ODDELEK 1: Identifikacija snovi/zmesi in družbe/podjetja

1.1 Identifikator izdelka

Identifikacija pripravka:

Komercialno ime: FASSAFILL EPOXY COMP.A
Komercialna koda: 1281
UFI: PKPY-Q5VS-1PDA-34JX

1.2 Pomembne identificirane uporabe snovi ali zmesi in odsvetovane uporabe

Priporočena uporaba: Epoksidna tesnilna masa za fuge; Samo za profesionalno uporabo
Odsvetovane uporabe: Ni namenjeno za potrošniško uporabo

1.3 Podrobnosti o dobavitelju varnostnega lista

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

Odgovorni: laboratorio.spresiano@fassabortolo.it

1.4 Telefonska številka za nujne primere

112 - Center za obveščanje (na voljo 24 ur)

ODDELEK 2: Določitev nevarnosti



2.1 Razvrstitev snovi ali zmesi

Uredba (ES) št. 1272/2008 (CLP)

Skin Irrit. 2	Povzroča draženje kože.
Eye Irrit. 2	Povzroča hudo draženje oči.
Skin Sens. 1	Lahko povzroči alergijski odziv kože.
Repr. 1B	Lahko škoduje plodnosti.
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

H315	Povzroča draženje kože.
H317	Lahko povzroči alergijski odziv kože.
H319	Povzroča hudo draženje oči.
H360F	Lahko škoduje plodnosti.
H412	Škodljivo za vodne organizme, z dolgotrajnimi učinki.

Previdnostni stavki

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

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

P501 Odstraniti vsebino/posodo v skladu z nacionalnimi predpisi.

Posebne oznake:

EUH205 Vsebuje epoksidne sestavine. Lahko povzroči alergijski odziv.

Vsebuje:

Formaldehid, oligomerni reakcijski produkti z 1-kloro-2,3-epoksipropanom in fenol

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

reakcijska zmes (1,2,2,6,6-pentametil-4-piperidil) sebakat in metil 1,2,2,6,6-pentametil-4-piperidil sebakat

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

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: FASSAFILL EPOXY COMP.A

Nevarne sestavine, skladno z Uredbo CLP in njeno razvrstitvijo:

Količina	Ime	Ident. št.	Razvrstitev	Registracijska številka:
≥15 - <20 %	bis-[4-(2,3-epoksipropoksi)fenil]propan	CAS:1675-54-3 EC:216-823-5 Index:603-073-00-2	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 Posebne mejne koncentracije: 5% ≤ C < 100%: Skin Irrit. 2 H315 5% ≤ C < 100%: Eye Irrit. 2 H319	01-2119456619-26-xxxx
≥3 - <5 %	Formaldehid, oligomerni reakcijski produkti z 1-kloro-2,3-epoksipropanom in fenol	EC:701-263-0	Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Chronic 2, H411	01-2119454392-40-xxxx
≥1 - <2.5 %	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; Repr. 1B, H360F	01-2119485289-22-xxxx
≥0.1 - <0.3 %	reakcijska zmes (1,2,2,6,6-pentametil-4-piperidil) sebakat in metil 1,2,2,6,6-pentametil-4-piperidil sebakat	CAS:1065336-91-5 EC:915-687-0	Skin Sens. 1A, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Repr. 2, H361f, M-Chronic:1, M-Acute:1	01-2119491304-40-xxxx

ODDELEK 4: Ukrepi za prvo pomoč

4.1 Opis ukrepov za prvo pomoč

V primeru stika s kožo:

Kontaminirana oblačila takoj slecite in jih na varen način odstranite.

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

Umijte celotno telo (tuširanje ali kopel).

V primeru stika z očmi:

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

Poškodovano oko zaščitite.

V primeru zaužitja:

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

V primeru vdihavanja:

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

4.2 Najpomembnejši simptomi in učinki, akutni in zapozneli

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

4.3 Navedba kakršne koli takojšnje medicinske oskrbe in posebnega zdravljenja

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

ODDELEK 5: Protipožarni ukrepi

5.1 Sredstva za gašenje

Ustrezna sredstva za gašenje:

CO2, gasilni aparat na prah, pena, pršenje z vodo.

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

Vodni curki

5.2 Posebne nevarnosti v zvezi s snovjo ali zmesjo

Pri gorenju nastajajo težki dimni plini.

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

5.3 Nasvet za gasilce

Uporabiti ustrezne dihalne naprave.

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

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

ODDELEK 6: Ukrepi o nenamernih izpustih

6.1 Osebni varnostni ukrepi, zaščitna oprema in postopki v sili

Za neizučeno osebje:

Nosite osebno varovalno opremo.

Osebe umaknite na varno mesto.

Glejte v oddelku 7 in 8 navedene zaščitne ukrepe.

Za reševalce:

Nosite osebno varovalno opremo.

6.2 Okoljevarstveni ukrepi

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

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

6.3 Metode in materiali za zadrževanje in čiščenje

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

Po pobiranju z vodo izperite območje in prizadete materiale.

Kontaminirano vodo za pranje shranite in odstranite.

6.4 Sklicevanje na druge oddelke

Glejte tudi naslova 8 in 13

ODDELEK 7: Ravnanje in skladiščenje

7.1 Varnostni ukrepi za varno ravnanje

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

Prazne vsebnike ne uporabite dokler niso očiščeni.

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

Nasveti o splošni higieni dela:

Kontaminirana oblačila se mora pred vstopom v jedilnico zamenjati.

Med delom ne jejte in ne pijte.

Glejte tudi oddelek 8 o priporočeni varovalni opremi.

7.2 Pogoji za varno skladiščenje, vključno z nezdružljivostjo

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

Mejna vrednost izpostavljenosti po PNEC

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

CAS: 1675-54-3 Način izpostavitve: Sladka voda; PNEC Omejite: 0.006 mg/l

Način izpostavitve: Morska voda; PNEC Omejite: 0.001 mg/l

Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 0.341 mg/kg

Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.034 mg/kg

Način izpostavitve: Tla (kmetijska); PNEC Omejite: 0.065 mg/kg

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

Formaldehid, oligomerni reakcijski produkti z 1-kloro-2,3-epoksipropanom in fenol

Način izpostavitve: Sladka voda; PNEC Omejite: 0.003 mg/l

Način izpostavitve: Morska voda; PNEC Omejite: 0.3 µg/l

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

Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.029 mg/kg

Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 0.294 mg/kg

Način izpostavitve: Prst; PNEC Omejite: 0.237 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

reakcijska zmes (1,2,2,6,6-pentametil-4-piperidil) sebakat in metil 1,2,2,6,6-pentametil-4-piperidil sebakat

CAS: 1065336-91-5 Način izpostavitve: Morska voda; PNEC Omejite: 0.22 µg/l

Način izpostavitve: Sladka voda; PNEC Omejite: 2.2 µg/l

Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 1 mg/l

Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.11 mg/kg

Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 1.05 mg/kg

Način izpostavitve: Tla (kmetijska); PNEC Omejite: 0.21 mg/kg

Izpeljane vrednosti brez učinka. (DNEL)

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

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

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

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

Formaldehid, oligomerni reakcijski produkti z 1-kloro-2,3-epoksipropanom in fenol

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: 0.008 mg/cm2

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

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

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/m3; Uporabnik: 0.87 mg/m3

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

reakcijska zmes (1,2,2,6,6-pentametil-4-piperidil) sebakat in metil 1,2,2,6,6-pentametil-4-piperidil sebakat

CAS: 1065336-91-5 Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 1.8 mg/kg; Uporabnik: 0.9 mg/kg

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Strokovni delavec: 1.27 mg/m3; Uporabnik: 0.31 mg/m3

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek
Uporabnik: 0.18 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); NBR (Nitrilkaučuk): debelina >= 0.4 mm; permeacijski čas >= 480 min. FKM (Fluórkaučuk): 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: Trdno stanje

Izgled: Pastozna trdno stanje

Barva: različnih

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: ni znano

Plamenišče: ni znano

Temperatura samovžiga: ni znano

Temperatura razgradnje: ni znano

pH: ni znano (Ne pride v poštev zaradi narave proizvoda)

Kinematična viskoznost: ni znano

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: 1.66 ± 0.02 kg/l (Interna metoda)

Relativna parna gostota: ni znano

Lastnosti delcev:

Ta izdelek vsebuje nanomateriale v sferoidni in amorfni obliki, s površinsko obdelavo/premazom.

9.2 Drugi podatki

Eksplozivne lastnosti: N.D.
Oksidativne lastnosti: N.D.

ODDELEK 10: Obstojnost in reaktivnost

10.1 Reaktivnost

Stabilen v normalnih pogojih

10.2 Kemijska stabilnost

Izdelek lahko sčasoma proizvaja tekoče faze.

10.3 Možnost poteka nevarnih reakcij

V stiku z močnimi oksidatorji se lahko vname.

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

10.4 Pogoji, ki se jim je treba izogniti

Izogibajte se bližine toplotnih virov.

10.5 Nezdružljivi materiali

Močni oksidanti, močni reduktorji, alifatski in aromatski amini.

Glejte točko 10.3

10.6 Nevarni produkti razgradnje

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

Glejte točko 5.2

ODDELEK 11: Toksikološki podatki

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

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

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

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

Toksikološki podatki izdelka:

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

Formaldehid, oligomerni reakcijski produkti z 1-kloro-2,3-epoksipropanom in fenol

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

reakcijska zmes (1,2,2,6,6-pentametil-4-piperidil) sebakat in metil 1,2,2,6,6-pentametil-4-piperidil sebakat

CAS: 1065336-91-5 a) akutna strupenost LD50 Oralno Podgana > 3230 mg/kg

11.2 Podatki o drugih nevarnostih

Lastnosti endokrinih motilcev:

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

ODDELEK 12: Ekološki podatki

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

12.1 Strupenost

Ekotoksikološki podatki:

Škodljivo za vodne organizme, z dolgotrajnimi učinki.

Ekotoksikoloških lastnosti izdelka

Proizvod je razvrščen: Aquatic Chronic 3(H412)

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

Formaldehid, oligomerni reakcijski produkti z 1-kloro-2,3-epoksipropanom in fenol

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

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

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

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

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

reakcijska zmes (1,2,2,6,6-pentametil-4-piperidil) sebakat in metil 1,2,2,6,6-pentametil-4-piperidil sebakat

CAS: 1065336-91-5 a) akutna strupenost za vodno okolje: LC50 Riba 0.9 mg/l 96h

a) akutna strupenost za vodno okolje: NOEC Alge 0.22 mg/l 72h

b) kronična strupenost za vodno okolje: NOEC Vodna bolha 6.3 mg/l 21d

12.2 Obstojnost in razgradljivost

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

CAS: 1675-54-3 Ni hitro razgradljivo

Formaldehid, oligomerni reakcijski produkti z 1-kloro-2,3-epoksipropanom in fenol

Ni hitro razgradljivo

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

CAS: 68609-97-2 Hitro razgradljivo

12.3 Zmožnost kopičenja v organizmih

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

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

12.4 Mobilnost v tleh

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

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

12.5 Rezultati ocene PBT in vPvB

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

12.6 Lastnosti endokrinih motilcev

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

12.7 Drugi škodljivi učinki

ni znano

ODDELEK 13: Odstranjevanje

13.1 Metode ravnanja z odpadki

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

Ne dopustite, da pride v kanalizacijo ali vodne poti.

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

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

ODDELEK 14: Podatki o prevozu

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 izvzeto:

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)

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: Nobeden

Omejitve v zvezi z vsebovanimi snovmi: 40, 75

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

Nobena

Uredba (EU) št. 649/2012 (uredba PIC)

Snovi niso navedene

Nemški razred nevarnosti za vodo.

Razred 2: ogroža vodo.

SVHC snovi:

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

15.2 Ocena kemijske varnosti

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

ODDELEK 16: Drugi podatki

Številka	Opis
H315	Povzroča draženje kože.
H317	Lahko povzroči alergijski odziv kože.
H319	Povzroča hudo draženje oči.
H360F	Lahko škoduje plodnosti.
H361f	Sum škodljivosti za plodnost.
H400	Zelo strupeno za vodne organizme.
H410	Zelo strupeno za vodne organizme, z dolgotrajnimi učinki.
H411	Strupeno za vodne organizme, z dolgotrajnimi učinki.
H412	Škodljivo za vodne organizme, z dolgotrajnimi učinki.

Številka	Razred in kategorija nevarnosti	Opis
3.2/2	Skin Irrit. 2	Draženje kože, Kategorija 2
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
3.7/1B	Repr. 1B	Strupenost za razmnoževanje, Kategorija 1B

3.7/2	Repr. 2	Strupenost za razmnoževanje, Kategorija 2
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
4.1/C2	Aquatic Chronic 2	Kronično (dolgotrajno) nevarnost za vodno okolje, Kategorija 2
4.1/C3	Aquatic Chronic 3	Kronično (dolgotrajno) nevarnost za vodno okolje, Kategorija 3

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

Razvrstitev v skladu z Uredbo (ES) št. 1272/2008	Postopek razvrščanja
Skin Irrit. 2, H315	metoda izračuna
Eye Irrit. 2, H319	metoda izračuna
Skin Sens. 1, H317	metoda izračuna
Repr. 1B, H360F	metoda izračuna
Aquatic Chronic 3, H412	metoda izračuna

Ta dokument je pripravila pristojna oseba, ki je ustrezno usposobljena

Glavni bibliografski viri:

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

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

Varnostni listi dobaviteljev surovin.

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

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

Ta list razveljavlja in nadomešča vsako predhodno izdajo

Legenda okrajšav in kratic, uporabljenih v varnostnem listu:

ACGIH: Ameriška konferenca vladnih industrijskih higienikov

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

ATE: Ocena akutne strupenosti

ATEmix: Ocena akutne strupenosti (Zmesi)

BEI: Biološki indeks izpostavljenosti

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

CAV: Center za zastrupitve

CE: Evropska skupnost

CLP: Razvrščanje, etiketiranje, pakiranje.

CMR: Rakotvorno, mutageno in strupeno za razmnoževanje

COV: Hlapna organska spojina

CSA: Ocena kemijske varnosti

CSR: Poročilo o kemijski varnosti

DNEL: Izpeljane vrednosti brez učinka.

EC50: Srednja učinkovita koncentracija

ECHA: Evropska agencija za kemikalije

EINECS: Evropski seznam obstoječih snovi.

ES: Scenarij izpostavljenosti

GefStoffVO: Odlok o nevarnih snoveh, Nemčija.

GHS: Globalno poenoten sistem razvrščanja in označevanja nevarnih kemikalij.

IARC: Mednarodna agencija za raziskovanje raka

IATA: Mednarodno združenje za zračni transport.

IC50: Srednja inhibitorna koncentracija

IMDG: Mednarodni kodeks za prevoz nevarnega blaga po morju

LC50: Letalna koncentracija za 50 odstotkov testne populacije.

LD50: Letalna doza za 50 odstotkov testne populacije.

LDLo: Najnižja smrtna doza

N.A.: Se ne uporablja

N/A: Se ne uporablja

N/D: Ni opredeljeno/Ni razpoložljiv

N.D.: Ni razpoložljiv

NIOSH: Nacionalni inštitut za varnost in zdravje pri delu

NOAEL: Raven brez opaznih negativnih vplivov

OSHA: Upravljanje varnosti in zdravja pri delu

PBT: Obstojne, se kopičijo v organizmih in so strupene

PGK: Navodila za embalažo nevarnih snovi

PNEC: Predvidena koncentracija brez učinka.

PSG: Potniki
RID: Pravilnik o mednarodnem prevozu nevarnega blaga po železnici.
STEL: Meja za kratkotrajno izpostavljenost.
STOT: Specifično strupeno za ciljne organe.
TLV: Mejna vrednost izpostavljenosti.
TLV-TWA: Mejna vrednost izpostavljenosti v časovnem obdobju po 8 ur dnevno (ACGIH standard).
vPvB: Telo obstojno, se zelo lahko kopiči v organizmih.
WGK: Nemški razred nevarnosti za vodo.

Odstavki spremenjeni od prejšnje revizije:

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

Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Substance identification
Chemical Name: Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate
CAS number: 1065336-91-5
EC number: 915-687-0
Registration Number: 01-2119491304-40-XXXX
Date - Version: 04/04/2022

INDUSTRIAL USE PRODUCT CATEGORIES (PC1, PC9a, PC32) SECTORS OF USE (SU15, SU17)

1. TITLE SECTION

EXPOSURE SCENARIO NAME
Industrial use of HALS in articles

USE DESCRIPTORS
Product Categories:
Adhesives, Sealants (PC1) Coatings and Paints, Thinners, paint removers (PC9a) Polymer Preparations and Compounds (PC32)
Sectors of use:
Manufacture of fabricated metal products, except machinery and equipment (SU 15). General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment (SU 17).

Environment
1. Industrial use of HALS in articles - ERC5

Worker
2. Mixing or blending in batch processes for formulation of preparations and articles - PROC5
3: Calendering operations - PROC6
4: Industrial spraying - PROC7
5: Transfer of chemicals from/to vessels/large containers at non dedicated facilities. - PROC8a
6: Transfer of chemicals from/to vessels/large containers at dedicated facilities - PROC8b
7: Roller or brush application - PROC10
8: Treatment of articles by dipping and pouring - PROC13
9: Low energy manipulation of substances bound in materials and/or articles - PROC21
10: High (mechanical) energy work-up of substances bound in materials and/or articles - PROC24

2. CONDITIONS OF USE AFFECTING EXPOSURE

2.1 ENVIRONMENTAL EXPOSURE CONTROL - Industrial use of HALS in articles - (ERC5)

Amount used, frequency and duration of use (or from service life)
Daily amount per site: ≤ 0,1 ton/day
Daily amount per site: ≤ 22,5 ton/year

Conditions and measures for the biological waste water treatment plant
Municipal sewage treatment plant is assumed.
Assumed domestic sewage treatment plant flow: ≥ 2E3 m³/day

Conditions and measures related to external treatment of waste (including article waste)
Dispose of waste product or used containers according to local regulations.

Other conditions affecting environmental exposure
Receiving surface water flow: ≥1.8E4 m³/day

2.2 WORKERS EXPOSURE CONTROL - Mixing or blending in batch processes for formulation of preparations and articles - (PROC5)

Product features (article)
Liquid.
Covers concentrations up to 5%

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Technical and organizational conditions and measures
Provide specifically designed and maintained LEV (fixed capturing hood type, on-tool extraction or enclosing hood type). Ensure effectiveness is at least 90%.
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personal operating under supervision. Ensure regular inspection, cleaning and maintenance of equipment and machines. Clear spills immediately. Ensure daily cleaning of the equipment.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

2.3 WORKERS EXPOSURE CONTROL - Calendering operations - (PROC6)

Product features (article)
Liquid.
Covers concentrations up to 5%

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Technical and organizational conditions and measures
Provide specifically designed and maintained LEV (fixed capturing hood type, on-tool extraction or enclosing hood type). Ensure effectiveness is at least 90%.
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personal operating under supervision. Ensure regular inspection, cleaning and maintenance of equipment and machines. Clear spills immediately. Ensure daily cleaning of the equipment.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

2.4 WORKERS EXPOSURE CONTROL - Industrial spraying - (PROC7)

Product features (article)
Liquid.
Covers concentrations up to 1%.

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 1 h/day.

Technical and organizational conditions and measures
Provide enclosing hood with very high effectiveness (such as fume cupboard) or effective ventilation by spray booth according to EN 16985. Ensure effectiveness is at least 95%.
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personal operating under supervision. Ensure regular inspection, cleaning and maintenance of equipment and machines. Clear spills immediately. Ensure daily cleaning of the equipment.
Provide a good standard of controlled ventilation (5 to 10 air changes per hour).

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

2.5 WORKERS EXPOSURE CONTROL - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities. - (PROC8b)

Product features (article)
Liquid.
Covers concentrations up to 5%.

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Technical and organizational conditions and measures
Provide specifically designed and maintained LEV (fixed capturing hood type, on-tool extraction or enclosing hood type). Ensure effectiveness is at least 90%.
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personal operating under supervision. Ensure regular inspection, cleaning and maintenance of equipment and machines. Clear spills immediately. Ensure daily cleaning of the equipment.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

2.6 WORKERS EXPOSURE CONTROL - Transfer of chemicals from/to vessels/ large containers at dedicated facilities - (PROC8b)

Product features (article)
Liquid.
Covers concentrations up to 5%.

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Technical and organizational conditions and measures
Provide enclosing hood with very high effectiveness (such as fume cupboard) or effective ventilation by spray booth according to EN 16985. Ensure effectiveness is at least 95%.
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personal operating under supervision. Ensure regular inspection, cleaning and maintenance of equipment and machines. Clear spills immediately. Ensure daily cleaning of the equipment.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

2.7 WORKERS EXPOSURE CONTROL - Roller or brush application - (PROC10)

Product features (article)
Liquid.
Covers concentrations up to 5%.

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Technical and organizational conditions and measures
Provide specifically designed and maintained LEV (fixed capturing hood type, on-tool extraction or enclosing hood type). Ensure effectiveness is at least 90%.
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personal operating under supervision. Ensure regular inspection, cleaning and maintenance of equipment and machines. Clear spills immediately. Ensure daily cleaning of the equipment.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

2.8 WORKERS EXPOSURE CONTROL - Treatment of articles by dipping and pouring - (PROC13)

Product features (article)
Liquid.
Covers concentrations up to 5%.

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Technical and organizational conditions and measures
Provide specifically designed and maintained LEV (fixed capturing hood type, on-tool extraction or enclosing hood type). Ensure effectiveness is at least 90%.
Assumes that activities are undertaken with appropriate and well maintained equipment by trained personal operating under supervision. Ensure regular inspection, cleaning and maintenance of equipment and machines. Clear spills immediately. Ensure daily cleaning of the equipment.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

2.9 WORKERS EXPOSURE CONTROL - Low energy manipulation of substances bound in materials and/or articles - (PROC21)

Product features (article)
Liquid.
Covers concentrations up to 5%.

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

2.10 WORKERS EXPOSURE CONTROL - High (mechanical) energy work-up of substances bound in materials and/or articles - (PROC24)

Product features (article)
Liquid.
Covers concentrations up to 5%.

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1 ENVIRONMENTAL RELEASE AND EXPOSURE - Industrial use of HALS in articles - (ERC5)

Release route	Release rate	Release estimation method
Water	0.01 kg/day	Estimated release factor
Air	0 kg/day	Estimated release factor
Soil	0.01 kg/day	Estimated release factor

Protection goal	Exposure estimate	RCR
Fresh water	3.72E-4 mg/L (EUSES 2.1.2)	0.169
Sediment (freshwater)	0.177 mg/kg dw (EUSES 2.1.2)	0.169
Sea water	3.7E-5 mg/L (EUSES 2.1.2)	0.168
Sediment (marine water)	0.018 mg/kg dw (EUSES 2.1.2)	0.16
Wastewater treatment plant	3.2E-3 mg/L (EUSES 2.1.2)	< 0.01
Farmland	0.013 mg/kg dw (EUSES 2.1.2)	0.063
Man via environment - Inhalation (systemic effects)	2.77E-8 mg/m³ (EUSES 2.1.2)	< 0.01
Man via environment - Oral	3.24E-5 mg/kg bw/day (EUSES 2.1.2)	< 0.01
Man via environment - combined routes	-	< 0.01

3.2 WORKERS EXPOSURE - Mixing or blending in batch processes for formulation of preparations and articles - (PROC5)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.037 mg/m³ (TRA Workers 3.0)	0.029
Dermal, systemic, long term	0.548 mg/kg bw/day (TRA Workers 3.0)	0.305
Combined, systemic, long term		0.334

3.3 WORKERS EXPOSURE - Calendering operations - (PROC6)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.037 mg/m³ (TRA Workers 3.0)	0.029
Dermal, systemic, long term	1.097 mg/kg bw/day (TRA Workers 3.0)	0.61
Combined, systemic, long term		0.638

3.4 WORKERS EXPOSURE - Industrial spraying - (PROC7)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.55 mg/m³ (TRA Workers 3.0)	0.433
Dermal, systemic, long term	0.857 mg/kg bw/day (TRA Workers 3.0)	0.476
Combined, systemic, long term		0.909

3.5 WORKERS EXPOSURE - Transfer of chemicals from/to vessels/large containers at non dedicated facilities. - (PROC8a)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.037 mg/m³ (TRA Workers 3.0)	0.029
Dermal, systemic, long term	0.548 mg/kg bw/day (TRA Workers 3.0)	0.305
Combined, systemic, long term		0.334

3.6 WORKERS EXPOSURE - Transfer of chemicals from/to vessels/large containers at dedicated facilities - (PROC8b)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.018 mg/m³ (TRA Workers 3.0)	0.014
Dermal, systemic, long term	0.548 mg/kg bw/day (TRA Workers 3.0)	0.305
Combined, systemic, long term		0.319

3.7 WORKERS EXPOSURE - Roller or brush application - (PROC10)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.037 mg/m³ (TRA Workers 3.0)	0.029
Dermal, systemic, long term	1.097 mg/kg bw/day (TRA Workers 3.0)	0.61
Combined, systemic, long term		0.638

3.8 WORKERS EXPOSURE - Treatment of articles by dipping and pouring - (PROC13)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.5 mg/m³ (TRA Workers 3.0)	0.394
Dermal, systemic, long term	1.071 mg/kg bw/day (TRA Workers 3.0)	0.595
Combined, systemic, long term		0.989

3.9 WORKERS EXPOSURE - Low energy manipulation of substances bound in materials and/or articles - (PROC21)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.2 mg/m³ (ECETOC TRA Workers)	0.157
Dermal, systemic, long term	0.1 mg/kg bw/day (ECETOC TRA Workers)	0.056
Combined, systemic, long term		0.213

3.10 WORKERS EXPOSURE - High (mechanical) energy work-up of substances bound in materials and/or articles - (PROC24)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.2 mg/m³ (ECETOC TRA Workers)	0.157
Dermal, systemic, long term	0.1 mg/kg bw/day (ECETOC TRA Workers)	0.056
Combined, systemic, long term		0.213

USO DIFFUSO DA PARTE DI OPERATORI PROFESSIONALI PRODUCT CATEGORIES (PC1, PC9a, PC32) SECTORS USE (SU15, SU17, SU19)

1. TITLE SECTION

EXPOSURE SCENARIO NAME

Wide dispersive outdoor use of HALS resulting in inclusion into a matrix

USE DESCRIPTORS

Product Categories:
Adhesives, Sealants (PC1) Coatings and Paints, Thinners, paint removers (PC 9a), Polymer Preparations and Compounds (PC32)
Sectors of use:
Manufacture of fabricated metal products, except machinery and equipment (SU 15). General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment (SU 17). Building and construction work (SU 19)

Environment

1. Wide dispersive outdoor use of HALS resulting in inclusion into a matrix - ERC8f
2. Wide dispersive indoor use of HALS resulting in inclusion into a matrix - ERC8c

Worker

3. Mixing or blending in batch processes for formulation of preparations and articles - PROC5
4: Transfer of chemicals from/to vessels/large containers at non dedicated facilities - PROC8a
5: Transfer of chemicals from/to vessels/large containers at dedicated facilities - PROC8b
6: Roller or brush application - PROC10
7: Non-industrial spraying - PROC13
8: Low energy manipulation of substances bound in materials and/or articles - PROC21
9: High (mechanical) energy work-up of substances bound in materials and/or articles - PROC24

2. CONDITIONS OF USE AFFECTING EXPOSURE

2.1 ENVIRONMENTAL EXPOSURE CONTROL - Wide dispersive outdoor use of HALS resulting in inclusion into a matrix - (ERC8f)

Conditions and measures for the biological waste water treatment plant

Municipal sewage treatment plant is assumed.

Conditions and measures related to external treatment of waste (including article waste)

Dispose of waste product or used containers according to local regulations.

2.2 ENVIRONMENTAL EXPOSURE CONTROL - Wide dispersive indoor use of HALS resulting in inclusion into a matrix - (ERC8c)

Conditions and measures for the biological waste water treatment plant

Municipal sewage treatment plant is assumed.

Conditions and measures related to external treatment of waste (including article waste)

Dispose of waste product or used containers according to local regulations.

2.3 WORKERS EXPOSURE CONTROL - Mixing or blending in batch processes for formulation of preparations and articles - (PROC5)

Product features (article)
Liquid.
Covers concentrations up to 5%

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

2.4 WORKERS EXPOSURE CONTROL - Transfer of chemicals from/to vessels/ large containers at non dedicated facilities - (PROC8a)

Product features (article)
Liquid.
Covers concentrations up to 5%

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

2.5 WORKERS EXPOSURE CONTROL - Transfer of chemicals from/to vessels/ large containers at dedicated facilities - (PROC8b)

Product features (article)
Liquid.
Covers concentrations up to 5%.

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

2.6 WORKERS EXPOSURE CONTROL - Roller or brush application - (PROC10)

Product features (article)
Liquid.
Covers concentrations up to 1%.

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Technical and organizational conditions and measures
Provide specifically designed and maintained LEV (receiving hood type). Ensure effectiveness is at least 80%.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with basic employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

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

Product features (article)
Liquid.
Covers concentrations up to 1%.

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Technical and organizational conditions and measures
Provide specifically designed and maintained LEV (receiving hood type). Ensure effectiveness is at least 80%.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear chemically resistant gloves (tested to EN374) in combination with basic employee training.; If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

2.8 WORKERS EXPOSURE CONTROL - Low energy manipulation of substances bound in materials and/or articles - (PROC21)

Product features (article)
Liquid.
Covers concentrations up to 5%.

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

2.9 WORKERS EXPOSURE CONTROL - High (mechanical) energy work-up of substances bound in materials and/or articles - (PROC24)

Product features (article)
Liquid.
Covers concentrations up to 5%.

Amount used (or contained in articles), frequency and duration of use/exposure
Covers use up to 8 h/day

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374. If skin contamination is expected to extend to other parts of the body, then these body parts should also be protected with impervious garments in a manner equivalent to those described for the hands. For further specifications, refer to section 8 of the SDS.

Other conditions affecting worker exposure
Indoor use.
Assumes process temperature up to 40 °C

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1 ENVIRONMENTAL RELEASE AND EXPOSURE - Wide dispersive outdoor use of HALS resulting in inclusion into a matrix - (ERC8f)

Release route	Release rate	Release estimation method
Water	0.05 kg/day	ERC
Air	0.15 kg/day	ERC
Soil	5E-3 kg/day	ERC

Protection goal	Exposure estimate	RCR
Fresh water	1.64E-3 mg/L (EUSES 2.1.2)	0.746
Sediment (freshwater)	0.782 mg/kg dw (EUSES 2.1.2)	0.745
Sea water	1.64E-4 mg/L (EUSES 2.1.2)	0.745
Sediment (marine water)	0.078 mg/kg dw (EUSES 2.1.2)	0.71
Wastewater treatment plant	0.016 mg/L (EUSES 2.1.2)	0.016
Farmland	0.064 mg/kg dw (EUSES 2.1.2)	0.307
Man via environment - Inhalation (systemic effects)	2.79E-8 mg/m³ (EUSES 2.1.2)	< 0.01
Man via environment - Oral	1.82E-4 mg/kg bw/day (EUSES 2.1.2)	< 0.01
Man via environment - combined routes	-	< 0.01

3.2 ENVIRONMENTAL RELEASE AND EXPOSURE - Wide dispersive indoor use of HALS resulting in inclusion into a matrix - (ERC8c)

Release route	Release rate	Release estimation method
Water	0.014 kg/day	ERC
Air	6.75E-3 kg/day	ERC
Soil	0 kg/day	ERC

Protection goal	Exposure estimate	RCR
Fresh water	4.83E-4 mg/L (EUSES 2.1.2)	0.22
Sediment (freshwater)	0.23 mg/kg dw (EUSES 2.1.2)	0.219
Sea water	4.81E-5 mg/L (EUSES 2.1.2)	0.219
Sediment (marine water)	0.023 mg/kg dw (EUSES 2.1.2)	0.208
Wastewater treatment plant	4.32E-3 mg/L (EUSES 2.1.2)	< 0.01
Farmland	0.018 mg/kg dw (EUSES 2.1.2)	0.084
Man via environment - Inhalation (systemic effects)	2.77E-8 mg/m³ (EUSES 2.1.2)	< 0.01
Man via environment - Oral	5.24E-5 mg/kg bw/day (EUSES 2.1.2)	< 0.01
Man via environment - combined routes	-	< 0.01

3.3 WORKERS EXPOSURE - Mixing or blending in batch processes for formulation of preparations and articles - (PROC5)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.367 mg/m³ (TRA Workers 3.0)	0.289
Dermal, systemic, long term	0.548 mg/kg bw/day (TRA Workers 3.0)	0.305
Combined, systemic, long term		0.593

3.4 WORKERS EXPOSURE - Transfer of chemicals from/to vessels/large containers at non dedicated facilities - (PROC8a)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.367 mg/m³ (TRA Workers 3.0)	0.289
Dermal, systemic, long term	0.548 mg/kg bw/day (TRA Workers 3.0)	0.305
Combined, systemic, long term		0.593

3.5 WORKERS EXPOSURE - Transfer of chemicals from/to vessels/large containers at dedicated facilities - (PROC8b)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.367 mg/m³ (TRA Workers 3.0)	0.289
Dermal, systemic, long term	0.548 mg/kg bw/day (TRA Workers 3.0)	0.305
Combined, systemic, long term		0.593

3.6 WORKERS EXPOSURE - Roller or brush application - (PROC10)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.97 mg/m³ (TRA)	0.764
Dermal, systemic, long term	0.274 mg/kg bw/day (TRA Workers 3.0)	0.152
Combined, systemic, long term		0.916

3.7 WORKERS EXPOSURE - Non-industrial spraying - (PROC11)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.5 mg/m³ (TRA)	0.394
Dermal, systemic, long term	1.071 mg/kg bw/day (TRA Workers 3.0)	0.595
Combined, systemic, long term		0.989

3.8 WORKERS EXPOSURE - Low energy manipulation of substances bound in materials and/or articles - (PROC21)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.2 mg/m³ (ECETOC TRA Workers)	0.157
Dermal, systemic, long term	0.1 mg/kg bw/day (ECETOC TRA Workers)	0.056
Combined, systemic, long term		0.213

3.9 WORKERS EXPOSURE - High (mechanical) energy work-up of substances bound in materials and/or articles - (PROC24)

Route of exposure and type of effects	Estimated exposure	RCR
Inhalation, systemic, long term	0.6 mg/m³ (ECETOC TRA Workers)	0.472
Dermal, systemic, long term	0.1 mg/kg bw/day (ECETOC TRA Workers)	0.056
Combined, systemic, long term		0.528

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

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

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

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

1. TITLE SECTION

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

ENVIRONMENT

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

WORKER

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

2. CONDITIONS OF USE AFFECTING EXPOSURE

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1. TITLE SECTION

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

ENVIRONMENT

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

WORKER

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

2. CONDITIONS OF USE AFFECTING EXPOSURE

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

Product features (article)

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

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

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

Conditions and measures related to sewage treatment plant

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

Other conditions affecting environmental exposure

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

2.2. WORKERS EXPOSURE CONTROL: Industrial spraying (PROC7)

Product features (article)

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

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

Duration: Covers daily exposures up to 8 hours.

Organizational and technical measures and conditions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Product features (article)

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

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

Duration: Covers daily exposures up to 8 hours.

Organizational and technical measures and conditions

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

Conditions and measures for personal protection, hygiene and health assessment

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

Other conditions affecting worker exposure

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

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

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

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

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

3.2. Worker exposure: Industrial spraying (PROC7)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

FASSAFILL EPOXY COMP.B

Varnostni list z dne 24/04/2026 revizija 5

ODDELEK 1: Identifikacija snovi/zmesi in družbe/podjetja

1.1 Identifikator izdelka

Identifikacija pripravka:

Komercialno ime: FASSAFILL EPOXY COMP.B

Komercialna koda: 1281.B

UFI: HRWQ-7RWA-4140-AGT0

1.2 Pomembne identificirane uporabe snovi ali zmesi in odsvetovane uporabe

Priporočena uporaba: Trdilec za epokside; 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 Corr. 1B	Povzroča hude opekline kože in poškodbe oči.
Eye Dam. 1	Povzroča hude poškodbe oči.
Skin Sens. 1	Lahko povzroči alergijski odziv kože.
Aquatic Acute 1	Zelo strupeno za vodne organizme.
Aquatic Chronic 1	Zelo 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

H314	Povzroča hude opekline kože in poškodbe oči.
H317	Lahko povzroči alergijski odziv kože.
H410	Zelo strupeno za vodne organizme, z dolgotrajnimi učinki.

Previdnostni stavki

P260	Ne vdihavati prahu/dima/plina/meglice/hlapov/razpršila.
P273	Preprečiti sproščanje v okolje.
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.

P310 Takoj pokličite CENTER ZA ZASTRUPITVE/ zdravnika.

P391 Prestreči razlito tekočino.

Vsebuje:

3-aminometil-3,5,5-trimetilcikloheksilamin

amini, polietilenpoli-,
trietilentetramin frakcija

Maščobne kisline, C18-nesatd., dimeri,
polimerni reakcijski produkti z maščobnimi
kislinami iz visokih olj in trietilentetramin

propilidintrimetanol, propoksiliran,
reakcijski produkti z amonijak

N,N-dimetil-1,3-diaminopropan

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: FASSAFILL EPOXY COMP.B

Nevarne sestavine, skladno z Uredbo CLP in njeno razvrstitvijo:

Količina	Ime	Ident. št.	Razvrstitev	Registracijska številka:
≥50 - <60 %	Maščobne kisline, C18-nesatd., dimeri, polimerni reakcijski produkti z maščobnimi kislinami iz visokih olj in trietilentetramin	CAS:68082-29-1 EC:500-191-5	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	01-2119972320-44-xxxx
≥15 - <20 %	propilidintrimetanol, propoksiliran, reakcijski produkti z amonijak	CAS:39423-51-3 EC:500-105-6	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411 Ocena akutne strupenosti: ATE - Oralno: 550mg/kg tt ATE - Dermalno: 1000mg/kg tt	01-2119556886-20-xxxx
≥12.5 - <15 %	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
≥1 - <2.5 %	N,N-dimetil-1,3-diaminopropan	CAS:109-55-7 EC:203-680-9 Index:612-061-00-6	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 2, H361d STOT SE 3, H335 Ocena akutne strupenosti: ATE - Oralno: 410mg/kg tt ATE - Dermalno: 1000mg/kg tt	01-2119486842-27-xxxx
≥0.3 - <0.5 %	amini, polietilenpoli-, trietilentetramin frakcija	CAS:90640-67-8 EC:292-588-2	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412, EUH071	01-2119487919-13-xxxx

Ocena akutne strupenosti:
ATE - Oralno: 1716mg/kg tt
ATE - Dermalno: 1465mg/kg tt

ODDELEK 4: Ukrepi za prvo pomoč

4.1 Opis ukrepov za prvo pomoč

V primeru stika s kožo:

Kontaminirana oblačila takoj slecite in jih na varen način odstranite.

TAKOJ SE POSVETUJTE Z ZDRAVNIKOM.

V primeru stika z očmi:

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

Poškodovano oko zaščitite.

V primeru zaužitja:

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:

CO2, gasilni aparat na prah, pena, pršenje z vodo.

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

Vodni curki

5.2 Posebne nevarnosti v zvezi s snovjo ali zmesjo

Pri gorenju nastajajo težki dimni plini.

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

5.3 Nasvet za gasilce

Uporabiti ustrezne dihalne naprave.

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

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

ODDELEK 6: Ukrepi o nenamernih izpustih

6.1 Osebni varnostni ukrepi, zaščitna oprema in postopki v sili

Za neizučeno osebje:

Nosite osebno varovalno opremo.

Osebe umaknite na varno mesto.

Glejte v oddelku 7 in 8 navedene zaščitne ukrepe.

Za reševalce:

Nosite osebno varovalno opremo.

6.2 Okoljevarstveni ukrepi

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

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

6.3 Metode in materiali za zadrževanje in čiščenje

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

Po pobiranju z vodo izperite območje in prizadete materiale.

Kontaminirano vodo za pranje shranite in odstranite.

6.4 Sklicevanje na druge oddelke

Glejte tudi naslova 8 in 13

ODDELEK 7: Ravnanje in skladiščenje

7.1 Varnostni ukrepi za varno ravnanje

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

Prazne vsebnike ne uporabite dokler niso očiščeni.

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

Nasveti o splošni higieni dela:

Kontaminirana oblačila se mora pred vstopom v jedilnico zamenjati.

Med delom ne jejte in ne pijte.

Glejte tudi oddelek 8 o priporočeni varovalni opremi.

7.2 Pogoji za varno skladiščenje, vključno z nezdružljivostjo

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

Mejna vrednost izpostavljenosti po PNEC

Maščobne kisline, C18-nesatd., dimeri, polimerni reakcijski produkti z maščobnimi kislinami iz visokih olj in trietilentetramin

CAS: 68082-29-1 Način izpostavitve: Sladka voda; PNEC Omejite: 2.2 µg/l
Način izpostavitve: Morska voda; PNEC Omejite: 0.22 µg/l
Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 3.84 mg/l
Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 2200000 mg/kg
Način izpostavitve: Morski sedimenti; PNEC Omejite: 220000 mg/kg
Način izpostavitve: Prst; PNEC Omejite: 440000 mg/kg

propilidintrimetanol, propoksiliran, reakcijski produkti z amonijak

CAS: 39423-51-3 Način izpostavitve: Sladka voda; PNEC Omejite: 0.004 mg/l
Način izpostavitve: Morska voda; PNEC Omejite: 0 mg/l
Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 0.022 mg/kg
Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.002 mg/kg
Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 10 mg/l
Način izpostavitve: Tla (kmetijska); PNEC Omejite: 0.002 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

N,N-dimetil-1,3-diaminopropan

CAS: 109-55-7 Način izpostavitve: Sladka voda; PNEC Omejite: 0.073 mg/l
Način izpostavitve: Morska voda; PNEC Omejite: 0.007 mg/l
Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 10 mg/l
Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 0.735 mg/kg
Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.073 mg/kg
Način izpostavitve: Prst; PNEC Omejite: 0.104 mg/kg

amini, polietilenpoli-, trietilentetramin frakcija

CAS: 90640-67-8 Način izpostavitve: Sladka voda; PNEC Omejite: 0.027 mg/l
Način izpostavitve: Morska voda; PNEC Omejite: 0.003 mg/l
Način izpostavitve: Mikroorganizmi v čistilnih napravah (STP); PNEC Omejite: 0.13 mg/l
Način izpostavitve: Sladkovodni sedimenti; PNEC Omejite: 8.572 mg/kg
Način izpostavitve: Morski sedimenti; PNEC Omejite: 0.857 mg/kg
Način izpostavitve: Tla (kmetijska); PNEC Omejite: 1.25 mg/kg

Izpeljane vrednosti brez učinka. (DNEL)

Maščobne kisline, C18-nesatd., dimeri, polimerni reakcijski produkti z maščobnimi kislinami iz visokih olj in trietilentetramin

CAS: 68082-29-1 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek delavec: 49.3 mg/m3; Uporabnik: 8.7 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek delavec: 14 mg/kg; Uporabnik: 5 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek Uporabnik: 5 mg/kg

propilidintrimetanol, propoksiliran, reakcijski produkti z amonijak

CAS: 39423-51-3 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek delavec: 4.9 mg/m3

Način izpostavitve: Dermalno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek delavec: 4 mg/kg

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek Uporabnik: 0.5 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/m3

Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Kratkotrajna, lokalni učinek Strokovni delavec: 0.073 mg/m3

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

N,N-dimetil-1,3-diaminopropan

CAS: 109-55-7 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek delavec: 1.2 mg/m3

amini, polietilenpoli-, trietilentetramin frakcija

CAS: 90640-67-8 Način izpostavitve: Z vdihavanjem, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek delavec: 0.54 mg/m3; Uporabnik: 0.096 mg/m3

Način izpostavitve: Oralno, človek; Pogostost izpostavitve: Dolgotrajna, sistemski učinek Uporabnik: 0.14 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); NBR (Nitrilkaučuk): debelina >= 0.4 mm; permeacijski čas >= 480 min. FKM (Fluórkaučuk): 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: Trdno stanje

Izgled: Pastozna trdno stanje

Barva: prosojen

Vonj: rahel, po amonijaku

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: ni znano

Plamenišče: ni znano

Temperatura samovžiga: ni znano

Temperatura razgradnje: ni znano

pH: >=11.30<=11.50 (Interna metoda - 20% v vodni disperziji)

Kinematična viskoznost: ni znano

Topnost v vodi: mešljiv v vseh razmerjih

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: 1.10 ± 0.02 kg/l (Interna metoda)

Relativna parna gostota: ni znano

Lastnosti delcev:

Ta izdelek vsebuje nanomateriale v sferoidni in amorfni obliki, s površinsko obdelavo/premazom.

9.2 Drugi podatki

Eksplozivne lastnosti: N.D.

Oksidativne lastnosti: N.D.

ODDELEK 10: Obstojnost in reaktivnost

10.1 Reaktivnost

Stabilen v normalnih pogojih

10.2 Kemijska stabilnost

Izdelek lahko sčasoma proizvaja tekoče faze.

10.3 Možnost poteka nevarnih reakcij

V stiku z močnimi oksidatorji se lahko vname.

V stiku z osnovnimi kovinami (alkalijske kovine in zemeljskoalkalijske kovine), oksidativnimi mineralnimi kislinami, halogeniranimi organskimi snovmi, organskimi peroksidi in hidroperoksidi, močnimi oksidanti, močnimi reduktorji lahko tvori vnetljive in/ali strupene pline.

10.4 Pogoji, ki se jim je treba izogniti

Izogibajte se bližine toplotnih virov.

10.5 Nezdružljivi materiali

Glejte točko 10.3

10.6 Nevarni produkti razgradnje

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

Glejte točko 5.2

ODDELEK 11: Toksikološki podatki

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

Toksikološki podatki izdelka:

a) akutna strupenost	Ni klasificirano
	Na podlagi razpoložljivih podatkov merila za razvrstitev niso izpolnjena.
b) jedkost za kožo/draženje kože	Proizvod je razvrščen: Skin Corr. 1B(H314)
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	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:

Maščobne kisline, C18-nesatd., dimeri, polimerni reakcijski produkti z maščobnimi kislinami iz visokih olj in trietilentetramin

CAS: 68082-29-1 a) akutna strupenost LD50 Oralno Podgana > 2000 mg/kg

LD50 Koža Podgana > 2000 mg/kg

propilidintrimetanol, propoksiliran, reakcijski produkti z amonijak

CAS: 39423-51-3 a) akutna strupenost ATE - Oralno: 550 mg/kg tt

ATE - Dermalno: 1000 mg/kg tt

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

N,N-dimetil-1,3-diaminopropan

CAS: 109-55-7 a) akutna strupenost ATE - Oralno: 410 mg/kg tt

ATE - Dermalno: 1000 mg/kg tt

amini, polietilenpoli-, trietilentetramin frakcija

CAS: 90640-67-8 a) akutna strupenost ATE - Oralno: 1716 mg/kg tt

ATE - Dermalno: 1465 mg/kg tt

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:

Zelo strupeno za vodne organizme, z dolgotrajnimi učinki.

Ekotoksikoloških lastnosti izdelka

Proizvod je razvrščen: Aquatic Acute 1(H400), Aquatic Chronic 1(H410)

Seznam sestavin z ekotoksikološkimi lastnostmi

Maščobne kisline, C18-nesatd., dimeri, polimerni reakcijski produkti z maščobnimi kislinami iz visokih olj in trietilentetramin

CAS: 68082-29-1 a) akutna strupenost za vodno okolje: LC50 Riba > 0.15 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha 1.2 mg/l 48h

a) akutna strupenost za vodno okolje: EC50 Alge 0.15 mg/l 72h

b) kronična strupenost za vodno okolje: NOEC Riba 0.1 mg/l 34d

b) kronična strupenost za vodno okolje: NOEC Vodna bolha 0.16 mg/l 21d

propilidintrimetanol, propoksiliran, reakcijski produkti z amonijak

CAS: 39423-51-3 a) akutna strupenost za vodno okolje: LC50 Riba > 100 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha 13 mg/l 48h

a) akutna strupenost za vodno okolje: ErC50 Alge 4.4 mg/l 72h

b) kronična strupenost za vodno okolje: NOEC Alge 1 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

N,N-dimetil-1,3-diaminopropan

CAS: 109-55-7 a) akutna strupenost za vodno okolje: LC50 Riba 122 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha 59.46 mg/l 48h

a) akutna strupenost za vodno okolje: EC50 Alge 34 mg/l 72h

b) kronična strupenost za vodno okolje: NOEC Vodna bolha 3.64 mg/l - 22d

amini, polietilenpoli-, trietilentetramin frakcija

CAS: 90640-67-8 a) akutna strupenost za vodno okolje: LC50 Riba 330 mg/l 96h

a) akutna strupenost za vodno okolje: EC50 Vodna bolha 31.1 mg/l 48h

a) akutna strupenost za vodno okolje: EC50 Alge 20 mg/l 72h

b) kronična strupenost za vodno okolje: EC10 Vodna bolha 1.9 mg/l 21d

b) kronična strupenost za vodno okolje: NOEC Alge 1.34 mg/l 72h

12.2 Obstojnost in razgradljivost

Maščobne kisline, C18-nesatd., dimeri, polimerni reakcijski produkti z maščobnimi kislinami iz visokih olj in trietilentetramin

CAS: 68082-29-1 Ni hitro razgradljivo

propilidintrimetanol, propoksiliran, reakcijski produkti z amonijak

CAS: 39423-51-3 Ni hitro razgradljivo

3-aminometil-3,5,5-trimetilcikloheksilamin

CAS: 2855-13-2 Ni hitro razgradljivo

N,N-dimetil-1,3-diaminopropan

CAS: 109-55-7 Hitro razgradljivo

amini, polietilenpoli-, trietilentetramin frakcija

CAS: 90640-67-8 Ni hitro razgradljivo

12.3 Zmožnost kopičenja v organizmih

3-aminometil-3,5,5-trimetilcikloheksilamin

CAS: 2855-13-2 Se ne kopiči v organizmih

N,N-dimetil-1,3-diaminopropan

CAS: 109-55-7 Se ne kopiči v organizmih

amini, polietilenpoli-, trietilentetramin frakcija

CAS: 90640-67-8 Se ne kopiči v organizmih

12.4 Mobilnost v tleh

Maščobne kisline, C18-nesatd., dimeri, polimerni reakcijski produkti z maščobnimi kislinami iz visokih olj in trietilentetramin

CAS: 68082-29-1 Testiranje: Log Koc; Vrednost: 5.750

3-aminometil-3,5,5-trimetilcikloheksilamin

CAS: 2855-13-2 Testiranje: Log Koc; Vrednost: 2.970

N,N-dimetil-1,3-diaminopropan

CAS: 109-55-7 Testiranje: Log Koc; Vrednost: 1.810

amini, polietilenpoli-, trietilentetramin frakcija

CAS: 90640-67-8 Testiranje: Log Koc; Vrednost: 3.500

12.5 Rezultati ocene PBT in vPvB

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

12.6 Lastnosti endokrinih motilcev

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

12.7 Drugi škodljivi učinki

ni znano

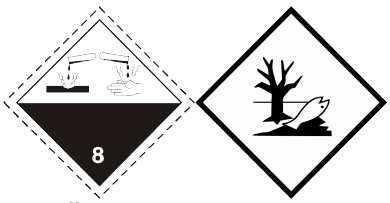
ODDELEK 13: Odstranjevanje

13.1 Metode ravnanja z odpadki

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

državnih predpisih.
Ne dopustite, da pride v kanalizacijo ali vodne poti.
Odstraniti posode, ki jih kontaminira izdelka v skladu z lokalnimi ali nacionalnimi predpisi.
Ko izdelku poteče življenjska doba, ga odstranite v skladu z veljavno zakonodajo.

ODDELEK 14: Podatki o prevozu



14.1 Številka ZN in številka ID

1759

14.2 Pravilno odpremno ime ZN

ADR-uradno ime blaga: JEDKA TRDNA SNOV, N.D.R. (3-aminometil-3,5,5-trimetilcikloheksilamin)
IATA-uradno ime blaga: CORROSIVE SOLID, N.O.S. (3-aminometil-3,5,5-trimetilcikloheksilamin)
IMDG-uradno ime blaga: CORROSIVE SOLID, N.O.S. (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

Glavna strupena komponenta: Maščobne kisline, C18-nesatd., dimeri, polimerni reakcijski produkti z maščobnimi kislinami iz visokih olj in trietilentetramin
Onesnaževalec morja: Da
Onesnažuje okolje po: Da
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: 859
IATA-tovorna letala: 863
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: -
IMDG-dodatne nevarnosti: -
IMDG-posebni ukrepi: 274

14.7 Pomorski prevoz v razsutem stanju v skladu z instrumenti IMO

ni znano

ODDELEK 15: Zakonsko predpisani podatki

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

Dir. 98/24/ES (Varovanje delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu)
Dir. 2000/39/ES (mejne vrednosti za poklicno izpostavljenost)
Direktiva 2010/75/EU
Uredba (ES) št. 1907/2006 (REACH)
Uredba (ES) št. 1272/2008 (CLP)
Uredba (ES) št. 790/2009 (1. ATP CLP) in (EU) št. 758/2013

Uredba (EU) 2020/878
Uredba (EU) št. 286/2011 (2. ATP CLP)
Uredba (EU) št. 618/2012 (3. ATP CLP)
Uredba (EU) št. 487/2013 (4. ATP CLP)
Uredba (EU) št. 944/2013 (5. ATP CLP)
Uredba (EU) št. 605/2014 (6. ATP CLP)
Uredba (EU) 2015/1221 (7. ATP CLP)
Uredba (EU) 2016/918 (8. ATP CLP)
Uredba (EU) 2016/1179 (9. ATP CLP)
Uredba (EU) 2017/776 (10. ATP CLP)
Uredba (EU) 2018/669 (11. ATP CLP)
Uredba (EU) 2018/1480 (13. ATP CLP)
Uredba (EU) 2019/521 (12. ATP CLP)
Uredba (EU) 2020/217 (14. ATP CLP)
Uredba (EU) 2020/1182 (15. ATP CLP)
Uredba (EU) 2021/643 (16. ATP CLP)
Uredba (EU) 2021/849 (17. ATP CLP)
Uredba (EU) 2022/692 (18. ATP CLP)
Uredba (EU) 2023/707
Uredba (EU) 2023/1434 (19. ATP CLP)
Uredba (EU) 2023/1435 (20. ATP CLP)
Uredba (EU) 2024/197 (21. ATP CLP)

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: Nobeden

Omejitve v zvezi z vsebovanimi snovmi: 40, 75

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

Kategorija Seveso III v skladu s Prilogo 1, del 1	Mejna vrednost nižje stopnje (v tonah)	Mejna vrednost višje stopnje (v tonah)
izdelek spada v kategorijo: E1	100	200

Uredba (EU) št. 649/2012 (uredba PIC)

Snovi niso navedene

Nemški razred nevarnosti za vodo.

Razred 3: izjemno nevarna.

SVHC snovi:

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

15.2 Ocena kemijske varnosti

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

ODDELEK 16: Drugi podatki

Številka	Opis
EUH071	Jedko za dihalne poti.
H226	Vnetljiva tekočina in hlapi.
H302	Zdravju škodljivo pri zaužitju.
H312	Zdravju škodljivo v stiku s kožo.
H314	Povzroča hude opekline kože in poškodbe oči.
H315	Povzroča draženje kože.
H317	Lahko povzroči alergijski odziv kože.
H318	Povzroča hude poškodbe oči.
H335	Lahko povzroči draženje dihalnih poti.
H361d	Sum škodljivosti za nerojenega otroka.
H400	Zelo strupeno za vodne organizme.
H410	Zelo strupeno za vodne organizme, z dolgotrajnimi učinki.
H411	Strupeno za vodne organizme, z dolgotrajnimi učinki.
H412	Škodljivo za vodne organizme, z dolgotrajnimi učinki.

Številka	Razred in kategorija nevarnosti	Opis

2.6/3	Flam. Liq. 3	Vnetljiva tekočina, Kategorija 3
3.1/4/Dermal	Acute Tox. 4	Akutna strupenost (dermalno), 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
3.2/2	Skin Irrit. 2	Draženje kože, Kategorija 2
3.3/1	Eye Dam. 1	Hude poškodbe oči, Kategorija 1
3.4.2/1	Skin Sens. 1	Preobčutljivost kože, Kategorija 1
3.4.2/1A	Skin Sens. 1A	Preobčutljivost kože, Kategorija 1A
3.7/2	Repr. 2	Strupenost za razmnoževanje, Kategorija 2
3.8/3	STOT SE 3	Specifična strupenost za ciljne organe (STOT) – enkratna izpostavljenost STOT enkrat, Kategorija 3
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
4.1/C2	Aquatic Chronic 2	Kronično (dolgotrajno) nevarnost za vodno okolje, Kategorija 2
4.1/C3	Aquatic Chronic 3	Kronično (dolgotrajno) nevarnost za vodno okolje, Kategorija 3

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

Razvrstitev v skladu z Uredbo (ES) št. 1272/2008	Postopek razvrščanja
Skin Corr. 1B, H314	metoda izračuna
Eye Dam. 1, H318	metoda izračuna
Skin Sens. 1, H317	metoda izračuna
Aquatic Acute 1, H400	metoda izračuna
Aquatic Chronic 1, H410	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

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^3/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/m³	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/m³	ECETOC TRA worker v2.0	0.706
by inhalation, systemic, short-term	14,192 mg/m³	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/m³	ECETOC TRA worker v2.0	0.106
by inhalation, systemic, short-term	2,129 mg/m³	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/m³	ECETOC TRA worker v2.0	0.353
by inhalation, systemic, short-term	7,096 mg/m³	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/m³	ECETOC TRA worker v2.0	0.353
by inhalation, systemic, short-term	7,096 mg/m³	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^3/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/m³	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/m³	ECETOC TRA worker v2.0	0.353
by inhalation, systemic, short-term	7,096 mg/m³	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/m³	ECETOC TRA worker v2.0	0.706
by inhalation, systemic, short-term	14,192 mg/m³	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/m³	ECETOC TRA worker v2.0	0.706
by inhalation, systemic, short-term	14,192 mg/m³	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/m³	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.

Amines, polyethylenepoly-, triethylenetetramine fraction

Substance identification
Chemical Name: Amines, polyethylenepoly-, triethylenetetramine fraction
CAS number: 90640-67-8

INDUSTRIAL APPLICATION OF COATINGS AND PAINTS - INDUSTRIAL USE

1. TITLE SECTION

Exposure scenario name: Industrial application of coatings and paints
Date - Version: 15/07/2020 - 1.0
Life cycle stage: Use at industrial sites
Main user group: Industrial uses
Sector(s) of use: Industrial uses (SU3)

Contributing scenario - Environment
CS1 Wet polymerization: ERC4

Contributing scenario - Worker
CS2 Blend Operations: PROC5
CS3 Spraying: PROC7
CS4 Material Transfers: PROC8a
CS5 Material Transfers: PROC8b
CS6 Material Transfers: PROC9
CS7 Roller and brush application: PROC10

2. CONDITIONS OF USE AFFECTING EXPOSURE

2.1. Contributing Scenario CS1 - Environment: Wet polymerization (ERC4)

Environmental release categories: Use of non-reactive processing aid at industrial site (no inclusion into or onto article). (ERC4)

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

Amount used, frequency and duration of use
Amounts used: Daily quantity per site 2114 kg/day
Release Type: Continuous release
Issue days: 220 days a year

Measures and technical-organizational conditions
Control measures to prevent releases: No specific measures identified.

Other operational conditions affecting environmental exposure
Local fresh water dilution factor: 1000

2.2. CS2 Contributing Scenario - Worker: Mixing Operations (PROC5)

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

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure

Duration: Includes use up to 60 min.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.3. CS3 Contributing Scenario - Worker: Spray (PROC7)

Process categories: Industrial spray application (PROC7)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 15%.

Amount used, frequency and duration of use/exposure

Duration: Covers up to 8 hours of daily exposure.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Dermal - minimum 95% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.4. CS4 Contributing Scenario - Worker: Material transfers (PROC8a)

Process categories: Transfer of a substance or a preparation (filling/emptying) at non-dedicated facilities (PROC8a)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 25%.

Amount used, frequency and duration of use/exposure

Duration: Covers up to 8 hours of daily exposure.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.5. CS5 Contributing Scenario - Worker: Material transfers (PROC8b)

Process categories: Transfer of a substance or a preparation (filling/emptying) at dedicated facilities (PROC8b)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 25%.

Amount used, frequency and duration of use/exposure

Duration:. Covers up to 8 hours of daily exposure.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Dermal - minimum 90% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.6 Contributing Scenario CS6 - Worker: Material transfers (PROC9)

Process categories: Transfer of a substance or preparation into small containers (dedicated filling line, including weighing) (PROC9)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 15%.

Amount used, frequency and duration of use/exposure

Duration: Covers up to 8 hours of daily exposure.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Dermal - minimum 90% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.7 CS7 Contributing Scenario - Worker: Roller and brush application (PROC10)

Process categories: Roller and brush application (PROC10)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 15%.

Amount used, frequency and duration of use/exposure

Duration: Includes use up to 60 min.
Additional conditions for human health: Limit the amount of substance in the product to 0.5%

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Dermal - minimum 90% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1. Contributing Scenario CS1 - Environment: Wet polymerization (ERC4)

Protection target	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
fresh water	0.00317 mg/l	EUSES	0.017
fresh water sediment	1.6 mg/kg bw/day	EUSES	0.017
sea water	0.00042 mg/l	EUSES	0.008
Marine sediment	0.212 mg/kg bw/day	EUSES	0.008
ground	0.114 mg/kg bw/day	EUSES	0.006

3.2. CS2 Contributing Scenario - Worker: Mixing Operations (PROC5)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.68 mg/kg bw/day	N.d.	0.12
by inhalation, systemic, long-term	0.365 mg/m³	N.d.	0.366
by inhalation, systemic, short-term	0.731 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.486

3.3. CS3 Contributing Scenario - Worker: Spray (PROC7)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.128 mg/kg bw/day	N.d.	0.226
by inhalation, systemic, long-term	0.457 mg/m³	N.d.	0.457
by inhalation, systemic, short-term	0.914 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.683

3.4. CS4 Contributing Scenario - Worker: Material transfers (PROC8a)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.041 mg/kg bw/day	N.d.	0.072
by inhalation, systemic, long-term	0.548 mg/m³	N.d.	0.548
by inhalation, systemic, short-term	1,097 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.621

3.5. CS5 Contributing Scenario - Worker: Material transfers (PROC8b)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.034 mg/kg bw/day	N.d.	0.06
by inhalation, systemic, long-term	0.548 mg/m³	N.d.	0.548
by inhalation, systemic, short-term	1.096 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.609

3.6. Contributing Scenario CS6 - Worker: Material transfers (PROC9)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.068 mg/kg bw/day	N.d.	0.12
by inhalation, systemic, long-term	0.365 mg/m³	N.d.	0.366
by inhalation, systemic, short-term	1.22 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.706

3.7. CS7 Contributing Scenario - Worker: Roller and brush application (PROC10)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.082 mg/kg bw/day	N.d.	0.144
by inhalation, systemic, long-term	0.457 mg/m³	N.d.	0.229
by inhalation, systemic, short-term	0.914 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.373

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.

USE IN RIGID FOAM, COATINGS, ADHESIVES AND SEALANTS - INDUSTRIAL USE

1. TITLE SECTION

Exposure scenario name: Use in rigid foam, coatings, adhesives and sealants
Date - Version: 03/18/2020 - 1.0
Life cycle stage: Use at industrial sites
Main user group: Industrial uses
Sector(s) of use: Industrial uses (SU3)

Contributing scenario - Environment

CS1 Wet polymerization: ERC4

Contributing scenario - Worker

CS2 Blend Operations: PROC5
CS3 Spraying: PROC7
CS4 Material Transfers: PROC8a
CS5 Material Transfers: PROC8b
CS6 Material Transfers: PROC9
CS7 Roller and brush application: PROC10

2. CONDITIONS OF USE AFFECTING EXPOSURE

2.1. Contributing Scenario CS1 - Environment: Wet polymerization (ERC4)

Environmental release categories: Use of non-reactive processing aid at industrial site (no inclusion into or onto article). (ERC4)

Product features (article)

Physical form of the product: Liquid

Amount used, frequency and duration of use

Amounts used: Daily quantity per site 2114 kg/day
Release Type: Continuous release
Issue days: 220 days a year

Measures and technical-organizational conditions

Control measures to prevent releases: No specific measures identified.

Other operational conditions affecting environmental exposure

Local fresh water dilution factor: 1000

2.2. CS2 Contributing Scenario - Worker: Mixing Operations (PROC5)

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

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure

Duration: Includes use up to 60 min.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.3. CS3 Contributing Scenario - Worker: Spray (PROC7)

Process categories: Industrial spray application (PROC7)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 15%.

Amount used, frequency and duration of use/exposure

Duration: Covers up to 8 hours of daily exposure.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Dermal - minimum 95% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.4. CS4 Contributing Scenario - Worker: Material transfers (PROC8a)

Process categories: Transfer of a substance or a preparation (filling/emptying) at non-dedicated facilities (PROC8a)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 25%.

Amount used, frequency and duration of use/exposure

Duration: Covers up to 8 hours of daily exposure.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.5. CS5 Contributing Scenario - Worker: Material transfers (PROC8b)

Process categories: Transfer of a substance or a preparation (filling/emptying) at dedicated facilities (PROC8b)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 25%.

Amount used, frequency and duration of use/exposure

Duration:. Covers up to 8 hours of daily exposure.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Dermal - minimum 90% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.6. Contributing Scenario CS6 - Worker: Material transfers (PROC9)

Process categories: Transfer of a substance or preparation into small containers (dedicated filling line, including weighing) (PROC9)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 15%.

Amount used, frequency and duration of use/exposure

Duration: Covers up to 8 hours of daily exposure.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Dermal - minimum 90% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.7. CS7 Contributing Scenario - Worker: Roller and brush application (PROC10)

Process categories: Roller and brush application (PROC10)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 5%.

Amount used, frequency and duration of use/exposure

Duration: Covers up to 8 hours of daily exposure.
Additional conditions for human health: Limit the amount of substance in the product to 0.5%

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: -Wear suitable gloves, tested according to EN347. Dermal - minimum 90% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1. Contributing Scenario CS1 - Environment: Wet polymerization (ERC4)

Protection target	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
fresh water	0.00317 mg/l	EUSES	0.017
fresh water sediment	1.6 mg/kg bw/day	EUSES	0.017
sea water	0.00042 mg/l	EUSES	0.008
Marine sediment	0.212 mg/kg bw/day	EUSES	0.008
ground	0.114 mg/kg bw/day	EUSES	0.006

3.2. CS2 Contributing Scenario - Worker: Mixing Operations (PROC5)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.68 mg/kg bw/day	N.d.	0.12
by inhalation, systemic, long-term	0.365 mg/m³	N.d.	0.366
by inhalation, systemic, short-term	0.731 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.486

3.3. CS3 Contributing Scenario - Worker: Spray (PROC7)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.128 mg/kg bw/day	N.d.	0.226
by inhalation, systemic, long-term	0.457 mg/m³	N.d.	0.457
by inhalation, systemic, short-term	0.914 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.683

3.4. CS4 Contributing Scenario - Worker: Material transfers (PROC8a)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.041 mg/kg bw/day	N.d.	0.072
by inhalation, systemic, long-term	0.548 mg/m³	N.d.	0.548
by inhalation, systemic, short-term	1.097 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.621

3.5. CS5 Contributing Scenario - Worker: Material transfers (PROC8b)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.034 mg/kg bw/day	N.d.	0.06
by inhalation, systemic, long-term	0.548 mg/m³	N.d.	0.548
by inhalation, systemic, short-term	1.096 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.609

3.6. Contributing Scenario CS6 - Worker: Material transfers (PROC9)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.068 mg/kg bw/day	N.d.	0.12
by inhalation, systemic, long-term	0.365 mg/m³	N.d.	0.366
by inhalation, systemic, short-term	1.22mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.706

3.7. CS7 Contributing Scenario - Worker: Roller and brush application (PROC10)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.082 mg/kg bw/day	N.d.	0.144
by inhalation, systemic, long-term	0.457 mg/m³	N.d.	0.229
by inhalation, systemic, short-term	0.914 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.373

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.

- INDUSTRIAL APPLICATION OF COATINGS AND PAINTS - PROFESSIONAL USE

1. TITLE SECTION

Exposure scenario name: Industrial application of coatings and paints
Date - Version: 03/18/2020 - 1.0
Life cycle stage: Generalized use by professional operators
Main user group: Professional uses
Sector(s) of use: Professional uses (SU22)

Contributing scenario - Environment

CS1 Wet polymerization: ERC8a - ERC8d

Contributing scenario - Worker

CS2 Blend Operations: PROC5
CS3 Material Transfers: PROC8a
CS4 Material Transfers: PROC8b
CS5 Material Transfers: PROC9
CS6 Roller and brush application: PROC10

2. CONDITIONS OF USE AFFECTING EXPOSURE

2.1. Contributing Scenario CS1 - Environment: Wet polymerization (ERC4)

Environmental release categories: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor). (ERC8a, ERC8d)

Product features (article)

Physical form of the product: Liquid

Amount used, frequency and duration of use

Amounts used: Daily quantity per site 15500kg/day
Release Type: Continuous release
Issue days: 300 days/year

Measures and technical-organizational conditions

Control measures to prevent releases: Preventive treatment of wastewater by neutralization. No other specific measures identified.

Other operational conditions affecting environmental exposure

Local fresh water dilution factor: 1000

2.2. CS2 Contributing Scenario - Worker: Mixing Operations (PROC5)

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

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure

Duration: Includes use up to 60 min.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.3. CS3 Contributing Scenario - Worker: Material transfers (PROC8a)

Process categories: Transfer of a substance or a preparation (filling/emptying) at non-dedicated facilities (PROC8a)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure

Duration: Includes use up to 15 min.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Inhalation - minimum 95% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.4. CS4 Contributing Scenario - Worker: Material transfers (PROC8b)

Process categories: Transfer of a substance or a preparation (filling/emptying) at dedicated facilities (PROC8b)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes substance shares in the product up to 5%.

Amount used, frequency and duration of use/exposure

Duration:. Covers up to 8 hours of daily exposure.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Dermal - minimum 90% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.5. CS5 Contributing Scenario - Worker: Material transfers (PROC9)

Process categories: Transfer of a substance or preparation into small containers (dedicated filling line, including weighing) (PROC9)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 25%.

Amount used, frequency and duration of use/exposure

Duration: Covers up to 8 hours of daily exposure.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Dermal - minimum 90% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.6. Contributing Scenario CS6 - Worker: Roller and brush application (PROC10)

Process categories: Roller and brush application (PROC10)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 5%.

Amount used, frequency and duration of use/exposure

Duration: Covers up to 8 hours of daily exposure.
Additional conditions for human health: Limit the amount of substance in the product to 2%

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Dermal - minimum 90% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1. Contributing Scenario CS1 - Environment: Wet polymerization (ERC8a, ERC8d)

Protection target	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
fresh water	0.0037 mg/l	EUSES	N.d.
fresh water sediment	1.6 mg/kg bw/day	EUSES	N.d.
sea water	0.00042 mg/l	EUSES	N.d.
Marine sediment	0.212 mg/kg bw/day	EUSES	N.d.
ground	0.114 mg/kg bw/day	EUSES	N.d.

3.2. CS2 Contributing Scenario - Worker: Mixing Operations (PROC5)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.68 mg/kg bw/day	N.d.	0.12
by inhalation, systemic, long-term	0.365 mg/m³	N.d.	0.366
by inhalation, systemic, short-term	0.731 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.486

3.3. CS3 Contributing Scenario - Worker: Material transfers (PROC8a)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.09 mg/kg bw/day	N.d.	0.15
by inhalation, systemic, long-term	0.61 mg/m³	N.d.	0.609
by inhalation, systemic, short-term	1.22mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.76

3.4. CS4 Contributing Scenario - Worker: Material transfers (PROC8b)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.14 mg/kg bw/day	N.d.	0.248
by inhalation, systemic, long-term	0.76 mg/m³	N.d.	0.076
by inhalation, systemic, short-term	1.52 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.324

3.5. CS5 Contributing Scenario - Worker: Material transfers (PROC9)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.14 mg/kg bw/day	N.d.	0.248
by inhalation, systemic, long-term	0.76 mg/m³	N.d.	0.076
by inhalation, systemic, short-term	1.52 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.324

3.6. Contributing Scenario CS6 - Worker: Roller and brush application (PROC10)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.14 mg/kg bw/day	N.d.	0.248
by inhalation, systemic, long-term	0.76 mg/m³	N.d.	0.076
by inhalation, systemic, short-term	0.243 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.498

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.

USE IN RIGID FOAM, COATINGS, ADHESIVES AND SEALANTS - PROFESSIONAL USE

1. TITLE SECTION

Exposure scenario name: Industrial application of coatings and paints
Date - Version: 03/18/2020 - 1.0
Life cycle stage: Use in rigid foam, coatings, adhesives and sealants
Main user group: Professional uses
Sector(s) of use: Professional uses (SU22)

Contributing scenario - Environment

CS1 Wet polymerization: ERC8a - ERC8d

Contributing scenario - Worker

CS2 Blend Operations: PROC5
CS3 Material Transfers: PROC8a
CS4 Material Transfers: PROC8b
CS5 Material Transfers: PROC9
CS6 Roller and brush application: PROC10

2. CONDITIONS OF USE AFFECTING EXPOSURE

2.1. Contributing Scenario CS1 - Environment: Wet polymerization (ERC4)

Environmental release categories: Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor). (ERC8a, ERC8d)

Product features (article)

Physical form of the product: Liquid

Amount used, frequency and duration of use

Amounts used: Daily quantity per site 15500kg/day
Release Type: Continuous release
Issue days: 300 days/year

Measures and technical-organizational conditions

Control measures to prevent releases: Preventive treatment of wastewater by neutralization. No other specific measures identified.

Other operational conditions affecting environmental exposure

Local fresh water dilution factor: 1000

2.2. CS2 Contributing Scenario - Worker: Mixing Operations (PROC5)

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

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure

Duration: Includes use up to 60 min.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.3. CS3 Contributing Scenario - Worker: Material transfers (PROC8a)

Process categories: Transfer of a substance or a preparation (filling/emptying) at non-dedicated facilities (PROC8a)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure

Duration: Includes use up to 15 min.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Inhalation - minimum 95% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.4. CS4 Contributing Scenario - Worker: Material transfers (PROC8b)

Process categories: Transfer of a substance or a preparation (filling/emptying) at dedicated facilities (PROC8b)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 0.5 %

Amount used, frequency and duration of use/exposure

Duration:. Covers up to 8 hours of daily exposure.

Measures and technical-organizational conditions

Technical organizational measures: No specific measures identified.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.5. CS5 Contributing Scenario - Worker: Material transfers (PROC9)

Process categories: Transfer of a substance or preparation into small containers (dedicated filling line, including weighing) (PROC9)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes substance shares in the product up to 5%.

Amount used, frequency and duration of use/exposure

Duration: Covers up to 8 hours of daily exposure.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Dermal - minimum 90% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

2.6. Contributing Scenario CS6 - Worker: Roller and brush application (PROC10)

Process categories: Roller and brush application (PROC10)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: < 500Pa
Concentration of the substance in the product: Includes concentrations up to 5%.

Amount used, frequency and duration of use/exposure

Duration: Covers up to 8 hours of daily exposure.

Measures and technical-organizational conditions

Technical organizational measures: Provide supplementary ventilation to points where emissions occur. Inhalation - minimum 90% efficiency.

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

Personal protective equipment: Wear suitable gloves, tested according to EN347. Dermal - minimum 90% efficiency. Wear suitable respiratory protection.
Additional conditions for human health: Assumes a good basic standard of occupational hygiene is implemented.

Other operational conditions affecting worker exposure

Indoor use

Further information on good practices. The requirements set out in the REACH Regulation Article 37(4) do not apply.

Further information on good practices: Supervise the implementation of risk management measures and compliance with the required operational conditions.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1. Contributing Scenario CS1 - Environment: Wet polymerization (ERC8a, ERC8d)

Protection target	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
fresh water	0.0037 mg/l	EUSES	N.d.
fresh water sediment	1.6 mg/kg bw/day	EUSES	N.d.
sea water	0.00042 mg/l	EUSES	N.d.
Marine sediment	0.212 mg/kg bw/day	EUSES	N.d.
ground	0.114 mg/kg bw/day	EUSES	N.d.

3.2. CS2 Contributing Scenario - Worker: Mixing Operations (PROC5)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.68 mg/kg bw/day	N.d.	0.12
by inhalation, systemic, long-term	0.365 mg/m³	N.d.	0.366
by inhalation, systemic, short-term	0.731 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.486

3.3. CS3 Contributing Scenario - Worker: Material transfers (PROC8a)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.09 mg/kg bw/day	N.d.	0.15
by inhalation, systemic, long-term	0.61 mg/m³	N.d.	0.609
by inhalation, systemic, short-term	1.22mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.76

3.4. CS4 Contributing Scenario - Worker: Material transfers (PROC8b)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.14 mg/kg bw/day	N.d.	0.248
by inhalation, systemic, long-term	0.76 mg/m³	N.d.	0.076
by inhalation, systemic, short-term	1.52 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.324

3.5. CS5 Contributing Scenario - Worker: Material transfers (PROC9)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.14 mg/kg bw/day	N.d.	0.248
by inhalation, systemic, long-term	0.76 mg/m³	N.d.	0.076
by inhalation, systemic, short-term	1.52 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.324

3.6. Contributing Scenario CS6 - Worker: Roller and brush application (PROC10)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
skin contact, systemic, long-term	0.14 mg/kg bw/day	N.d.	0.248
by inhalation, systemic, long-term	0.76 mg/m³	N.d.	0.076
by inhalation, systemic, short-term	1.52 mg/m³	N.d.	<0.001
combined routes, systemic, long-term	N.d.	N.d.	0.373

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.

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine

Substance identification
Chemical Name: Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine
CAS number: 68082-29-1

USE AT INDUSTRIAL USES

1. TITLE SECTION

Exposure scenario name: Industrial production of varnishes and enamels - Industrial application of coatings and paints - Use in rigid foam, coatings, adhesives and sealants - Use in composite and foundry materials
Date - Version: 03/12/2020 - 1.0
Life cycle stage: Use at industrial sites
Main user group: Industrial uses
Sector(s) of use: Industrial uses (SU3)

Contributing scenario - Environment
CS1 Wet polymerization: ERC5

Contributing scenario - Worker
CS2 Hardening: PROC4
CS3 Spraying - Dermal Exposure Assessment: PROC7
CS4 Spraying - Dermal Exposure Assessment: PROC7
CS5 Material transfers: PROC8b
CS6 Material Transfers: PROC9

2. CONDITIONS OF USE AFFECTING EXPOSURE

2.1. CS1 Environment Contributing Scenario: Wet Polymerization (ERC5)

Environmental release categories: Industrial use leading to inclusion into/onto an article (ERC5)

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

Amount used, frequency and duration of use
Amounts used: Daily quantity per site 3.33 tons/day - Yearly amount per site 999 tons/year
Release Type: Continuous release
Issue days: 300 days/year

Conditions and measures for the municipal sewage treatment plant
Type of sewage treatment plant (STP): Municipal STP - Water: minimum efficiency of 91.34%
STP effluent (m^3/day): 2000

Conditions and measures for waste treatment (including the product waste)
Waste treatment: No specific measures identified.

Other operational conditions affecting environmental exposure
Flow rate of receiving surface water: 18000 m^3/day

2.2. Contributing Scenario CS2 - Worker: Curing (PROC4)

Process categories: Chemical production where opportunity for exposure arises (PROC4)

Product features (article)

Physical form of the product: Liquid
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure

Duration: Covers a daily exposure up to 8 hours.

Measures and technical-organizational conditions

Technical organizational measures:
Provide a good standard of general ventilation (up to 3 air changes per hour).
Ensure personnel are trained to minimize exposure.
Dermal - minimum efficiency 90%
Inhalation - minimum efficiency 90%

Conditions and measures for personal protection, hygiene and health verification

Personal protective equipment:
Wear an appropriate apron to avoid skin exposure.
Wear suitable gloves, tested according to EN347.
Dermal - minimum efficiency 95%

Other operational conditions affecting worker exposure

Indoor use
Temperature: A process temperature of up to 40°C is assumed
Ventilation Rate: Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%
Body parts exposed: Possible skin contact is believed to be limited to the hands.

2.3. Contributing Scenario CS3 - Spraying: Dermal Exposure Assessment (PROC7)

Process categories: Industrial spray application (PROC7)

Product features (article)

Physical form of the product: Liquid
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure

Duration: Covers a daily exposure up to 8 hours.

Measures and technical-organizational conditions

Technical organizational measures:
Provide a good standard of general ventilation (up to 3 air changes per hour).
Ensure personnel are trained to minimize exposure.
Dermal - minimum efficiency 95%
Inhalation - minimum efficiency 90%

Conditions and measures for personal protection, hygiene and health verification

Personal protective equipment:
Wear an appropriate apron to avoid skin exposure.
Wear suitable gloves, tested according to EN347.
Dermal - minimum efficiency 95%

Other operational conditions affecting worker exposure

Indoor use
Temperature: A process temperature of up to 40°C is assumed
Ventilation Rate: Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%
Body parts exposed: Possible skin contact is believed to be limited to the hands and forearms.

2.4. Contributing Scenario CS4 - Spraying: Inhalation Exposure Assessment (PROC7)

Process categories: Industrial spray application (PROC7)

Product features (article)

Physical form of the product: Liquid
Vapor pressure: 7.9E-08 Pa
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure

Duration: For each application, avoid using for a duration exceeding 480 min.

Conditions and measures for personal protection, hygiene and health verification

Personal protective equipment: Wear suitable respiratory protection. Inhalation - minimum efficiency 95%

Other operational conditions affecting worker exposure

Indoor use
Room size: Covers use in a room size of 300m².
Temperature: Includes use at room temperature.
Ventilation Rate: Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%
Body parts exposed: Possible skin contact is believed to be limited to the hands and forearms.
Additional conditions for human health: Moderate amount used (0.3-3 l/minute)

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

Further information on good practices: Use a splash guard. For further data, see section 8 of the safety data sheet. Wear suitable respiratory protection.

2.5. Contributing Scenario CS5 - Worker: Material Transfers (PROC8b)

Process categories: Transfer of a substance or a preparation (filling/emptying) at dedicated facilities (PROC8b)

Product features (article)

Physical form of the product: Liquid
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure

Duration: Covers a daily exposure up to 8 hours.

Measures and technical-organizational conditions

Technical organizational measures:
Provide a good standard of general ventilation (up to 3 air changes per hour).
Ensure personnel are trained to minimize exposure.
Dermal - minimum efficiency 95%
Inhalation - minimum efficiency 95%

Conditions and measures for personal protection, hygiene and health verification

Personal protective equipment:
Wear an appropriate apron to avoid skin exposure.
Wear suitable gloves, tested according to EN347.
Dermal - minimum efficiency 95 %

Other operational conditions affecting worker exposure

Indoor use
Temperature: A process temperature of up to 40°C is assumed
Ventilation Rate: Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%
Body parts exposed: Possible skin contact is believed to be limited to the hands and forearms.

2.6. Contributing Scenario CS6 - Worker: 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
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure

Duration: Covers a daily exposure up to 8 hours.

Measures and technical-organizational conditions

Technical organizational measures:
Provide a good standard of general ventilation (up to 3 air changes per hour).
Ensure personnel are trained to minimize exposure.
Dermal - minimum efficiency 90%
Inhalation - minimum efficiency 90%

Conditions and measures for personal protection, hygiene and health verification

Personal protective equipment:
Wear an appropriate apron to avoid skin exposure.
Wear suitable gloves, tested according to EN347.
Dermal - minimum efficiency 95 %

Other operational conditions affecting worker exposure

Indoor use
Temperature: A process temperature of up to 40°C is assumed
Ventilation Rate: Provide a basic level of general ventilation (1 to 3 air changes per hour). 90%
Body parts exposed: Possible skin contact is believed to be limited to the hands.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1. CS1 Environment Contributing Scenario: Wet Polymerization (ERC5)

Release route	Release rate	Release evaluation method
Water	0.666 kg/day	spERC
Air	8.325 kg/day	spERC
Ground	0.01 %	spERC

Protection target	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
fresh water	0.001 mg/l	N.d.	0.279
fresh water sediment	121.3 mg/kg dry weight	N.d.	0.279
sea water	0.0001251 mg/l	N.d.	0.288
Marine sediment	12.51 mg/kg dry weight	N.d.	0.288
agricultural land	7.992 mg/kg dry weight	N.d.	0.292
environmentally exposed people - Inhalation	0.002 mg/m³	N.d.	< 0.01
environmentally exposed people - Oral	208.8 mg/kg bw/day	N.d.	372.8
All ways	N.d.	N.d.	372.8

3.2. Contributing Scenario CS2 - Worker: Curing (PROC4)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, systemic, long-term	0.17 mg/m³	ECETOC TRA worker v2.0	0.044
skin contact, systemic, long-term	0.009 mg/kg bw/day	ECETOC TRA worker v2.0	0.008
combined routes, systemic, long-term	N.d.	ECETOC TRA worker v2.0	0.051

3.3. Contributing Scenario CS3 - Spraying: Dermal Exposure Assessment (PROC7)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, systemic, long-term	0.21 mg/m³	ECETOC TRA worker v2.0	0.054
skin contact, systemic, long-term	0.027 mg/kg bw/day	ECETOC TRA worker v2.0	0.024
combined routes, systemic, long-term	N.d.	ECETOC TRA worker v2.0	0.078

3.4. Contributing Scenario CS4 - Spraying: Inhalation Exposure Assessment (PROC7)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, systemic, long-term	0.21 mg/m³	ECETOC TRA worker v2.0	0.054
skin contact, systemic, long-term	0.027 mg/kg bw/day	ECETOC TRA worker v2.0	0.024
combined routes, systemic, long-term	N.d.	ECETOC TRA worker v2.0	0.078

3.5. Contributing Scenario CS5 - Worker: Material Transfers (PROC8b)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, systemic, long-term	0.085 mg/m³	ECETOC TRA worker v2.0	0.022
skin contact, systemic, long-term	0.009 mg/kg bw/day	ECETOC TRA worker v2.0	0.008
combined routes, systemic, long-term	N.d.	ECETOC TRA worker v2.0	0.03

3.6. Contributing Scenario CS6 - Worker: Material Transfers (PROC9)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, systemic, long-term	0.17 mg/m³	ECETOC TRA worker v2.0	0.044
skin contact, systemic, long-term	0.009 mg/kg bw/day	ECETOC TRA worker v2.0	0.008
combined routes, systemic, long-term	N.d.	ECETOC TRA worker v2.0	0.051

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.

GENERALIZED USE BY PROFESSIONAL OPERATORS

1. TITLE SECTION

Exposure scenario name: Industrial production of varnishes and enamels - Industrial application of coatings and paints - Use in rigid foam, coatings, adhesives and sealants - Use in composite and foundry materials
Date - Version: 03/12/2020 - 1.0
Life cycle stage: Use at industrial sites
Main user group: Generalized use by professional traders
Sector(s) of use: Professional uses (SU22)

Contributing scenario - Environment

CS1 Wet polymerization: ERC8C

Contributing scenario - Worker

CS2 Blend Operations: PROC5
CS3 Material Transfers: PROC8b
CS4 Material Transfers: PROC9

2. CONDITIONS OF USE AFFECTING EXPOSURE

2.1. CS1 Environment Contributing Scenario: Wet Polymerization (ERC8c)

Environmental release categories: Widespread use resulting in an inclusion into or onto the surface of an article (indoor use) (ERC8c)

Product features (article)

Physical form of the product: Liquid

Amount used, frequency and duration of use

Amounts used: Daily quantity at site 0.0005494 tons/day

Conditions and measures for the municipal sewage treatment plant

Type of sewage treatment plant (STP): Municipal STP - Water: minimum efficiency of 91.34%
STP effluent (m^3/day): 2000

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

Waste treatment: No specific measures identified.

Other operational conditions affecting environmental exposure

Flow rate of receiving surface water: 18000 m^3/day

2.2. Contributing Scenario CS2 - Worker: Blending Operations (PROC5)

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

Product features (article)

Physical form of the product: Liquid
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure

Duration: Covers a daily exposure up to 4 hours.

Measures and technical-organizational conditions

Technical organizational measures:
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Ensure personnel are trained to minimize exposure.

Conditions and measures for personal protection, hygiene and health verification

Personal protective equipment:
Wear an appropriate apron to avoid skin exposure.
Wear suitable gloves, tested according to EN347.
Dermal - minimum efficiency 95 %

Other operational conditions affecting worker exposure
Indoor use
Temperature: A process temperature of up to 40°C is assumed
Body parts exposed: Possible skin contact is believed to be limited to the hands.

2.3. CS3 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
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure
Duration: Covers a daily exposure up to 4 hours.

Measures and technical-organizational conditions
Technical organizational measures:
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Ensure personnel are trained to minimize exposure.

Conditions and measures for personal protection, hygiene and health verification
Personal protective equipment:
Wear an appropriate apron to avoid skin exposure.
Wear suitable gloves, tested according to EN347.
Dermal - minimum efficiency 95 %

Other operational conditions affecting worker exposure
Indoor use
Temperature: A process temperature of up to 40°C is assumed
Body parts exposed: Possible skin contact is believed to be limited to the hands and forearms.

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
Concentration of the substance in the product: Includes substance shares in the product up to 25%

Amount used, frequency and duration of use/exposure
Duration: Covers a daily exposure up to 4 hours.

Measures and technical-organizational conditions
Technical organizational measures:
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Ensure personnel are trained to minimize exposure.

Conditions and measures for personal protection, hygiene and health verification
Personal protective equipment:
Wear an appropriate apron to avoid skin exposure.
Wear suitable gloves, tested according to EN347.
Dermal - minimum efficiency 95 %

Other operational conditions affecting worker exposure
Indoor use
Temperature: A process temperature of up to 40°C is assumed
Body parts exposed: Possible skin contact is believed to be limited to the hands and forearms.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1. CS1 Environment Contributing Scenario: Wet Polymerization (ERC8c)

Release route	Release rate	Release evaluation method
Water	0.008 kg/day	spERC
Air	0 %	spERC
Ground	0 %	spERC

Protection target	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
fresh water	7.3E-05 mg/l	N.d.	0.017
fresh water sediment	7.301 mg/kg dry weight	N.d.	0.017
sea water	1.113E-05 mg/l	N.d.	0.026
Marine sediment	1.113 mg/kg dry weight	N.d.	0.026
agricultural land	7.318 mg/kg dry weight	N.d.	0.084
environmentally exposed people - Inhalation	9.158E-07 mg/m³	N.d.	< 0.01
environmentally exposed people - Oral	190.8 mg/kg bw/day	N.d.	340.7
All ways	N.d.	N.d.	340.7

3.2. Contributing Scenario CS2 - Worker: Blending Operations (PROC5)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, systemic, long-term	0.714 mg/m³	ECETOC TRA worker v2.0	0.183
skin contact, systemic, long-term	0.171 mg/kg bw/day	ECETOC TRA worker v2.0	0.156
combined routes, systemic, long-term	N.d.	ECETOC TRA worker v2.0	0.339

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, systemic, long-term	0.714 mg/m³	ECETOC TRA worker v2.0	0.183
skin contact, systemic, long-term	0.171 mg/kg bw/day	ECETOC TRA worker v2.0	0.156
combined routes, systemic, long-term	N.d.	ECETOC TRA worker v2.0	0.339

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, systemic, long-term	0.714 mg/m³	ECETOC TRA worker v2.0	0.183
skin contact, systemic, long-term	0.171 mg/kg bw/day	ECETOC TRA worker v2.0	0.156
combined routes, systemic, long-term	N.d.	ECETOC TRA worker v2.0	0.339

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.

Propylidynetrimethanol, propoxylated, reaction products with ammonia

Substance identification
CAS number: 39423-51-3

PROFESSIONAL USES

1. TITLE SECTION

Exposure scenario name: Professional uses.
Date - Version: 05/17/2023 - 3.0

Contributing scenario - Environment
SC1 Wide dispersive external use resulting in being included in item (Indoors) ERC8c
SC2 Wide dispersive external use resulting in being included in item (In outdoor environments) ERC8f

Contributing scenario - Worker
SC3 Mixing or blending in batch processes PROC5
SC4 Transfer of a substance or mixture (charging/discharging) at non-dedicated facilities PROC8a
SC5 Transfer of a substance or a mixture (charging/discharging) at dedicated facilities PROC8b
SC6 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC9
SC7 Application with rollers or brushes PROC10
SC8 Non-industrial spraying PROC11
SC9 Treatment of articles by dipping and pouring PROC13

2. CONDITIONS OF USE AFFECTING EXPOSURE

2.1. Environmental exposure control: Wide dispersive external use resulting in being included in item (Indoors) - ERC8c

Amount used (or contained in articles), frequency and duration of use/exposure
Yearly amount used in EU: 999 tons/year
Daily amount per site: 0,547397 kg/day
Fraction of EU tonnage used in region: 0.1
Maximum allowable site tonnage (Msafe): Daily amount per site 2004,1 kg/day
Critical compartment for Msafe: The risk of environmental exposure is driven by microbes in the wastewater treatment plant.
Maximum allowable site tonnage (Msafe): Daily amount per site 7.2 kg/day
Critical compartment for Msafe: Risk from environmental exposure is driven by fresh water, freshwater sediment, marine water and marine water sediment.
Maximum allowable site tonnage (Msafe): Daily amount per site 10.9 kg/day
Critical compartment for Msafe: Risk from environmental exposure is driven by soil.
Maximum allowable site tonnage (Msafe): Daily amount per site 23924.1 kg/day
Critical compartment for Msafe: Risk from environmental exposure is determined by humans through indirect exposure (mainly from ingestion).
Days of emission: 365

Conditions and measures for the waste water treatment plant
Type of STP: Municipal wastewater treatment plant
STP effluent: 2000m³/day

Other conditions affecting environmental exposure
Water flow on the receiving surface: 18 000 m³/day
Local fresh water dilution factor: 10
Local seawater dilution factor: 100

2.2. Environmental exposure control: Wide dispersive external use resulting in being included in item (In outdoor environments) - ERC8f

Amount used (or contained in articles), frequency and duration of use/exposure
Yearly amount used in EU: 999 tons/year
Daily amount per site: 0,547397 kg/day
Fraction of EU tonnage used in region: 0.1
Maximum allowable site tonnage (Msafe): Daily amount per site 7.2 kg/day
Critical compartment for Msafe: Risk from environmental exposure is driven by fresh water, freshwater sediment, marine water and marine water sediment.
Maximum allowable site tonnage (Msafe): Daily amount per site 15.4 kg/day
Critical compartment for Msafe: Risk from environmental exposure is driven by soil.
Maximum allowable site tonnage (Msafe): Daily amount per site 23924.1 kg/day
Critical compartment for Msafe: Risk from environmental exposure is determined by humans through indirect exposure (mainly from ingestion).
Days of emission: 365

Conditions and measures for the waste water treatment plant
Type of STP: none

Other conditions affecting environmental exposure
Water flow on the receiving surface: 18 000 m³/day
Local fresh water dilution factor: 10
Local seawater dilution factor: 100

2.3. Worker Exposure Control: Mixing or blending in batch processes - PROC5

Product features (article)
Physical form of the product: Liquid blend
Vapour pressure: 0.0023 Pa
Temperature: 20°C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Frequency and duration of use 480 min
Frequency of use: 5 days/week

Organizational and technical measures and conditions
Local exhaust ventilation
Inhalation - minimum yield of 80%.
Provide a good standard of general ventilation (3 to 5 air changes per hour).
Inhalation - minimum yield of 30%.

Conditions and measures for personal protection, hygiene and health assessment
Wear suitable respirator.
Inhalation - minimum yield of 95 %
Wear chemically resistant gloves in combination with employee training. (EN374)
Dermal - minimum efficiency of 80%.

Other conditions affecting worker exposure
Body parts exposed: Palms 480 cm²
Indoor and outdoor use: Inside.
Industrial or professional environments: Professional use.
Temperature: 20 °C

2.4. Worker Exposure Control: Transfer of a substance or mixture (charging/discharging) at non-dedicated facilities - PROC8a

Product features (article)
Physical form of the product: Liquid blend
Vapour pressure: 0.0023 Pa
Temperature: 20°C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Frequency and duration of use 240 min
Frequency of use: 5 days/week

Organizational and technical measures and conditions
Local exhaust ventilation
Inhalation - minimum yield of 80%.
Provide a good standard of general ventilation (3 to 5 air changes per hour).
Inhalation - minimum yield of 30%.

Conditions and measures for personal protection, hygiene and health assessment
Wear suitable respirator.
Inhalation - minimum yield of 90 %
Wear chemically resistant gloves in combination with employee training. (EN374)
Dermal - minimum efficiency of 80%.

Other conditions affecting worker exposure
Body parts exposed: Both hands 960 cm²
Indoor and outdoor use: Inside.
Industrial or professional environments: Professional use.
Temperature: 20 °C

2.5. Worker Exposure Control: Transfer of a substance or a mixture (charging/discharging) at dedicated facilities - PROC8b

Product features (article)
Physical form of the product: Liquid blend
Vapour pressure: 0.0023 Pa
Temperature: 20°C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Frequency and duration of use 240 min
Frequency of use: 5 days/week

Organizational and technical measures and conditions
Local exhaust ventilation
Inhalation - minimum yield of 90 %
Provide a good standard of general ventilation (3 to 5 air changes per hour).
Inhalation - minimum yield of 30%.

Conditions and measures for personal protection, hygiene and health assessment
Wear chemically resistant gloves (EN374)
Dermal - minimum efficiency of 80%.

Other conditions affecting worker exposure
Body parts exposed: Both hands 960 cm²
Indoor and outdoor use: Inside.
Industrial or professional environments: Professional use.
Temperature: 20 °C

2.6. Worker Exposure Control: Transfer of substance or mixture into small containers (dedicated filling line, including weighing) - PROC9

Product features (article)
Physical form of the product: Liquid blend
Vapour pressure: 0.0023 Pa
Temperature: 20 °C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Frequency and duration of use 240 min
Frequency of use: 5 days/week

Organizational and technical measures and conditions
Local exhaust ventilation
Inhalation - minimum yield of 90 %
Provide a good standard of general ventilation (3 to 5 air changes per hour).
Inhalation - minimum yield of 30%.

Conditions and measures for personal protection, hygiene and health assessment
Wear suitable respirator.
Inhalation - minimum yield of 90 %

Other conditions affecting worker exposure
Body parts exposed: Palms 480 cm²
Indoor and outdoor use: Inside.
Industrial or professional environments: Professional use.
Temperature: 20 °C

2.7. Worker Exposure Control: Application with rollers or brushes - PROC10

Product features (article)
Physical form of the product: Liquid blend
Vapour pressure: 0.0023 Pa
Temperature: 20 °C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Frequency and duration of use 480 min
Frequency of use: 5 days/week

Organizational and technical measures and conditions
Local exhaust ventilation
Inhalation - minimum yield of 80%.
Provide a good standard of general ventilation (3 to 5 air changes per hour).
Inhalation - minimum yield of 30%.

Conditions and measures for personal protection, hygiene and health assessment
Wear suitable respirator.
Inhalation - minimum yield of 95 %
Wear chemically resistant gloves in combination with employee training. (EN374)
Dermal - minimum efficiency of 80%.

Other conditions affecting worker exposure
Body parts exposed: Both hands 960 cm²
Indoor and outdoor use: Inside.
Industrial or professional environments: Professional use.
Temperature: 20 °C

2.9. Worker Exposure Control: Treatment of articles by dipping and pouring - PROC13

Product features (article)
Covers percentage substance in the product up to 25 %.
Physical form of the product: Liquid blend
Vapour pressure: 0.0023 Pa
Temperature: 20 °C

Amount used (or contained in articles), frequency and duration of use/exposure
Duration: Frequency and duration of use 480 min
Frequency of use: 5 days/week

Organizational and technical measures and conditions
Local exhaust ventilation
Inhalation - minimum yield of 80%.
Provide a good standard of general ventilation (3 to 5 air changes per hour).
Inhalation - minimum yield of 30%.

Conditions and measures for personal protection, hygiene and health assessment
Wear suitable respirator.
Inhalation - minimum yield of 95 %
Wear chemically resistant gloves in combination with employee training. (EN374)
Dermal - minimum efficiency of 80%.

Other conditions affecting worker exposure
Body parts exposed: Palms 480 cm²
Indoor and outdoor use: Inside.
Industrial or professional environments: Professional use.
Temperature: 20 °C

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1. Environmental release and exposure: Wide dispersive external use resulting in being included in item (Indoors) - ERC8c

Release route	Release rate%	Release evaluation method
Water	1	Environmental Release Category (ERC)
Air	15	Environmental Release Category (ERC)
Soil	0	Environmental Release Category (ERC)

Protection target	Estimated exposure	RCR
Sewage treatment plant	0.0027313mg/l	< 0.001
Fresh water	0.0003326mg/l	0.076
Fresh water sediments	0.0016965mg/kg dry weight	0.076
Sea water	0.0000335mg/l	0.076
marine sediments	0.0001707mg/kg dry weight	0.076
Soil	0.0000958mg/kg dry weight	0.05
Secondary poisoning	0.0002765mg/kg body weight/day	< 0.001

3.2. Environmental release and exposure: Wide dispersive external use resulting in being included in item (In outdoor environments) - ERC8f

Release route	Release rate%	Release evaluation method
Water	1	Environmental Release Category (ERC)
Air	15	Environmental Release Category (ERC)
Soil	0.5	Environmental Release Category (ERC)

Protection target	Estimated exposure	RCR
Fresh water	0.0003332mg/l	0.076
Fresh water sediments	0.0016993mg/kg dry weight	0.076
Sea water	0.0000335mg/l	0.076
marine sediments	0.000171mg/kg dry weight	0.076
Soil	0.0000677mg/kg dry weight	0.036
Secondary poisoning	0.0002769mg/kg body weight/day	< 0.001

3.3. Worker exposure: Mixing or blending in batch processes - PROC5

Exposure routes: Dermal
Health effect: systemic
Exposure indicator: Long-term
Estimated exposure: 0.686 mg/kg body weight/day (EASY TRA v3.6)
RCR: 0.171

Exposure routes: Inhalation
Health effect: systemic
Exposure indicator: Long-term
Estimated exposure: 0.003 mg/m³ (EASY TRA v3.6)
RCR: < 0.001

3.4. Worker exposure: Transfer of a substance or mixture (charging/discharging) at non-dedicated facilities - PROC8a

Exposure routes: Dermal
Health effect: systemic
Exposure indicator: Long-term
Estimated exposure: 0.686 mg/kg body weight/day (EASY TRA v3.6)
RCR: 0.171

Exposure routes: Inhalation
Health effect: systemic
Exposure indicator: Long-term
Estimated exposure: 0.004 mg/m³ (EASY TRA v3.6)
RCR: < 0.001

3.5. Worker exposure: Transfer of a substance or a mixture (charging/discharging) at dedicated facilities - PROC8b

Exposure routes: Dermal
Health effect: systemic
Exposure indicator: Long-term
Estimated exposure: 0.686 mg/kg body weight/day (EASY TRA v3.6)
RCR: 0.171

Exposure routes: Inhalation
Health effect: systemic
Exposure indicator: Long-term
Estimated exposure: 0.019 mg/m³ (EASY TRA v3.6)
RCR: 0.004

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

Exposure routes: Dermal
Health effect: systemic
Exposure indicator: Long-term
Estimated exposure: 1.714mg/kg body weight/day (EASY TRA v3.6)
RCR: 0.429

Exposure routes: Inhalation
Health effect: systemic
Exposure indicator: Long-term
Estimated exposure: 0.004 mg/m³ (EASY TRA v3.6)
RCR: < 0.001

3.7. Worker exposure: Application with rollers or brushes - PROC10

Exposure routes: Dermal
Health effect: systemic
Exposure indicator: Long-term
Estimated exposure: 1.371 mg/kg body weight/day (EASY TRA v3.6)
RCR: 0.343

Exposure routes: Inhalation
Health effect: systemic
Exposure indicator: Long-term
Estimated exposure: 0.003 mg/m³ (EASY TRA v3.6)
RCR: < 0.001

3.8. Worker exposure: Non-industrial spraying - PROC11

Exposure routes: Dermal
Health effect: systemic
Exposure indicator: Long-term
Estimated exposure: 2.679 mg/kg body weight/day (EASY TRA v3.6)
RCR: 0.67

Exposure routes: Inhalation
Health effect: systemic
Exposure indicator: Long-term
Estimated exposure: 0.642 mg/m³ (EASY TRA v3.6)
RCR: 0.13

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.

N,N-dimethyl-1,3-diaminopropane

Substance identification
Chemical Name: N,N-dimethyl-1,3-diaminopropane
CAS number: 109-55-7

GENERALIZED USE BY PROFESSIONAL OPERATORS

1. TITLE SECTION

Exposure scenario name: Industrial application of coatings and paints
Date - Version: 17/03/2020 - 1.0
Life cycle stage: Generalized use by professional operators
Main user group: Professional uses
Sector(s) of use: Professional uses (SU22)

Contributing scenario - Environment
CS1 Wet polymerization: ERC8c

Contributing scenario - Worker
CS2 Roller and brush application: PROC10

2. CONDITIONS OF USE AFFECTING EXPOSURE

2.1. Contributing Scenario CS1 - Environment: Wet polymerization (ERC8c)

Environmental release categories: Generalized use with subsequent inclusion in or on the surface of an article (indoor use) (ERC8c)

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

Amount used, frequency and duration of use
Release Type: Continuous release
Issue days: 365 days/year

Measures and technical-organizational conditions
Used sewage treatment plant.
Exhaust gas treatment with thermal oxidation.
Do not use sewage sludge with fertilizer. The sludge is disposed of or recovered.
Do not spread industrial sludge on natural soils. Aerobic biological treatment.

Conditions and measures relating to municipal sewage treatment plants
Type of sewage treatment plant (STP): Municipal STP
STP effluent (m³/day): 2000

Other operational conditions affecting environmental exposure
Local seawater dilution factor: 100
Local fresh water dilution factor: 10
Flow rate of receiving surface water: 18000 m³/day

2.2. CS2 Contributing Scenario - Worker: Roller and brush application (PROC10)

Process categories: Roller and brush application (PROC10)

Product features (article)
Physical form of the product: Liquid
Vapor pressure: 590 Pa
Concentration of the substance in the product: Includes substance shares in the product up to 5%.

Amount used, frequency and duration of use/exposure
Duration: 240 min
Frequency: 5 days/week

Measures and technical-organizational conditions

Provide supplementary ventilation to points where emissions occur. Inhalation - minimum efficiency of 80%.
Ensure that skin contact is avoided.
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.
Avoid direct contact with the product, even with contaminated hands.
Skin contact with the substance is to be excluded.

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

Personal protective equipment:
Wear adequate eye protection.
Wear suitable gloves, tested according to EN347.
Wear suitable respiratory protection. Inhalation - minimum efficiency of: 95 %

Other operational conditions affecting worker exposure

Indoor use
Temperature: Assumes a process temperature up to 20°C.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

3.1. Contributing Scenario CS1 - Environment: Wet polymerization (ERC8c)

Protection target	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
Marine sediment	19.1 kg/day	N.d.	0.001434

3.2. CS2 Contributing Scenario - Worker: Roller and brush application (PROC10)

Route of Exposure, Impact on Health, Exposure Indicator	Degree of exposure	Calculation method	Risk characterization ratio (RCR)
by inhalation, systemic, short-term	0.5109 mg/m³	ECETOC TRA Worker v3	0.42575

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.