenih v varnostnem listu:

ACGIH: Ameriška konferenca vladnih industrijskih higienikov

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

ATE: Ocena akutne strupenosti
ATEmix: Ocena akutne strupenosti (Zmesi)
BEI: Biološki indeks izpostavljenosti
CAS: Chemical Abstracts Service (oddelek Ameriškega kemijskega društva).
CAV: Center za zastrupitve
CE: Evropska skupnost
CLP: Razvrščanje, etiketiranje, pakiranje.
CMR: Rakotvorno, mutageno in strupeno za razmnoževanje
COV: Hlapna organska spojina
CSA: Ocena kemijske varnosti
CSR: Poročilo o kemijski varnosti
DNEL: Izpeljane vrednosti brez učinka.
EC50: Srednja učinkovita koncentracija
ECHA: Evropska agencija za kemikalije
EINECS: Evropski seznam obstoječih snovi.
ES: Scenarij izpostavljenosti
GefStoffVO: Odlok o nevarnih snoveh, Nemčija.
GHS: Globalno poenoten sistem razvrščanja in označevanja nevarnih kemikalij.
IARC: Mednarodna agencija za raziskovanje raka
IATA: Mednarodno združenje za zračni transport.
IC50: Srednja inhibitorna koncentracija
IMDG: Mednarodni kodeks za prevoz nevarnega blaga po morju
LC50: Letalna koncentracija za 50 odstotkov testne populacije.
LD50: Letalna doza za 50 odstotkov testne populacije.
LDLo: Najnižja smrtna doza
N.A.: Se ne uporablja
N/A: Se ne uporablja
N/D: Ni opredeljeno/Ni razpoložljiv
N.D.: Ni razpoložljiv
NIOSH: Nacionalni inštitut za varnost in zdravje pri delu
NOAEL: Raven brez opaznih negativnih vplivov
OSHA: Upravljanje varnosti in zdravja pri delu
PBT: Obstojne, se kopičijo v organizmih in so strupene
PGK: Navodila za embalažo nevarnih snovi
PNEC: Predvidena koncentracija brez učinka.
PSG: Potniki
RID: Pravilnik o mednarodnem prevozu nevarnega blaga po železnici.
STEL: Meja za kratkotrajno izpostavljenost.
STOT: Specifično strupeno za ciljne organe.
TLV: Mejna vrednost izpostavljenosti.
TLV-TWA: Mejna vrednost izpostavljenosti v časovnem obdobju po 8 ur dnevno (ACGIH standard).
vPvB: Telo obstojno, se zelo lahko kopiči v organizmih.
WGK: Nemški razred nevarnosti za vodo.

Odstavki spremenjeni od prejšnje revizije:

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

2-Butoxyethanol

Substance identification
Chemical Name: 2-Butoxyethanol
CAS number: 111-76-2

EXPOSURE SCENARIO 5: USE IN COATINGS.

Based on the ECHA CSA&IR template, part D of June 2008 combined with the GES narrative file.

SECTION 1

Title: 2-Butoxyethanol Use in coatings.
Life Cycle Stage (LCS): Use at an industrial site.
Environmental release categories: ERC4; ESVOC SpERC 4.3a.v1
Process categories: PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13,PROC15.
Processes, tasks and activities including: Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (materials receipt, storage, preparation and transfer of bulk and semi-bulk products, application by roller or spreader, dipping, flow, fluidised bed on production lines and film formation), cleaning and maintenance of equipment and associated laboratory activities [GES3_I].
Evaluation method: Health: ECETOC TRA model used [EE1]. Environment: ECETOC TRA model used [EE1]. SPERC ESVOC used.

SECTION 2: OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES.

SECTION 2.1: Environmental exposure control:

Product features: The substance has a unique structure [PrC1]. Non-hydrophobic [PrC4b]. Liquid, vapor pressure <0.5 kPa under standard conditions [OC3]. Miscible in water. Virtually non-toxic to aquatic species. Readily biodegradable [PrC5a]. Low bioaccumulation potential.
Amount used per site (tonnes per year): 2600 (8670 kg/g)
Frequency and duration of use: Continuous process [CS54]. 300 days per year of activity.
Environmental factors not influenced by risk management: Local dilution factor in fresh water [EF1]: 10. Local dilution factor in sea water [EF2]: 100.
Other given operational conditions affecting environmental exposure: No specific measures required. Days of issue (days/year) [FD4]: 300. Continuous release [FD2].
Local technical conditions and measures to reduce and limit discharges and air emissions: Treatment of air emissions is not required for REACH compliance but may be required to comply with other environmental legislation. Soil emission controls are not applicable as there is no direct release to soil [TCR4]. To control aerosol emissions into the air use a scrubber or dry filtration system. On-site wastewater treatment required [TCR13]. Treat on-site waste water (prior to receiving water discharge) to provide the required removal efficiency ≥ (%) [TCR8]: 87. Assumed industrial wastewater treatment plant flow (m^3/d): 2000. If discharging to municipal sewage treatment plant, no on-site wastewater treatment required [TCR9]. Prevent discharge of undissolved substance to or recover from waste water [TCR14].
Organizational measures to prevent/limit release from a site: Construct a containment basin around storage facilities to prevent soil and water pollution in the event of spillage [S5]. Prevent environmental discharge consistent with regulatory requirements [OMS4]. The site shall adopt a spillage plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases [W2]. A leak prevention plan is needed to prevent low level continual releases [W3].
Conditions and measures related to sewage treatment plant: Estimated substance removal from waste water via domestic sewage treatment (%) [STP3]: 87. Assumed domestic sewage treatment plant flow (m3/d) [STP5]: 2000.
Conditions and measures for the disposal of articles at end of their service life: Estimated quantity of waste treated - not exceeding: 5%. Type of treatment suitable for waste: incineration. Removal Effectiveness (%): 99,98. Treat as hazardous waste. External treatment and disposal of waste should comply with applicable local and/or national regulations [ETW3]. Dispose of waste or used containers in accordance with local regulations [ENVT12].
Conditions and measures for the recovery of articles at the end of their service life: Not applicable.
Other environmental control measures in addition to those described above: none.

SECTION 2.2: Worker exposure control.

Product features:
Physical state of the product: Liquid, vapor pressure <0.5 kPa under standard conditions [OC3].
Concentration of the substance in the product: Covers a percentage substance in the product up to 100% (unless otherwise stated) [G13].
Amounts used: Not applicable.
Frequency and duration of use: Covers a daily exposure up to 8 hours (unless otherwise specified) [G2]. Continuous process [CS54].
Human factors not influenced by risk management: none.
Other given operational conditions affecting workers exposure: Assumes a good basic standard of occupational hygiene has been implemented [G1]. Assumes use of the product at not more than 20°C above ambient temperature, unless otherwise specified [G15].
Technical conditions and process-level (source) measures and technical conditions and measures to control dispersion from the source to the worker: none.

Contributing scenarios:

General measures (skin irritants) [G19]: Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Immediately remove any contamination with skin. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop [E3]. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying. [E4].
General measures (eye irritants) [G44]: Use suitable eye protection [PPE26]. Avoid direct eye contact with product, also via contamination on hands [E73]. Avoid splashing [C&H15].

ES5-CS1: PROC1 General exposures (closed systems) [CS15]. Continuous process [CS54]. without sampling [CS57]: No other specific measures identified [EI20].
ES5-CS2: PROC2 General exposures (closed systems) [CS15]. Continuous process [CS54]. With sampling [CS56]: No other specific measures identified [EI20].
ES5-CS3: PROC2 Film formation - accelerated drying (50-100°C). Drying (>100 °C). UV/EB radiation curing [CS94]: Handle substance within a predominantly closed system provided with extract ventilation [E49].
ES5-CS4: PROC3 Mixing operations (closed systems) [CS29]. General exposures (closed systems) [CS15]. No other specific measures identified [EI20].
ES5-CS5: PROC4 Film formation - air drying [CS95]. No other specific measures identified [EI20].
ES5-CS6: PROC5 Preparation of material for application [CS96]. Mixing operations (open systems) [CS30]. No other specific measures identified [EI20].
ES5-CS7: PROC7 Spray application (automatic/robotic) [CS97]. Carry out in a vented booth or extracted enclosure [E57].
ES5-CS8: PROC7 Spray application [CS10]. Manual [CS34]: Carry out in a vented booth or extracted enclosure [E57]. or, Wear a respirator conforming to EN140 with a type A filter or better [PPE22]. Change the filter cartridge on the respirator daily [PPE25].
ES5-CS9: PROC8a Material transfers [CS3]. (open systems) [CS108]. No other specific measures identified [EI20].
ES5-CS10: PROC8b Material transfers [CS3]. (closed systems) [CS107]. No other specific measures identified [EI20].
ES5-CS11: PROC10 Roller application, spreader, flow [CS98]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11].
ES5-CS12: PROC13 Dipping and pouring [CS4]. No other specific measures identified [EI20].
ES5-CS13: PROC15 Laboratory activity [CS36]. No other specific measures identified [EI20].
ES5-CS14: PROC9 Drum/batch transfers [CS8]. Material transfers [CS3]. Transfer/pour from containers [CS22]. No other specific measures identified [EI20].

SECTION 3: EXPOSURE ESTIMATION:

Maximum exposure resulting from the contributing scenarios described.

Environment:

ES5-ES1: ERC4
Conditions given in SPERC fact sheet give rise to following releases fractions [OOC29]. (ESVOC SpERC 4.3a.v1).
Fraction released into air from the process (initial release before application of RMM) [OOC4]: 0.98.
Fraction released into waste water from the process (initial release before application of RMM) [OOC5]: 0,02.
Fraction released into soil by the process (initial release before application of RMM) [OOC6]: 0.
PEC of microorganisms in wastewater treatment plant: 8.66E+01mg/l. Risk characterization report: 1.87E-01.
Local PEC in surface water: 1.10E+00mg/l. Risk characterization report: 1.25E-01.
Local PEC in freshwater sediments: 4.69E+00mg/kgdw. Risk characterization report: 1.36E-01.
Local PEC in seawater during the release episode: 1.10E-01mg/l. Risk characterization report: 1.25E-01.
Local PEC in marine sediments: 4.69E-01mg/kgdw. Risk characterization report: 1.36E-01.
Local PEC in soil: 6.14E-01mg/kgdw. Risk characterization report: 2.64E-01. Risk from environmental exposure is driven by soil [TCR1f].

Health:

Exposure resulting from contributing scenario ES5-CS1:
Inhalation (steam). 8 hours on average 0.01ppm. Risk characterization report: <0.001. 15 minutes average 0.04ppm. Risk characterization report: <0.001. Dermal: 0.03 mg/kg/d.

Exposure resulting from contributing scenario ES5-CS2:
Inhalation (steam). 8 hours on average 1ppm. Risk characterization report: 0.05. 15 minutes average 4ppm. Risk characterization report: 0,08. Dermal: 1.4 mg/kg/d.

Exposure resulting from contributing scenario ES5-CS3:
Inhalation (steam). 8 hours on average 0.5ppm. Risk characterization report: 0,025. 15 minutes average 2ppm. Risk characterization report: 0,04. Dermal: 1.4 mg/kg/d.

Exposure resulting from contributing scenario ES5-CS4:
Inhalation (steam). 8 hours on average 3ppm. Risk characterization report: 0.84. !da duplicazione! 15 minutes average 12ppm. Risk characterization report: 0.24. Dermal: 0.69 mg/kg/d.

Exposure resulting from contributing scenario ES5-CS5:
Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 6.9 mg/kg/d.

Exposure resulting from contributing scenario ES5-CS6:
Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 14 mg/kg/d.

Exposure resulting from contributing scenario ES5-CS7:
Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 43 mg/kg/d.

Exposure resulting from contributing scenario ES5-CS8:
Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0,5. 15 minutes average 40ppm. Risk characterization report: 0,8. Dermal: 43 mg/kg/d.

Exposure resulting from contributing scenario ES5-CS9:
Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0,5. 15 minutes average 40ppm. Risk characterization report: 0,8. Dermal: 14 mg/kg/d.

Exposure resulting from contributing scenario ES5-CS10:
Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0,4. Dermal: 14 mg/kg/d.

Exposure resulting from contributing scenario ES5-CS11:
Inhalation (steam). 8 hours on average 7ppm. Risk characterization report: 0.35. 15 minutes average 28ppm. Risk characterization report: 0.56. Dermal: 27 mg/kg/d.

Exposure resulting from contributing scenario ES5-CS12:
Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0.5. 15 minutes average 40ppm. Risk characterization report: 0.8. Dermal: 14 mg/kg/d.

Exposure resulting from contributing scenario ES5-CS13:
Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 0.34 mg/kg/d.

Exposure resulting from contributing scenario ES5-CS14:
Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 6.9 mg/kg/d.

The risk management measures described protect against acute exposure.
Dermal: A DNEL cannot be derived for this endpoint. Risk management measures are based on qualitative risk characterisation [G37].
Available hazard data do not enable the derivation of a DNEL for dermal irritant effects [G32]. Risk management measures are based on qualitative risk characterisation [G37].
Available hazard data do not enable the derivation of a DNEL for eye irritant effects [G45].

SECTION 4: GUIDE FOR VERIFYING COMPLIANCE WITH THE EXPOSURE SCENARIO

Environment:
Msafe: 32900kg/d. 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 [DSU1].

$$\frac{m_{spERC} * (1 - E_{ER,spERC}) * F_{release,spERC}}{DF_{spERC}} \geq \frac{m_{site} * (1 - E_{ER,site}) * F_{release,site}}{DF_{site}}$$

where:
mSPERC: frequency of substance use in the spERC.
EER,SPERC: efficacy of RMM in SPERC.
Frelease,SPERC: initial release fraction in spERC.
DFSPERC: dilution factor in the river of the wastewater treatment plant effluent.
msite: frequency of use of the substance at the site.
EER,site: effectiveness of RMM at the site.
Frelease,,site: Initial release fraction at the site.
DFsite: dilution factor in the river of the wastewater treatment plant effluent.

Health:
Inhalation (steam). No correction required as all exposures are assumed to be 8 hours long (worst case assumption). No correction is required as all exposures are assumed to result from substance concentrations up to 100%.
Dermal: Not applicable.

EXPOSURE SCENARIO 6: USE IN COATINGS.

Based on the ECHA CSA&IR template, part D of June 2008 combined with the GES narrative file.

SECTION 1

Title: 2-butoxyethanol. Use in coatings.
Life Cycle Stage (LCS): Generalized use by professional operators.
Environmental release category: ERC8a, ERC8d.; ESVOC SpERC 8.3b.v1
Process category: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19.
Processes, tasks and activities including: Covers the use in coatings (paints, inks, adhesives, etc.), including exposures during use (materials receipt, storage, preparation and transfer of bulk and semi-bulk application by spray, roller, brush or manual spreader or similar methods and film formation), cleaning and maintenance of equipment and associated laboratory activities [GES3_P].
Evaluation method: Health: ECETOC TRA model used [EE1]. Environment: ECETOC TRA model used [EE1]. SPERC ESVOC used.

SECTION 2: OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES.

SECTION 2.1: Environmental exposure control:

Product features: The substance has a unique structure [PrC1]. Non-hydrophobic [PrC4b]. Liquid, vapor pressure <0.5 kPa under standard conditions [OC3]. Miscible in water. Virtually non-toxic to aquatic species. Readily biodegradable [PrC5a]. Low bioaccumulation potential.
Amount used per site (tonnes per year): Not applicable. Dispersive use [FD3].
Frequency and duration of use: Continuous process [CS54]. 365 days per year of activity.
Other given operational conditions affecting environmental exposure: No specific measures required. Dispersive use [FD3].
Local technical conditions and measures to reduce and limit discharges and air emissions: Treatment of air emissions is not required for REACH compliance but may be required to comply with other environmental legislation. To control aerosol emissions into the air use a scrubber or dry filtration system. All wastewater must be discharged to municipal sewage treatment plants or collected and sent for waste disposal. Assumes no on-site wastewater treatment.
Organizational measures to prevent/limit release from a site: Construct a containment basin around storage facilities to prevent soil and water pollution in the event of spillage [S5]. Prevent environmental discharge consistent with regulatory requirements [OMS4].
Conditions and measures for the disposal of articles at end of their service life: Estimated quantity of waste treated - not exceeding: 10%. Type of treatment suitable for waste: incineration. Removal Effectiveness (%): 99,98. Treat as hazardous waste. External treatment and disposal of waste should comply with applicable local and/or national regulations [ETW3]. Dispose of waste or used containers in accordance with local regulations [ENVT12].
Conditions and measures for the recovery of articles at the end of their service life. Not applicable.
Other environmental control measures in addition to those described above: none.

SECTION 2.2: Worker exposure control.

Product features:
Physical state of the product: Liquid, vapor pressure <0.5 kPa under standard conditions [OC3].
Concentration of the substance in the product: Covers a percentage substance in the product up to 100% (unless otherwise stated) [G13].
Amounts used: Not applicable.
Frequency and duration of use: Covers a daily exposure up to 8 hours (unless otherwise specified) [G2]. Continuous process [CS54].
Human factors not influenced by risk management: none.
Other given operational conditions affecting workers exposure: Assumes a good basic standard of occupational hygiene has been implemented [G1]. Assumes use of the product at not more than 20°C above ambient temperature, unless otherwise specified [G15].
Technical conditions and process-level (source) measures and technical conditions and measures to control dispersion from the source to the worker: none.

Contributing scenarios:

General measures (skin irritants) [G19]: Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Immediately remove any contamination with skin. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop [E3]. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying. [E4].
General measures (eye irritants) [G44]: Use suitable eye protection [PPE26]. Avoid direct eye contact with product, also via contamination on hands [E73]. Avoid splashing [C&H15].
ES6-CS1: PROC1 General exposures (closed systems) [CS15]. No other specific measures identified [EI20].
ES6-CS2: PROC2 Filling of equipment from drums or containers, [CS45]. No other specific measures identified [EI20].
ES6-CS3: PROC2 General exposures (closed systems) [CS15]. Use in systems under containment [CS38]. No other specific measures identified [EI20].
ES6-CS4: PROC3 Preparation of material for application [CS96]. Mixing operations (closed systems) [CS29]. Batch process [CS55]. No other specific measures identified [EI20].
ES6-CS5: PROC4 Film formation - air drying [CS95]. Indoor [OC8]. No other specific measures identified [EI20].
ES6-CS6: PROC4 Film formation - air drying [CS95]. Outdoors [OC9]. Make sure the operation is performed outdoors [E69].
ES6-CS7: PROC5 Preparation of material for application [CS96]. Mixing operations (open systems) [CS30]. Indoor [OC8]. No other specific measures identified [EI20].
ES6-CS8: PROC5 Preparation of material for application [CS96]. Mixing operations (open systems) [CS30]. Outdoors [OC9]. Make sure the operation is performed outdoors [E69].
ES6-CS9: PROC8a Material transfers [CS3]. Pouring from small containers [CS9]. (open systems) [CS108]. Provide extract ventilation at points where emissions occur [E54].
ES6-CS10: PROC8b Material transfers [CS3]. Pouring from small containers [CS9]. (closed systems) [CS107]. No other specific measures identified [EI20].

ES6-CS11: PROC10 Roller application, spreader, flow [CS98]. Indoor [OC8]. Provide extract ventilation at points where emissions occur [E54].
ES6-CS12: PROC10 Roller application, spreader, flow [CS98]. Outdoors [OC9]. Make sure the operation is performed outdoors [E69]. Limit the substance content in the product to 25% [OC18].
ES6-CS13: PROC11 Spray application [CS10]. Manual [CS34]. Indoor [OC8]. Carry out in a vented booth or extracted enclosure [E57]. Limit the substance content in the product to 25% [OC18].
ES6-CS14: PROC11 Spray application [CS10]. Manual [CS34]. Outdoors [OC9]. Make sure the operation is performed outdoors [E69]. Wear a respirator conforming to EN140 with a type A filter or better [PPE22]. Change the filter cartridge on the respirator daily [PPE25].
ES6-CS15: PROC13 Dipping and pouring [CS4]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11]. or, Make sure the operation is performed outdoors [E69].
ES6-CS16: PROC19 Dipping and pouring [CS4]. Outdoors [OC9]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11]. or, Make sure the operation is performed outdoors [E69]. Limit the substance content in the product to 25% [OC18].
ES6-CS17: PROC15 Laboratory activity [CS36]. No other specific measures identified [EI20].

SECTION 3: EXPOSURE ESTIMATION:

Maximum exposure resulting from the contributing scenarios described.

Environment:

ES6-ES1: ERC8a, ERC8d
Conditions given in SPERC fact sheet give rise to following releases fractions [OOC29]. (ESVOC SpERC 8.3b.v1).
Fraction released to air from highly dispersive use (regional only) [OOC7]: 0.98.
Fraction released to wastewater from highly dispersive use [OOC8]: 0.01.
Fraction released into soil by highly dispersive use (regional only) [OOC9]: 0.01.
PEC of microorganisms in wastewater treatment plant: 2,74E-03mg/l. Risk characterization report: 5.92E-06.
Local PEC in surface water: 5.98E-03mg/l. Risk characterization report: 6.80E-04.
Local PEC in freshwater sediments: 2.54E-02mg/kgdw. Risk characterization report: 7.34E-04.
Local PEC in seawater during the release episode: 6,50E-04mg/l. Risk characterization report: 7.39E-04.
Local PEC in marine sediments: 2.77E-03mg/kgdw. Risk characterization report: 8.01E-04.
Local PEC in soil: 2.13E-02mg/kgdw. Risk characterization report: 9.14E-03. Risk from environmental exposure is driven by soil [TCR1f].

Health:

Exposure resulting from contributing scenario ES6-CS1:
Inhalation (steam). 8 hours on average 0.01ppm. Risk characterization report: <0.001. 15 minutes average 0.04ppm. Risk characterization report: <0.001. Dermal: 0.03 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS2:
Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 1.4 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS3:
Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 1.4 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS4:
Inhalation (steam). 8 hours on average 3ppm. Risk characterization report: 0.84. !da duplicazione! 15 minutes average 12ppm. Risk characterization report: 0,24. Dermal: 0.69 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS5:
Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0.5. 15 minutes average 40ppm. Risk characterization report: 0.8. Dermal: 6.9 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS6:
Inhalation (steam). 8 hours on average 7ppm. Risk characterization report: 0.35. 15 minutes average 28ppm. Risk characterization report: 0.56. Dermal: 6.9 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS7:
Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0,5. 15 minutes average 40ppm. Risk characterization report: 0,8. Dermal: 14 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS8:
Inhalation (steam). 8 hours on average 7ppm. Risk characterization report: 0.35. 15 minutes average 28ppm. Risk characterization report: 0,56. Dermal: 14 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS9:
Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 14 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS10:
Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0,5. 15 minutes average 40ppm. Risk characterization report: 0.8. Dermal: 14 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS11:
Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 27 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS12:
Inhalation (steam). 8 hours on average 11ppm. Risk characterization report: 0.525. 15 minutes average 42ppm. Risk characterization report: 0.84. Dermal: 16 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS13:
Inhalation (steam). 8 hours on average 12ppm. Risk characterization report: 0.6. 15 minutes average 48ppm. Risk characterization report: 0.96. Dermal: 64 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS14:
Inhalation (steam). 8 hours on average 7ppm. Risk characterization report: 0.35. 15 minutes average 28ppm. Risk characterization report: 0.56. Dermal: 110 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS15:
Inhalation (steam). 8 hours on average 7ppm. Risk characterization report: 0.35. 15 minutes average 28ppm. Risk characterization report: 0,56. Dermal: 14 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS16:
Inhalation (steam). 8 hours on average 11ppm. Risk characterization report: 0.525. 15 minutes average 42ppm. Risk characterization report: 0.84. Dermal: 85 mg/kg/d.

Exposure resulting from contributing scenario ES6-CS17:
Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0,4. Dermal: 0.34 mg/kg/d.

The risk management measures described protect against acute exposure.
Dermal: A DNEL cannot be derived for this endpoint. Risk management measures are based on qualitative risk characterisation [G37].
Available hazard data do not enable the derivation of a DNEL for dermal irritant effects [G32]. Risk management measures are based on qualitative risk characterisation [G37].
Available hazard data do not enable the derivation of a DNEL for eye irritant effects [G45].

SECTION 4: GUIDE FOR VERIFYING COMPLIANCE WITH THE EXPOSURE SCENARIO

Environment:
Msafe: 59.9kg/g. Not applicable for highly dispersive uses [DSU5].

Health:
Inhalation (steam). No correction required as all exposures are assumed to be 8 hours long (worst case assumption). To go from a concentration of 5-25% to a concentration of 100%, multiply by 1.7.
Dermal: Not applicable.

EXPOSURE SCENARIO 8: USE IN CLEANING PRODUCTS.

Based on the ECHA CSA&IR template, part D of June 2008 combined with the GES narrative file.

SECTION 1

Title: 2-butoxyethanol. Use in cleaning products.
Life Cycle Stage (LCS): Generalized use by professional operators.
Environmental release category: ERC8a, ERC8d.; ESVOC SpERC 8.4c.v1
Process category: PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13.
Processes, tasks and activities including: Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand) [GES4_P].
Evaluation method: Health: ECETOC TRA model used [EE1]. Environment: ECETOC TRA model used [EE1]. SPERC ESVOC used.

SECTION 2: OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES.

SECTION 2.1 Environmental exposure control:

Product features: The substance has a unique structure [PrC1]. Non-hydrophobic [PrC4b]. Liquid, vapor pressure <0.5 kPa under standard conditions [OC3]. Miscible in water. Virtually non-toxic to aquatic species. Readily biodegradable [PrC5a]. Low bioaccumulation potential.
Amount used per site (tonnes per year): Not applicable. Dispersive use [FD3].
Frequency and duration of use: Continuous process [CS54]. 365 days per year of activity.
Other given operational conditions affecting environmental exposure: No specific measures required. Dispersive use [FD3].
Local technical conditions and measures to reduce and limit discharges and air emissions: No air emission control required; required removal efficiency of 0% [TCR5]. No waste water treatment required [TCR6]. Assumes no on-site wastewater treatment.
Organizational measures to prevent/limit release from a site: Construct a containment basin around storage facilities to prevent soil and water pollution in the event of spillage [S5]. Prevent environmental discharge consistent with regulatory requirements [OMS4].
Conditions and measures for the disposal of articles at end of their service life: Estimated quantity of waste treated - not exceeding: 10%. Type of treatment suitable for waste: incineration. Removal Effectiveness (%): 99,98. Treat as hazardous waste. External treatment and disposal of waste should comply with applicable local and/or national regulations [ETW3]. Dispose of waste or used containers in accordance with local regulations [ENVT12].
Conditions and measures for the recovery of articles at the end of their service life. Not applicable.
Other environmental control measures in addition to those described above: none.

SECTION 2.2: Worker exposure control.

Product features:
Physical state of the product: Liquid, vapor pressure <0.5 kPa under standard conditions [OC3].
Concentration of the substance in the product: Covers a percentage substance in the product up to 100% (unless otherwise stated) [G13].
Amounts used: Not applicable.
Frequency and duration of use: Covers a daily exposure up to 8 hours (unless otherwise specified) [G2]. Continuous process [CS54].
Human factors not influenced by risk management: none.
Other given operational conditions affecting workers exposure: Assumes a good basic standard of occupational hygiene has been implemented [G1]. Assumes use of the product at not more than 20°C above ambient temperature, unless otherwise specified [G15].
Technical conditions and process-level (source) measures and technical conditions and measures to control dispersion from the source to the worker: none.

Contributing scenarios:

General measures (skin irritants) [G19]: Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Immediately remove any contamination with skin. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop [E3]. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying. [E4].
General measures (eye irritants) [G44]: Use suitable eye protection [PPE26]. Avoid direct eye contact with product, also via contamination on hands [E73]. Avoid splashing [C&H15].
ES8-CS1: PROC8b Filling of equipment from drums or containers, [CS45]. No other specific measures identified [EI20].
ES8-CS2: PROC2 Automated process with (semi) closed systems [CS93]. Use in systems under containment [CS38]. No other specific measures identified [EI20].
ES8-CS3: PROC3 Automated process with (semi) closed systems [CS93]. Use in systems under containment [CS38]. Batch process [CS55]. No other specific measures identified [EI20].
ES8-CS4: PROC4 Maintenance (of larger plant items) and machine set up [CS77]. Use in systems under containment [CS38]. No other specific measures identified [EI20].
ES8-CS5: PROC4 Cleaning of medical devices [CS74]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11]. Limit the substance content in the product to 25% [OC18].
ES8-CS6: PROC13 Surfaces [CS48]. Cleaning [CS47]. Dipping and pouring [CS4]. Manual [CS34]. No other specific measures identified [EI20].
ES8-CS7: PROC10 Cleaning with low-pressure washers [CS42]. No spraying [CS60]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11]. or, Make sure the operation is performed outdoors [E69]. Limit the substance content in the product to 25% [OC18].
ES8-CS8: PROC11 Cleaning with high pressure washers [CS44]. Indoor [OC8]. Spray application [CS10]. Carry out in a vented booth or extracted enclosure [E57]. Limit the substance content in the product to 25% [OC18].
ES8-CS9: PROC11 Cleaning with high pressure washers [CS44]. Outdoors [OC9]. Spray application [CS10]. Make sure the operation is performed outdoors [E69]. Wear a respirator conforming to EN140 with a type A filter or better [PPE22]. Change the filter cartridge on the respirator daily [PPE25]. Limit the substance content in the product to 25% [OC18].
ES8-CS10: PROC11 Surfaces [CS48]. Cleaning [CS47]. Manual [CS34]. Spray application [CS10]. Provide a good standard of controlled ventilation (10-15 air changes per hour) [E40]. Limit the substance content in the product to 5% [OC17]. or, Wear a respirator conforming to EN140 with a type A filter or better [PPE22].

ES8-CS11: PROC10 Ad hoc manual application via trigger sprays, dipping, etc. [CS27]. Rolling, brushing [CS51]. With local ventilation systems [CS109]. Provide extract ventilation at points where emissions occur [E54].
ES8-CS12: PROC10 Ad hoc manual application via trigger sprays, dipping, etc. [CS27]. Rolling, brushing [CS51]. Without local ventilation systems [CS110]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11]. Limit the substance content in the product to 25% [OC18]. or, Wear a full face respirator conforming to EN140 with type A filter or better [PPE24].
ES8-CS13: PROC4 Application of cleaning products in closed systems [CS101]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11].
ES8-CS14: PROC8a Filling of equipment from drums or containers, [CS45]. Provide a good standard of general ventilation (not less than 3-5 air changes per hour) [E11]. or, Make sure the operation is performed outdoors [E69]. Limit the substance content in the product to 25% [OC18].

SECTION 3: EXPOSURE ESTIMATION:

Maximum exposure resulting from the contributing scenarios described.

Environment

ES8-ES1: ERC8a, ERC8d.
Conditions given in SPERC fact sheet give rise to following releases fractions [OOC29]. (ESVOC SpERC 8.4c.v1).
Fraction released to air from highly dispersive use (regional only) [OOC7]: 0.95.
Fraction released to wastewater from highly dispersive use [OOC8]: 0,025.
Fraction released into soil by highly dispersive use (regional only) [OOC9]: 0.025.
PEC of microorganisms in wastewater treatment plant: 5.14E-03mg/l. Risk characterization report: 1.11E-05.
Local PEC in surface water: 6.01E-03mg/l. Risk characterization report: 6.83E-04.
Local PEC in freshwater sediments: 2.56E-02mg/kgdw. Risk characterization report: 7.40E-04.
Local PEC in seawater during the release episode: 6.53E-04mg/l. Risk characterization report: 7.42E-04.
Local PEC in marine sediments: 2.78E-03mg/kgdw. Risk characterization report: 8.03E-04.
Local PEC in soil: 2.13E-02mg/kgdw. Risk characterization report: 9.14E-03. Risk from environmental exposure is driven by soil [TCR1f].

Health:

Exposure resulting from contributing scenario ES8-CS1:
Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: <0.5. 15 minutes average 40ppm. Risk characterization report: 0.8. Dermal: 14mg/kg/d.

Exposure resulting from contributing scenario ES8-CS2:
Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 1.4 mg/kg/d.

Exposure resulting from contributing scenario ES8-CS3:
Inhalation (steam). 8 hours on average 3ppm. Risk characterization report: 0.84. !da duplicazione! 15 minutes average 12ppm. Risk characterization report: 0,24. Dermal: 0.69mg/kg/d.

Exposure resulting from contributing scenario ES8-CS4:
Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0.5. 15 minutes average 40ppm. Risk characterization report: 0.8. Dermal: 6.9 mg/kg/d.

Exposure resulting from contributing scenario ES8-CS5:
Inhalation (steam). 8 hours on average 4.2ppm. Risk characterization report: 0.21. 15 minutes average 16.8ppm. Risk characterization report: 0.34. Dermal: 4.1 mg/kg/d.

Exposure resulting from contributing scenario ES8-CS6:
Inhalation (steam). 8 hours on average 10ppm. Risk characterization report: 0.5. 15 minutes average 40ppm. Risk characterization report: 0.8. Dermal: 14 mg/kg/d.

Exposure resulting from contributing scenario ES8-CS7:
Inhalation (steam). 8 hours on average 11ppm. Risk characterization report: 0.525. 15 minutes average 42ppm. Risk characterization report: 0.84. Dermal: 16 mg/kg/d.

Exposure resulting from contributing scenario ES8-CS8:
Inhalation (steam). 8 hours on average 12ppm. Risk characterization report: 0.6. 15 minutes average 48ppm. Risk characterization report: 0.96. Dermal: 64 mg/kg/d.

Exposure resulting from contributing scenario ES8-CS9:
Inhalation (steam). 8 hours on average 4.2ppm. Risk characterization report: 0.21. 15 minutes average 16.8ppm. Risk characterization report: 0,34. Dermal: 64 mg/kg/d.

Exposure resulting from contributing scenario ES8-CS10:
Inhalation (steam). 8 hours on average 6ppm. Risk characterization report: 0.3. 15 minutes average 24ppm. Risk characterization report: 0.48. Dermal: 21 mg/kg/d.

Exposure resulting from contributing scenario ES8-CS11:
Inhalation (steam). 8 hours on average 5ppm. Risk characterization report: 0.25. 15 minutes average 20ppm. Risk characterization report: 0.4. Dermal: 27 mg/kg/d.

Exposure resulting from contributing scenario ES8-CS12:
Inhalation (steam). 8 hours on average 11ppm. Risk characterization report: 0.525. 15 minutes average 42ppm. Risk characterization report: 0.84. Dermal: 16 mg/kg/d.

Exposure resulting from contributing scenario ES8-CS13:
Inhalation (steam). 8 hours on average 7ppm. Risk characterization report: 0.35. 15 minutes average 28ppm. Risk characterization report: 0.56. Dermal: 6.9 mg/kg/d.

Exposure resulting from contributing scenario ES8-CS14:
Inhalation (steam). 8 hours on average 11ppm. Risk characterization report: 0.525. 15 minutes average 42ppm. Risk characterization report: 0.84. Dermal: 8.2 mg/kg/d.

The risk management measures described protect against acute exposure.
Dermal: A DNEL cannot be derived for this endpoint. Risk management measures are based on qualitative risk characterisation [G37].
Available hazard data do not enable the derivation of a DNEL for dermal irritant effects [G32]. Risk management measures are based on qualitative risk characterisation [G37].
Available hazard data do not enable the derivation of a DNEL for eye irritant effects [G45].

SECTION 4: GUIDE FOR VERIFYING COMPLIANCE WITH THE EXPOSURE SCENARIO

Environment:

Msafe: 59.9kg/g. Not applicable for highly dispersive uses [DSU5].

Health:

Inhalation (steam). No correction required as all exposures are assumed to be 8 hours long (worst case assumption). To go from a concentration of 5-25% to a concentration of 100%, multiply by 1.7. To go from a concentration of 1-5% to a concentration of 5-25%, multiply by 3.

Dermal: Not applicable.