SECȚIUNEA 1: Identificarea substanței/amestecului și a societății/întreprinderii

1.1. Identificator de produs

Identificarea preparatului:

Nume comercial: FEEL UNIK

Cod comercial: COL803

1.2. Utilizări relevante identificate ale substanței sau ale amestecului și utilizări contraindicate

Utilizarea recomandată: Vopsea anti-rugină pentru metale

1.3. Detalii privind furnizorul fișei cu date de securitate

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

Responsabil: laboratorio.spresiano@fassabortolo.it

1.4. Număr de telefon care poate fi apelat în caz de urgență

+40213183606

SECȚIUNEA 2: Identificarea pericolelor



2.1. Clasificarea substanței sau a amestecului

Regulamentul (CE) nr. 1272/2008 (CLP)

Aquatic Chronic 2 Toxic pentru mediul acvatic cu efecte pe termen lung.

Efecte fizico-chimice dăunătoare sănătăţii omului şi mediului înconjurător:

Nici un alt risc

2.2. Elemente de etichetare

Regulamentul (CE) nr. 1272/2008 (CLP)

Pictograme de pericol și cuvânt de avertizare



Fraze de pericol

H411 Toxic pentru mediul acvatic cu efecte pe termen lung.

Fraze de precauţie

P101 Dacă este necesară consultarea medicului, țineți la îndemână recipientul sau eticheta produsului.

P102 A nu se lăsa la îndemâna copiilor.

P271 A se utiliza numai în aer liber sau în spaţii bine ventilate.

P273 Evitaţi dispersarea în mediu.

P391 Colectaţi scurgerile de produs.

P501 Aruncați conținutul/recipientul în conformitate cu reglementarea națională.

Prevederi speciale:

EUH208 Conţine 1,2-benzizotiazol-3(2H)-onă. Poate provoca o reacţie alergică.

EUH208 Conţine masă de reacție compusă din 5-cloro-2-metil-2H-izotiazol-3-onă și 2-metil-2H-izotiazol-3-onă (3:1). Poate provoca o reacţie alergică.

Dispoziţii speciale conform Anexei XVII (REACH) cu modificările şi completările ulterioare:

Nici una

2.3. Alte pericole

Nu conține PBT, vPvB sau perturbatori endocrini prezenți în concentrații >= 0,1%.

Conține biocid. Pentru a menține în siguranță stocul: masă de reacție compusă din 5-cloro-2-metil-2Hizotiazol-3-onă și 2-metil-2H-izotiazol-3-onă (3:1)

Conține biocid. Pentru a menține în siguranță stocul: 1,2-benzizotiazol-3(2H)-onă

Nici un alt risc

SECȚIUNEA 3: Compoziție/informații privind componenții

3.1. Substanțe

N.A.

3.2. Amestecuri

Identificarea preparatului: FEEL UNIK

Componente periculoase în sensul Regulamentului CLP şi clasificarea corespunzătoare:

Cantitate	Nume	Nr. de Ident.	Clasificare	Număr de înregistrare:
≥7 - <10 %	2-butoxietanol	CAS:111-76-2 EC:203-905-0 Index:603-014-00-0	Acute Tox. 3, H331 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Toxicitate Acută Estimată: ATE - Oral: 1200mg/kg gc ATE - Inhalare (Vapori): 3mg/l	01-2119475108-36-xxxx
≥5 - <7 %	bis(ortofosfat) de trizinc	CAS:7779-90-0 EC:231-944-3 Index:030-011-00-6	Aquatic Acute 1, H400; Aquatic Chronic 1, H410	01-2119485044-40-xxxx
≥0.3 - <0.5 %	amoniac 31%	CAS:1336-21-6 EC:215-647-6 Index:007-001-01-2	Skin Corr. 1B, H314; Eye Dam. 1, H318; STOT SE 3, H335; Aquatic Acute 1, H400; Aquatic Chronic 2, H411, M-Acute:1	01-2119488876-14-xxxx
≥0.1 - <0.3 %	oxid de zinc	CAS:1314-13-2 EC:215-222-5 Index:030-013-00-7	Aquatic Acute 1, H400; Aquatic Chronic 1, H410	01-2119463881-32-xxxx
≥0.025 - <0.05 %	Silice cristalină, cuarț (fracție respirabilă)	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372	Scutit
≥0.025 - <0.05 %	amoniac, anhidru	CAS:7664-41-7 EC:231-635-3 Index:007-001-00-5	Flam. Gas 2, H221 Press. Gas, H280 Acute Tox. 3, H331 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Toxicitate Acută Estimată: ATE - Inhalare (Vapori): 3mg/l	
≥0.0036 - <0.036 %	1,2-benzizotiazol-3(2H)-onă	CAS:2634-33-5 EC:220-120-9 Index:613-088-00-6	Acute Tox. 2, H330 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410, M-Chronic:1, M-Acute:1 Limite de concentrație specifice: C ≥ 0.036%: Skin Sens. 1A H317 Toxicitate Acută Estimată: ATE - Oral: 450mg/kg gc ATE - Inhalare (Praf/ceaţă): 0.21mg/l	
≥0.005 - <0.025 %	acid acrilic	CAS:79-10-7 EC:201-177-9 Index:607-061-00-8	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 2, H411, M:1 Limite de concentrație specifice: 1% ≤ C < 100%: STOT SE 3 H335 Toxicitate Acută Estimată: ATE - Oral: 617mg/kg gc ATE - Dermică: 1100mg/kg gc	01-2119452449-31-xxxx

			ATE - Inhalare (Vapori): 11mg/l	
≥0.00015 - <0.0015 %	masă de reacție compusă din 5-cloro-2-metil-2H-izotiazol-3-onă și 2-metil-2H-izotiazol-3-onă (3:1)	CAS:55965-84-9 Index:613-167-00-5	Acute Tox. 2, H310 Acute Tox. 2, H330 Acute Tox. 3, H301 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410, M-Chronic:100, M-Acute:100, EUH071 Limite de concentrație specifice: C ≥ 0.6%: Skin Corr. 1C H314 0.06% ≤ C < 0.6%: Skin Irrit. 2 H315 C ≥ 0.6%: Eye Dam. 1 H318 0.06% ≤ C < 0.6%: Eye Irrit. 2 H319 C ≥ 0.0015%: Skin Sens. 1A H317 Toxicitate Acută Estimată: ATE - Oral: 64mg/kg gc ATE - Dermică: 92.4mg/kg gc ATE - Inhalare (Praf/ceaţă): 0.17mg/l	
< 0.00015 %	etanolamină	CAS:141-43-5 EC:205-483-3 Index:603-030-00-8	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412 Limite de concentrație specifice: C ≥ 5%: STOT SE 3 H335 Toxicitate Acută Estimată: ATE - Oral: 500mg/kg gc ATE - Dermică: 1100mg/kg gc ATE - Inhalare (Vapori): 11mg/l	01-2119486455-28-xxxx

SECȚIUNEA 4: Măsuri de prim ajutor

4.1. Descrierea măsurilor de prim ajutor

În caz de contact cu pielea:

Spalati cu multa apa si sapun

În caz de contact cu ochii:

În cazul contactului cu ochii, spălați imediat cu multă apă și consultați medicul.

În caz de ingerare:

Nu provocaţi vomitarea, adresaţi-vă unui medic arătând Fişa de Siguranţă şi eticheta produsului.

În caz de inhalare:

Conduceţi accidentatul la aer liber şi ţineţi-l la cald şi în repaus.

4.2. Cele mai importante simptome și efecte, atât acute, cât și întârziate

Niciunul cunoscut

4.3. Indicații privind orice fel de asistență medicală imediată și tratamentele speciale necesare

Dacă vă simțiți rău, consultați medicul.

SECȚIUNEA 5: Măsuri de combatere a incendiilor

5.1. Mijloace de stingere a incendiilor

Mijloace de stingere corespunzătoare:

Produsul nu este inflamabil

Mijloace de stingere care nu trebuie să fie utilizate din motive de siguranţă:

Niciunul in mod deosebit.

5.2. Pericole speciale cauzate de substanță sau de amestec

Combustia produce fum greu.

În caz de incendiu și/sau explozie, nu respirați fumul.

5.3. Recomandări destinate pompierilor

Folosiţi dispozitive respiratorii corespunzătoare.

Strângeţi separat apa contaminată folosită pentru stingerea incendiului. Nu o descărcaţi în reţeaua de canalizare.

Dacă este posibil din punct de vedere al siguranţei, îndepărtaţi din zona de pericol imediat recipientele neafectate.

SECȚIUNEA 6: Măsuri împotriva pierderilor accidentale

6.1. Precauții personale, echipament de protecție și proceduri de urgență

Pentru personalul care nu este implicat în situații de urgență:

Îmbrăcaţi dispozitivele de protecţie individuală.

Duceţi persoanele în loc sigur.

Citiţi măsurile de protecţie prezentate la punctele 7 şi 8.

Pentru personalul care intervine în situații de urgență:

Îmbrăcaţi dispozitivele de protecţie individuală.

6.2. Precauții pentru mediul înconjurător

Împiedicaţi penetrarea în sol/subsol. Împiedicaţi vărsarea în apele de suprafaţă sau în reţeaua de canalizare.

În caz de scurgere de gaz sau penetrare în cursuri de apă, sol sau sistemul de canalizare, informaţi autorităţile răspunzătoare.

6.3. Metode și material pentru izolarea incendiilor și pentru curățenie

Material corespunzător pentru colectare: material absorbant inert (de exemplu, nisip, vermiculit)

Dupa ce produsul a fost recuperat, clatiti suprafata si materialele folosite cu apa

Reţineţi apa de spălat contaminată şi eliminaţi-o.

6.4. Trimiteri către alte secțiuni

Vezi şi paragrafele 8 şi 13

SECȚIUNEA 7: Manipulare și depozitare

7.1. Precauții pentru manipularea în condiții de securitate

Evitați contactul cu pielea și ochii, precum și inhalarea vaporilor și a ceții.

Nu folositi pe suprafate extinse in incinte locuite

Nu folosiţi recipiente goale înainte de a fi curăţate.

Înaintea operaţiilor de transfer, asiguraţi-vă că în recipiente nu sunt materiale rezidue incompatibile.

Sfaturi privind igiena generală la locul de muncă:

Hainele contaminate trebuie înlocuite înainte de accesul la zona de prânz.

Nu mincati sau beti in timpul lucrului

Se face trimitere şi la paragraful 8 pentru dispozitivele de protecţie recomandate.

7.2. Condiții de depozitare în condiții de securitate, inclusiv eventuale incompatibilități

Păstrați recipientele bine închise într-un spațiu răcoros și bine ventilat, la distanță de surse de căldură.

Ţineţi departe de alimente, băuturi şi hrană pentru animale.

Materiale incompatibile

Vezi pct. 10.5

Instructiuni privind spatiile de depozitare:

Spatii ventilate adecvat

A se feri de îngheț.

7.3. Utilizare (utilizări) finală (finale) specifică (specifice)

Recomandări

Vezi pct. 1.2

Soluţii specifice pentru sectorul industrial

Nici o utilizare particulară

SECȚIUNEA 8: Controale ale expunerii/protecția personală

8.1. Parametri de control

Limitele de expunere profesională

2-butoxietanol

CAS: 111-76-2	Tip OEL	ACGIH		Termen lung 20 ppm Note: A3, BEI - Eye and URT irr
	Tip OEL	UE		Termen lung 98 mg/m3 - 20 ppm; Termen scurt 246 mg/m3 - 50 ppm Note: Skin
	Tip OEL	MAK	Austria	Termen lung 98 mg/m3 - 20 ppm; Termen scurt 200 mg/m3 - 40 ppm Note: Skin
	Tip OEL	MAK	Germania	Termen lung 49 mg/m3 - 10 ppm; Termen scurt 98 mg/m3 - 20 ppm Note: Skin
	Tip OEL	VLEP	Belgia	Termen lung 98 mg/m3 - 20 ppm; Termen scurt 246 mg/m3 - 50 ppm
	Tip OEL	VLEP	Franţa	Termen lung 49 mg/m3 - 10 ppm; Termen scurt 246 mg/m3 - 50 ppm Note: Skin

	Tip OEL	VLEP	Italia	Termen lung 98 mg/m3 - 20 ppm; Termen scurt 246 mg/m3 - 50 ppm Note: Skin
	Tip OEL	VLEP	România	Termen lung 98 mg/m3 - 20 ppm; Termen scurt 246 mg/m3 - 50 ppm
	Tip OEL	TLV	Bulgaria	Termen lung 98 mg/m3 - 20 ppm; Termen scurt 246 mg/m3 - 50 ppm Note: Skin
	Tip OEL	TLV	Cehia	Termen lung 100 mg/m3 - 20.4 ppm; Termen scurt 200 mg/m3 - 40.8 ppm Note: Skin
	Tip OEL	VLA	Spania	Termen lung 98 mg/m3 - 20 ppm; Termen scurt 245 mg/m3 - 50 ppm Note: Skin
	Tip OEL	ÁK	Ungaria	Termen lung 98 mg/m3; Termen scurt 246 mg/m3 Note: Skin
	Tip OEL	MAC	Olanda	Termen lung 100 mg/m3 - 20 ppm; Termen scurt 246 mg/m3 - 50 ppm Note: Skin
	Tip OEL	VLE	Portugalia	Termen lung 98 mg/m3 - 20 ppm; Termen scurt 246 mg/m3 - 50 ppm Note: Skin
	Tip OEL	SUVA	Elveţia	Termen lung 49 mg/m3 - 10 ppm; Termen scurt 98 mg/m3 - 20 ppm
	Tip OEL	WEL	U.K.	Termen lung 123 mg/m3 - 25 ppm; Termen scurt 246 mg/m3 - 50 ppm
	Tip OEL	GVI	Croaţia	Termen lung 98 mg/m3 - 20 ppm; Termen scurt 246 mg/m3 - 50 ppm Note: Skin
	Tip OEL	AGW	Germania	Termen lung 49 mg/m3 - 10 ppm; Termen scurt 98 mg/m3 - 20 ppm Note: Skin
	Tip OEL	NDS	Polonia	Termen lung 98 mg/m3; Termen scurt 200 mg/m3 Note: Skin
	Tip OEL	MV	Slovenia	Termen lung 98 mg/m3 - 20 ppm; Termen scurt 246 mg/m3 - 50 ppm Note: Skin
	Tip OEL	IPRV	Lituania	Termen lung 50 mg/m3 - 100 ppm; Termen scurt 100 mg/m3 - 20 ppm Note: Skin

amoniac 31%

CAS: 1336-21-6	Tip OEL	ACGIH		Termen lung 25 ppm; Termen scurt 35 ppm Note: Anhydrous
	Tip OEL	UE		Termen lung 14 mg/m3 - 20 ppm; Termen scurt 36 mg/m3 - 50 ppm Note: Anhydrous

oxid de zinc

CAS: 1314-13-2	Tip OEL	ACGIH		Termen lung 2 mg/m3; Termen scurt 10 mg/m3 Note: (R) - Metal fume fever
	Tip OEL	MAK	Austria	Termen lung 5 mg/m3 Note: Respirable aerosol
	Tip OEL	VLEP	Belgia	Termen lung 5 mg/m3; Termen scurt 10 mg/m3 Note: Respirable fraction
	Tip OEL	VLEP	Franţa	Termen lung 10 mg/m3 Termen lung 5 mg/m3 Note: Respirable fraction
	Tip OEL	VLEP	România	Termen lung 5 mg/m3; Termen scurt 10 mg/m3 Note: Respirable fraction
	Tip OEL	TLV	Cehia	Termen lung 2 mg/m3; Termen scurt 5 mg/m3
	Tip OEL	VLA	Spania	Termen lung 2 mg/m3; Termen scurt 10 mg/m3 Note: Respirable fraction
	Tip OEL	ÁK	Ungaria	Termen lung 5 mg/m3
	Tip OEL	SUVA	Elveţia	Termen lung 3 mg/m3; Termen scurt 3 mg/m3 Note: Respirable aerosol
	Tip OEL	WEL	U.K.	Termen lung 5 mg/m3; Termen scurt 10 mg/m3
	Tip OEL	NDS	Polonia	Termen lung 5 mg/m3; Termen scurt 10 mg/m3 Note: Respirable fraction

	Tip OEL	MV	Slovenia	Termen lung 5 mg/m3; Termen scurt 20 mg/m3 Note: Respirable fraction

Silice cristalină, cuarț (fracție respirabilă)

CAS: 14808-60-7	Tip OEL	ACGIH		Termen lung 0.025 mg/m3 Note: (R), A2 - Pulm fibrosis, lung cancer
	Tip OEL	UE		Termen lung 0.1 mg/m3 Note: Respirable dust particles
	Tip OEL	MAK	Austria	Termen lung 0.05 mg/m3 Note: Respirable fraction
	Tip OEL	VLEP	Belgia	Termen lung 0.1 mg/m3 Note: Respirable dust; Additional indication "C" means that the agent falls within the scope of Title 2 concerning carcinogenic, mutagenic and reprotoxic agents of Book VI of the Codex on well-being at work.
	Tip OEL	VLEP	Franţa	Termen lung 0.1 mg/m3 Note: Respirable fraction
	Tip OEL	VLEP	Italia	Termen lung 0.1 mg/m3 Note: Respirable dust particles
	Tip OEL	VLA	Spania	Termen lung 0.05 mg/m3 Note: Respirable fraction
	Tip OEL	ÁK	Ungaria	Termen lung 0.1 mg/m3 Note: Respirable fraction
	Tip OEL	MAC	Olanda	Termen lung 0.075 mg/m3 Note: Respirable fraction
	Tip OEL	SUVA	Elveţia	Termen lung 0.15 mg/m3 Note: Respirable aerosol
	Tip OEL	GVI	Croaţia	Termen lung 0.1 mg/m3
	Tip OEL	AGW	Germania	Termen lung 0.05 mg/m3; Termen scurt 0.4 mg/m3 Note: Respirable fraction
	Tip OEL	NDS	Polonia	Termen lung 0.1 mg/m3 Note: Respirable fraction
	Tip OEL	MV	Slovenia	Termen lung 0.15 mg/m3
	Tip OEL	IPRV	Lituania	Termen lung 0.1 mg/m3
	Tip OEL	NGV/KGV	Suedia	Termen lung 0.1 mg/m3 Note: Respirable fraction

amoniac, anhidru

CAS: 7664-41-7	Tip OEL	ACGIH		Termen lung 25 ppm; Termen scurt 35 ppm Note: Eye dam, URT irr
	Tip OEL	UE		Termen lung 14 mg/m3 - 20 ppm; Termen scurt 36 mg/m3 - 50 ppm

acid acrilic

CAS: 79-10-7	Tip OEL	ACGIH		Termen lung 2 ppm Note: Skin, A4 - URT irr
	Tip OEL	UE		Termen lung 29 mg/m3 - 10 ppm; Termen scurt 59 mg/m3 - 20 ppm Note: STEL duration: 1 min
	Tip OEL	MAK	Austria	Termen lung 29 mg/m3 - 10 ppm; Termen scurt 59 mg/m3 - 20 ppm
	Tip OEL	MAK	Germania	Termen lung 30 mg/m3 - 10 ppm; Termen scurt 30 mg/m3 - 10 ppm
	Tip OEL	VLEP	Belgia	Termen lung 6 mg/m3 - 2 ppm; Termen scurt 59 mg/m3 - 20 ppm Note: Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air.
	Tip OEL	VLEP	Franţa	Termen lung 29 mg/m3 - 10 ppm; Termen scurt 59 mg/m3 - 20 ppm
	Tip OEL	VLEP	Italia	Termen lung 29 mg/m3 - 10 ppm; Termen scurt 59 mg/m3 - 20 ppm Note: Skin
	Tip OEL	VLEP	România	Termen lung 29 mg/m3 - 10 ppm; Termen scurt 59 mg/m3 - 20 ppm Note: Skin

	Tip OEL	TLV	Cehia	Termen lung 29 mg/m3 - 9.686 ppm; Termen scurt 59 mg/m3 - 19.706 ppm Note: duration: 1 min
	Tip OEL	VLA	Spania	Termen lung 29 mg/m3 - 10 ppm; Termen scurt 59 mg/m3 - 20 ppm Note: Skin
	Tip OEL	ÁK	Ungaria	Termen lung 29 mg/m3; Termen scurt 59 mg/m3
	Tip OEL	SUVA	Elveţia	Termen lung 29 mg/m3 - 10 ppm; Termen scurt 59 mg/m3 - 20 ppm
	Tip OEL	WEL	U.K.	Termen lung 29 mg/m3 - 10 ppm; Termen scurt 59 mg/m3 - 20 ppm
	Tip OEL	GVI	Croaţia	Termen lung 29 mg/m3 - 10 ppm; Termen scurt 59 mg/m3 - 20 ppm
	Tip OEL	AGW	Germania	Termen lung 30 mg/m3 - 10 ppm; Termen scurt 30 mg/m3 - 10 ppm
	Tip OEL	NDS	Polonia	Termen lung 10 mg/m3 - 3.4 ppm; Termen scurt 29.5 mg/m3 Note: Skin

masă de reacție compusă din 5-cloro-2-metil-2H-izotiazol-3-onă și 2-metil-2H-izotiazol-3-onă (3:1)

CAS: 55965-84-9	Tip OEL	MAK	Austria	Termen lung 0.05 mg/m3
	Tip OEL	MAK	Germania	Termen lung 0.2 mg/m3; Termen scurt 0.4 mg/m3 Note: Inhalable fraction
	Tip OEL	SUVA	Elveţia	Termen lung 0.2 mg/m3; Termen scurt 0.4 mg/m3 Note: Inhalable fraction

etanolamină

CAS: 141-43-5	Tip OEL	ACGIH		Termen lung 3 ppm; Termen scurt 6 ppm Note: Eye and skin irr
	Tip OEL	UE		Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.6 mg/m3 - 3 ppm Note: Skin
	Tip OEL	MAK	Austria	Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.6 mg/m3 - 3 ppm
	Tip OEL	MAK	Germania	Termen lung 0.5 mg/m3 - 0.2 ppm; Termen scurt 0.5 mg/m3 - 0.2 ppm Note: Inhalable fraction and vapour
	Tip OEL	VLEP	Belgia	Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.6 mg/m3 - 3 ppm Note: Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air.
	Tip OEL	VLEP	Franţa	Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.6 mg/m3 - 3 ppm Note: Skin
	Tip OEL	VLEP	Italia	Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.6 mg/m3 - 3 ppm Note: Skin
	Tip OEL	VLEP	România	Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.6 mg/m3 - 3 ppm
	Tip OEL	TLV	Bulgaria	Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.6 mg/m3 - 1 ppm Note: Skin
	Tip OEL	TLV	Cehia	Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.6 mg/m3 - 3 ppm Note: Skin
	Tip OEL	VLA	Spania	Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.6 mg/m3 - 3 ppm Note: Skin
	Tip OEL	ÁK	Ungaria	Termen lung 2.5 mg/m3; Termen scurt 7.6 mg/m3 Note: Skin
	Tip OEL	MAC	Olanda	Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.5 mg/m3 - 3 ppm Note: Skin
	Tip OEL	SUVA	Elveţia	Termen lung 5 mg/m3 - 2 ppm; Termen scurt 10 mg/m3 - 4 ppm
	Tip OEL	WEL	U.K.	Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.6 mg/m3 - 3 ppm Note: Skin
	Tip OEL	GVI	Croaţia	Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.6 mg/m3 - 1 ppm Note: Skin
	Tip OEL	AGW	Germania	Termen lung 0.5 mg/m3 - 0.2 ppm; Termen scurt 0.5 mg/m3 - 0.2 ppm Note: Skin, Inhalable fraction and vapour
	Tip OEL	NDS	Polonia	Termen lung 2.5 mg/m3; Termen scurt 7.5 mg/m3 Note: Skin
	Tip OEL	MV	Slovenia	Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.6 mg/m3 - 3 ppm

Note: Skin

Tip OEL	IPRV	Lituania	Termen lung 2.5 mg/m3 - 1 ppm; Termen scurt 7.6 mg/m3 - 3 ppm Note: Skin

Valori limită de expunere PNEC

2-butoxietanol

CAS: 111-76-2
- Cale de expunere: Apă dulce; PNEC Limită: 8.8 mg/l
- Cale de expunere: Apă sărată; PNEC Limită: 0.88 mg/l
- Cale de expunere: Microorganisme în tratamente de epurare; PNEC Limită: 463 mg/l
- Cale de expunere: Sedimente în apă dulce; PNEC Limită: 34.6 mg/kg
- Cale de expunere: Sedimente în apă sărată; PNEC Limită: 3.46 mg/kg
- Cale de expunere: Sol (agricol); PNEC Limită: 2.33 mg/kg
- Cale de expunere: Lanț alimentar; PNEC Limită: 20 mg/kg

bis(ortofosfat) de trizinc

CAS: 7779-90-0
- Cale de expunere: Apă dulce; PNEC Limită: 20.6 µg/l
- Cale de expunere: Apă sărată; PNEC Limită: 6.1 µg/l
- Cale de expunere: Microorganisme în tratamente de epurare; PNEC Limită: 100 µg/l
- Cale de expunere: Sedimente în apă dulce; PNEC Limită: 117.8 mg/kg
- Cale de expunere: Sedimente în apă sărată; PNEC Limită: 56.5 mg/kg
- Cale de expunere: Sol (agricol); PNEC Limită: 35.6 mg/kg

amoniac 31%

CAS: 1336-21-6
- Cale de expunere: Apă sărată; PNEC Limită: 0.001 mg/l
  Note: Anhydrous
- Cale de expunere: Apă dulce; PNEC Limită: 0.001 mg/l
  Note: Anhydrous

oxid de zinc

CAS: 1314-13-2
- Cale de expunere: Apă dulce; PNEC Limită: 0.021 mg/l
- Cale de expunere: Apă sărată; PNEC Limită: 0.006 mg/l
- Cale de expunere: Sedimente în apă dulce; PNEC Limită: 117.8 mg/kg
- Cale de expunere: Sedimente în apă sărată; PNEC Limită: 56.5 mg/kg
- Cale de expunere: Sol (agricol); PNEC Limită: 35.6 mg/kg
- Cale de expunere: Microorganisme în tratamente de epurare; PNEC Limită: 0.052 mg/l

acid acrilic

CAS: 79-10-7
- Cale de expunere: Apă sărată; PNEC Limită: 0.3 µg/l
- Cale de expunere: Apă dulce; PNEC Limită: 0.003 mg/l
- Cale de expunere: Microorganisme în tratamente de epurare; PNEC Limită: 0.9 mg/l
- Cale de expunere: Sedimente în apă sărată; PNEC Limită: 0.002 mg/kg
- Cale de expunere: Sedimente în apă dulce; PNEC Limită: 0.024 mg/kg
- Cale de expunere: Sol (agricol); PNEC Limită: 1 mg/kg

etanolamină

CAS: 141-43-5
- Cale de expunere: Apă dulce; PNEC Limită: 0.07 mg/l
- Cale de expunere: Apă sărată; PNEC Limită: 0.007 mg/l
- Cale de expunere: Microorganisme în tratamente de epurare; PNEC Limită: 100 mg/l
- Cale de expunere: Sedimente în apă dulce; PNEC Limită: 0.357 mg/kg
- Cale de expunere: Sedimente în apă sărată; PNEC Limită: 0.036 mg/kg
- Cale de expunere: Sol; PNEC Limită: 1.29 mg/kg

Nivel Derivat Fără Efect (DNEL)

2-butoxietanol

CAS: 111-76-2
- Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen lung, efecte sistemice
  Lucrător profesionist: 98 mg/m3; Consumator: 59 mg/m3
- Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen scurt, efecte sistemice
  Lucrător profesionist: 1091 mg/m3; Consumator: 426 mg/m3

Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen scurt, efecte locale
Lucrător profesionist: 246 mg/m3; Consumator: 147 mg/m3

Cale de expunere: Oral uman; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Consumator: 6.3 mg/kg

Cale de expunere: Oral uman; Frecvenţă de expunere: Pe termen scurt, efecte sistemice
Consumator: 26.7 mg/kg

bis(ortofosfat) de trizinc

CAS: 7779-90-0

Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Lucrător: 5 mg/m3; Consumator: 2.5 mg/m3

Cale de expunere: Epidermic uman; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Lucrător: 83 mg/kg; Consumator: 83 mg/kg

Cale de expunere: Oral uman; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Consumator: 0.83 mg/kg

amoniac 31%

CAS: 1336-21-6

Cale de expunere: Epidermic uman; Frecvenţă de expunere: Pe termen scurt, efecte sistemice
Lucrător profesionist: 6.8 mg/kg; Consumator: 68 mg/kg
Note: Anhydrous

Cale de expunere: Epidermic uman; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Lucrător profesionist: 6.8 mg/kg; Consumator: 68 mg/kg
Note: Anhydrous

Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen scurt, efecte sistemice
Lucrător profesionist: 47.6 mg/m3; Consumator: 23.8 mg/m3
Note: Anhydrous

Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Lucrător profesionist: 47.6 mg/m3; Consumator: 23.8 mg/m3
Note: Anhydrous

Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen scurt, efecte locale
Lucrător profesionist: 36 mg/m3; Consumator: 7.2 mg/m3
Note: Anhydrous

Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen lung, efecte locale
Lucrător profesionist: 14 mg/m3; Consumator: 2.8 mg/m3
Note: Anhydrous

Cale de expunere: Oral uman; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Consumator: 6.8 mg/kg
Note: Anhydrous

Cale de expunere: Oral uman; Frecvenţă de expunere: Pe termen scurt, efecte sistemice
Consumator: 6.8 mg/kg
Note: Anhydrous

oxid de zinc

CAS: 1314-13-2

Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Lucrător profesionist: 5 mg/m3; Consumator: 2.5 mg/m3

Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen lung, efecte locale
Lucrător profesionist: 0.5 mg/m3

Cale de expunere: Epidermic uman; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Lucrător profesionist: 83 mg/kg; Consumator: 83 mg/kg

Cale de expunere: Oral uman; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Consumator: 0.83 mg/kg

acid acrilic

CAS: 79-10-7

Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen scurt, efecte locale
Lucrător: 30 mg/m3; Consumator: 3.6 mg/m3

Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen lung, efecte locale
Lucrător: 30 mg/m3; Consumator: 3.6 mg/m3

Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen scurt, efecte sistemice
Lucrător: 30 mg/m3; Consumator: 3.6 mg/m3

Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Lucrător: 30 mg/m3; Consumator: 3.6 mg/m3

Cale de expunere: Oral uman; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Consumator: 0.4 mg/kg

Cale de expunere: Oral uman; Frecvenţă de expunere: Pe termen scurt, efecte sistemice
Consumator: 1.2 mg/kg

etanolamină

CAS: 141-43-5 Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Lucrător: 1 mg/m3; Consumator: 0.18 mg/kg

Cale de expunere: Prin inhalare umană; Frecvenţă de expunere: Pe termen lung, efecte locale
Lucrător: 0.51 mg/m3; Consumator: 0.28 mg/m3

Cale de expunere: Epidermic uman; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Lucrător: 3 mg/kg; Consumator: 1.5 mg/kg

Cale de expunere: Oral uman; Frecvenţă de expunere: Pe termen lung, efecte sistemice
Consumator: 1.5 mg/kg

8.2. Controale ale expunerii

Asigurați o ventilație adecvată. Atunci când este rezonabil posibil, aceasta se poate obține prin utilizarea de ventilație de schimb și a unei aspirații generale bune.

Protectia ochilor

Ochelari cu protecție laterală (EN 16321).

Protectia pielii

Utilizați îmbrăcăminte corespunzătoare pentru protecția completă a pielii, în funcție de activitate și expunere (EN 14605/EN 13982), de exemplu salopetă de lucru, șorț, încălțăminte de siguranță, îmbrăcăminte corespunzătoare.

Protectia mainilor

Nu există niciun material sau combinație de materiale pentru mănuși care să poată garanta o rezistență nelimitată la orice produs chimic sau combinație de produse.

Pentru manipulare prelungită sau repetată, utilizați mănuși rezistente la produse chimice.

Tipul de mănuși adecvate (EN 374/EN 16523); NBR (cauciuc nitrilic): grosime >= 0.4 mm; timp de penetrare >= 480 min. FKM (fluor cauciuc): grosime >= 0.4 mm; timp de penetrare >= 480 min

Alegerea mănușilor potrivite nu depinde numai de material, ci și de alte caracteristici de calitate care variază de la un producător la altul, precum și de metodele și timpii de utilizare a amestecului.

Protectie respiratorie

Dacă lucrătorii sunt expuși la concentrații mai mari decât limitele de expunere, trebuie să poarte aparate respiratorii certificate.

Filtru amestec (EN 14387): mască cu filtru A-P2.

Controale de expunere ambientală:

Vezi pct. 6.2

Măsurile de igienă și tehnice

Vezi alineatul 7.

SECȚIUNEA 9: Proprietățile fizice și chimice

9.1. Informații privind proprietățile fizice și chimice de bază

Stare fizică: Lichid

Aspect: Vâscos

Culoare: alb/gri

Miros: ușor

Pragul de miros: N.D.

Punctul de topire/punctul de înghețare: N.D.

Punctul de fierbere sau punctul inițial de fierbere și intervalul de fierbere: N.D.

Inflamabilitatea: neinflamabil

Limita inferioară și superioară de explozie: N.D.

Punctul de aprindere: > 93°C (Evaluare internă)

Temperatura de autoaprindere: N.D.

Temperatura de descompunere: N.A.

pH: >=7.50<=8.50 (Metoda internă)

Viscozitatea cinematică: > 20.5 mm²/s (40 °C)

Solubilitatea in apa: miscibil în toate relațiile

Solubilitate în ulei: Nu există date disponibile

Coeficientul de partiție n-octanol/apă (valoarea log): N.A.

Presiunea vaporilor: N.D.

Densitatea și/sau densitatea relativă: 1.22 ± 0.03 kg/l (Metoda internă)

Densitatea relativă a vaporilor: N.D.

Caracteristicile particulei:

Dimensiunea particulei: N.A.

9.2. Alte informații

Proprietati explozive: N.A. (Evaluare internă)

Proprietati oxidante: N.A. (Evaluare internă)

SECȚIUNEA 10: Stabilitate și reactivitate

10.1. Reactivitate

Stabilă în condiţii normale

10.2. Stabilitate chimică

Stabilă în condiţii normale

10.3. Posibilitatea de reacții periculoase

Niciuna.

10.4. Condiții de evitat

Evitați apropierea de surse de căldură.

10.5. Materiale incompatibile

Nici una in particular

10.6. Produși de descompunere periculoși

În cazul depozitării și manipulării adecvate, nu există produse de descompunere periculoase.

Vezi pct. 5.2

SECȚIUNEA 11: Informații toxicologice

11.1. Informații privind clasele de pericol definite în Regulamentul (CE) nr. 1272/2008

Informații toxicologice ale produsului:

a) toxicitate acută	Neclasificat
	Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.
b) corodarea/iritarea pielii	Neclasificat
	Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.
c) lezarea gravă/iritarea ochilor	Neclasificat
	Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.
d) sensibilizarea căilor respiratorii sau a pielii	Neclasificat
	Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.
e) mutagenitatea celulelor germinative	Neclasificat
	Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.
f) cancerogenitatea	Neclasificat
	Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.
g) toxicitatea pentru reproducere	Neclasificat
	Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.
h) STOT (toxicitate asupra organelor țintă specifice) - expunere unică	Neclasificat
	Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.
i) STOT (toxicitate asupra organelor țintă specifice) - expunere repetată	Neclasificat
	Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.
j) pericol prin aspirare	Neclasificat
	Pe baza datelor disponibile, criteriile de clasificare nu sunt îndeplinite.

Informații toxicologice referitoare la substanțele principale găsite în acest produs:

2-butoxietanol		
CAS: 111-76-2	a) toxicitate acută	ATE - Oral: 1200 mg/kg gc
		ATE - Inhalare (Vapori): 3 mg/l
		LD50 Piele Porcuşor de Guinea > 2000 mg/kg
bis(ortofosfat) de trizinc		
CAS: 7779-90-0	a) toxicitate acută	LD50 Oral Șobolan > 5000 mg/kg

LC50 Praf de inhalare Șobolan > 5.7 mg/l 4h

LD50 Piele Șobolan > 2000 mg/kg

amoniac 31%

CAS: 1336-21-6 a) toxicitate acută LD50 Oral Șobolan 350 mg/kg
Note: Anhydrous

LC50 Inhalare Șobolan 9850 mg/m3 1h
Note: Anhydrous

oxid de zinc

CAS: 1314-13-2 a) toxicitate acută LD50 Oral Șobolan > 5000 mg/kg

LD50 Piele Șobolan > 2000 mg/kg

LC50 Inhalare Șobolan > 5.7 mg/l 4h

amoniac, anhidru

CAS: 7664-41-7 a) toxicitate acută ATE - Inhalare (Vapori): 3 mg/l

1,2-benzizotiazol-3(2H)-onă

CAS: 2634-33-5 a) toxicitate acută ATE - Oral: 450 mg/kg gc

ATE - Inhalare (Praf/ceaţă): 0.21 mg/l

acid acrilic

CAS: 79-10-7 a) toxicitate acută ATE - Oral: 617 mg/kg gc

ATE - Dermică: 1100 mg/kg gc

ATE - Inhalare (Vapori): 11 mg/l

masă de reacție compusă din 5-cloro-2-metil-2H-izotiazol-3-onă și 2-metil-2H-izotiazol-3-onă (3:1)

CAS: 55965-84-9 a) toxicitate acută ATE - Oral: 64 mg/kg gc

ATE - Dermică: 92.4 mg/kg gc

ATE - Inhalare (Praf/ceaţă): 0.17 mg/l

etanolamină

CAS: 141-43-5 a) toxicitate acută ATE - Oral: 500 mg/kg gc

ATE - Dermică: 1100 mg/kg gc

ATE - Inhalare (Vapori): 11 mg/l

11.2. Informații privind alte pericole

Proprietăți de perturbator endocrin:

Nu conține perturbatori endocrini prezenți în concentrații >= 0,1%

SECȚIUNEA 12: Informații ecologice

A se adopta bune practici de productie astfel incat produsul sa nu fie eliberat in mediu

12.1. Toxicitate

Informaţii Ecotoxicologice:

Toxic pentru mediul acvatic cu efecte pe termen lung.

Lista proprietatilor Eco-toxicologice ale produsului

Produsul este clasificat: Aquatic Chronic 2(H411)

Lista componentelor cu proprietăţi ecotoxicologice

2-butoxietanol

CAS: 111-76-2 a) Toxicitate acvatică acută: LC50 Pește 1474 mg/l 96h

a) Toxicitate acvatică acută: EC50 Daphnia 1550 mg/l 48h

a) Toxicitate acvatică acută: EC50 Alge 1840 mg/l 72h

b) Toxicitatea acvatică cronică: NOEC Pește > 100 mg/l 21d

b) Toxicitatea acvatică cronică: NOEC Daphnia 100 mg/l 21d

bis(ortofosfat) de trizinc

CAS: 7779-90-0 a) Toxicitate acvatică acută: LC50 Pește 0.169 mg/l 96h

a) Toxicitate acvatică acută: EC50 Daphnia 0.147 mg/l 48h

a) Toxicitate acvatică acută: EC50 Alge 0.136 mg/l 72h

b) Toxicitatea acvatică cronică: NOEC Pește 0.044 mg/l

b) Toxicitatea acvatică cronică: NOEC Daphnia 0.037 mg/l

b) Toxicitatea acvatică cronică: NOEC Alge 0.019 mg/l

amoniac 31%

CAS: 1336-21-6
a) Toxicitate acvatică acută: LC50 Pește 0.083 mg/l 96h - Anhydrous
a) Toxicitate acvatică acută: EC50 Daphnia 101 mg/l 48h - Anhydrous
a) Toxicitate acvatică acută: EC50 Alge 3283.2 mg/l 72h - Anhydrous
b) Toxicitatea acvatică cronică: NOEC Pește 1.2 mg/l - 61d - Anhydrous
b) Toxicitatea acvatică cronică: NOEC Daphnia 0.79 mg/l 21d - Anhydrous

oxid de zinc

CAS: 1314-13-2
a) Toxicitate acvatică acută: LC50 Pește 0.169 mg/l 96h
a) Toxicitate acvatică acută: EC50 Daphnia 0.147 mg/l 48h
a) Toxicitate acvatică acută: EC50 Alge 0.136 mg/l 72h
b) Toxicitatea acvatică cronică: NOEC Pește 0.044 mg/l
b) Toxicitatea acvatică cronică: NOEC Daphnia 0.037 mg/l
b) Toxicitatea acvatică cronică: NOEC Alge 0.019 mg/l

1,2-benzizotiazol-3(2H)-onă

CAS: 2634-33-5
a) Toxicitate acvatică acută: LC50 Pește 2.2 mg/l 96h
a) Toxicitate acvatică acută: EC50 Daphnia 3.27 mg/l 48h
a) Toxicitate acvatică acută: EC50 Alge 0.11 mg/l 72h
b) Toxicitatea acvatică cronică: NOEC Pește 0.21 mg/l - 28d
b) Toxicitatea acvatică cronică: NOEC Daphnia 1.2 mg/l - 21d
b) Toxicitatea acvatică cronică: NOEC Alge 0.04 mg/l 72h

acid acrilic

CAS: 79-10-7
a) Toxicitate acvatică acută: LC50 Pește 27 mg/l 96h
a) Toxicitate acvatică acută: EC50 Daphnia 47 mg/l 48h
a) Toxicitate acvatică acută: EC50 Alge 0.13 mg/l 72h
b) Toxicitatea acvatică cronică: NOEC Daphnia > 12 mg/l 21d

masă de reacție compusă din 5-cloro-2-metil-2H-izotiazol-3-onă și 2-metil-2H-izotiazol-3-onă (3:1)

CAS: 55965-84-9
a) Toxicitate acvatică acută: LC50 Pește 0.22 mg/l 96h
a) Toxicitate acvatică acută: EC50 Daphnia 0.1 mg/l 48h
a) Toxicitate acvatică acută: EC50 Alge 0.0052 mg/l 48h
a) Toxicitate acvatică acută: EC50 Alge de apă dulce 0.048 mg/l 72h
b) Toxicitatea acvatică cronică: NOEC Pește 0.098 mg/l - 28d
b) Toxicitatea acvatică cronică: NOEC Daphnia 0.004 mg/l - 21d
b) Toxicitatea acvatică cronică: NOEC Alge de apă dulce 0.0012 mg/l 72h

12.2. Persistență și degradabilitate

2-butoxietanol

CAS: 111-76-2 Degradabil în mod rapid

amoniac 31%

CAS: 1336-21-6 Degradabil în mod rapid

1,2-benzizotiazol-3(2H)-onă

CAS: 2634-33-5 Degradabil în mod lent

acid acrilic

CAS: 79-10-7 Degradabil în mod rapid

masă de reacție compusă din 5-cloro-2-metil-2H-izotiazol-3-onă și 2-metil-2H-izotiazol-3-onă (3:1)

CAS: 55965-84-9 Degradabil în mod lent

etanolamină

CAS: 141-43-5 Degradabil în mod rapid

12.3. Potențial de bioacumulare

2-butoxietanol

CAS: 111-76-2 Nu este supus bioacumulării

1,2-benzizotiazol-3(2H)-onă

CAS: 2634-33-5 Nu este supus bioacumulării

masă de reacție compusă din 5-cloro-2-metil-2H-izotiazol-3-onă și 2-metil-2H-izotiazol-3-onă (3:1)

CAS: 55965-84-9 Nu este supus bioacumulării

etanolamină

CAS: 141-43-5 Nu este supus bioacumulării

12.4. Mobilitate în sol

1,2-benzizotiazol-3(2H)-onă

CAS: 2634-33-5 Test: Log Koc; Valoare: 1.150

acid acrilic

CAS: 79-10-7 Test: Log Koc

masă de reacție compusă din 5-cloro-2-metil-2H-izotiazol-3-onă și 2-metil-2H-izotiazol-3-onă (3:1)

CAS: 55965-84-9 Test: Log Koc; Valoare: < 2.000

12.5. Rezultatele evaluărilor PBT și vPvB

În baza datelor disponibile, produsul nu conţine substanţe PBT/vPvB în procentaj ≥ de 0.1%.

12.6. Proprietăți de perturbator endocrin

Nu conține perturbatori endocrini prezenți în concentrații >= 0,1%

12.7. Alte efecte adverse

N.A.

SECȚIUNEA 13: Considerații privind eliminarea

13.1. Metode de tratare a deșeurilor

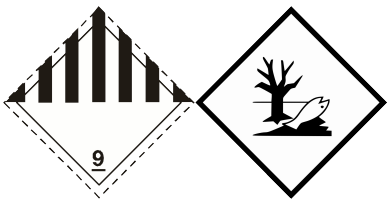
A se recupera, daca este posibil. A se respecta regulamentele locale in vigoare

Nu permiteți pătrunderea produsului în sistemul de canalizare sau în cursurile de apă.

Recipientele contaminate cu produs, în conformitate cu dispozițiile legale locale sau naționale.

Odată ce produsul a expirat, acesta trebuie eliminat în conformitate cu reglementările în vigoare.

SECȚIUNEA 14: Informații referitoare la transport



14.1. Numărul ONU sau numărul de identificare

3082

14.2. Denumirea corectă ONU pentru expediție

ADR-Nume transport îmbarcare: MATERIE PERICULOASĂ DIN PUNCT DE VEDERE AL MEDIULUI, LICHIDĂ, N.D. (bis(ortofosfat) de trizinc - oxid de zinc)

IATA-Nume transport îmbarcare: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis(ortofosfat) de trizinc - oxid de zinc)

IMDG-Nume transport îmbarcare: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis(ortofosfat) de trizinc - oxid de zinc)

14.3. Clasa (clasele) de pericol pentru transport

ADR-clasa: 9

IATA-Clasa: 9

IMDG-Clasa: 9

14.4. Grupul de ambalare

ADR-Grup Ambalare: III

IATA-Grup Ambalare: III

IMDG-Grup Ambalare: III

14.5. Pericole pentru mediul înconjurător

Componentul toxic principal: bis(ortofosfat) de trizinc
Poluant marin: Da
Poluant ambiental: Da
IMDG-EMS: F-A, S-F

14.6. Precauții speciale pentru utilizatori

Drumuri şi Căi Ferate (ADR-RID):
ADR-Etichetă: 9
ADR - Număr de identificare a pericolului: 90
ADR-Dispoziţii Speciale: 274 335 375 601 650
ADR-Cod de restricţie în tunel:

Aer (IATA):
IATA-Aeronavă de pasagerit: 964
IATA-Aeronavă de marfă: 964
IATA-Etichetă: 9
IATA-Riscul secundar: -
IATA-Erg: 9L
IATA-Dispoziţii Speciale: A97 A158 A197 A215

Mare (IMDG):
IMDG-Depozitare și manipulare: Category A
IMDG-Segregare: -
IMDG-Riscul secundar: -
IMDG-Dispoziţii Speciale: 274 335 375 969

14.7. Transportul maritim în vrac în conformitate cu instrumentele OMI

N.A.

SECȚIUNEA 15: Informații de reglementare

15.1. Regulamente/legislație în domeniul securității, al sănătății și al mediului specifice (specifică) pentru substanța sau amestecul în cauză

Directiva 98/24/CE (Riscuri în legătură cu agenţii chimici la locul de muncă)
Directiva 2000/39/CE (Valori limită a expunerii profesionale)
Directiva 2010/75/UE
Regulamentul (CE) nr. 1907/2006 (REACH)
Regulamentul (CE) nr. 1272/2008 (CLP)
Regulamentul (CE) nr. 790/2009 (ATP 1 CLP) și (EU) nr. 758/2013
Regulamentul (EU) nr. 2020/878
Regulamentul (EU) nr. 286/2011 (ATP 2 CLP)
Regulamentul (EU) nr. 618/2012 (ATP 3 CLP)
Regulamentul (EU) nr. 487/2013 (ATP 4 CLP)
Regulamentul (EU) nr. 944/2013 (ATP 5 CLP)
Regulamentul (EU) nr. 605/2014 (ATP 6 CLP)
Regulamentul (EU) nr. 2015/1221 (ATP 7 CLP)
Regulamentul (EU) nr. 2016/918 (ATP 8 CLP)
Regulamentul (EU) nr. 2016/1179 (ATP 9 CLP)
Regulamentul (EU) nr. 2017/776 (ATP 10 CLP)
Regulamentul (EU) nr. 2018/669 (ATP 11 CLP)
Regulamentul (EU) nr. 2018/1480 (ATP 13 CLP)
Regulamentul (EU) nr. 2019/521 (ATP 12 CLP)
Regulamentul (EU) nr. 2020/217 (ATP 14 CLP)
Regulamentul (EU) nr. 2020/1182 (ATP 15 CLP)
Regulamentul (EU) nr. 2021/643 (ATP 16 CLP)
Regulamentul (EU) nr. 2021/849 (ATP 17 CLP)
Regulamentul (EU) nr. 2022/692 (ATP 18 CLP)
Regulamentul (UE) nr. 2023/707
Regulamentul (EU) nr. 2023/1434 (ATP 19 CLP)
Regulamentul (EU) nr. 2023/1435 (ATP 20 CLP)
Regulamentul (EU) nr. 2024/197 (ATP 21 CLP)
Regulamentul (EU) nr. 2024/2564 (ATP 22 CLP)
Regulamentul (EU) nr. 2024/2865
Regulamentul (EU) nr. 2025/1222 (ATP 23 CLP)

Restricţii referitoare la produsele sau substanţele conţinute de acestea conform Anexei XVII Regulamentul (CE) 1907/2006 (REACH) cu modificările ulterioare:

Restricții referitoare la produs: 3

Restricții referitoare la substanțele conținute: 40, 75

Dispoziții în legătură cu directiva EU 2012/18 (Seveso III):

Categoria Seveso III conform Anexei 1, partea 1	Limită nivel inferior (tone)	Limită nivel superior (tone)
Produsul face parte din categoria: E2	200	500

Regulamentul (UE) nr. 649/2012 (Regulamentul PIC)

Nu există substanțe menționate

Clasa Germană a Periculozității Apei

Clasa 2: periculos pentru ape.

Substanţe SVHC:

În baza datelor disponibile, produsul nu conţine substanţe SVHC în procentaj ≥ de 0.1%.

Valoarea limită UE pentru conținutul de COV (Directiva 2004/42/CE) Cat. A/i: 140 g/l; COV < 140 g/l

15.2. Evaluarea securității chimice

Nu a fost efectuată nici o Evaluare de Securitate Chimică pentru amestecul. Consultați scenariile de expunere ale substanțelor anexate acestei fișe de securitate. La consultarea scenariilor, luați în considerare eventualele limitări de utilizare indicate în secțiunea 1.2.

SECȚIUNEA 16: Alte informații

Cod	Descriere
EUH071	Corosiv pentru căile respiratorii.
H221	Gaz inflamabil.
H226	Lichid şi vapori inflamabili.
H280	Conţine un gaz sub presiune; pericol de explozie în caz de încălzire.
H301	Toxic în caz de înghiţire.
H302	Nociv în caz de înghiţire.
H310	Mortal în contact cu pielea.
H312	Nociv în contact cu pielea.
H314	Provoacă arsuri grave ale pielii şi lezarea ochilor.
H315	Provoacă iritarea pielii.
H317	Poate provoca o reacţie alergică a pielii.
H318	Provoacă leziuni oculare grave.
H319	Provoacă o iritare gravă a ochilor.
H330	Mortal în caz de inhalare.
H331	Toxic în caz de inhalare.
H332	Nociv în caz de inhalare.
H335	Poate provoca iritarea căilor respiratorii.
H372	Provoacă daune organelor în caz de expunere îndelungată sau repetată prin inhalare.
H400	Foarte toxic pentru mediul acvatic.
H410	Foarte toxic pentru mediul acvatic cu efecte pe termen lung.
H411	Toxic pentru mediul acvatic cu efecte pe termen lung.
H412	Nociv pentru mediul acvatic cu efecte pe termen lung.

Cod	Clasa de pericol şi categoria de pericol	Descriere
2.2/2	Flam. Gas 2	Gaz inflamabil, Categoria 2
2.5	Press. Gas	Gaze sub presiune
2.6/3	Flam. Liq. 3	Lichid inflamabil, Categoria 3
3.1/2/Dermal	Acute Tox. 2	Toxicitate acută (dermică), Categoria 2
3.1/2/Inhal	Acute Tox. 2	Toxicitate acută (inhalare), Categoria 2
3.1/3/Inhal	Acute Tox. 3	Toxicitate acută (inhalare), Categoria 3
3.1/3/Oral	Acute Tox. 3	Toxicitate acută (orală), Categoria 3
3.1/4/Dermal	Acute Tox. 4	Toxicitate acută (dermică), Categoria 4
3.1/4/Inhal	Acute Tox. 4	Toxicitate acută (inhalare), Categoria 4
3.1/4/Oral	Acute Tox. 4	Toxicitate acută (orală), Categoria 4
3.2/1A	Skin Corr. 1A	Corodarea pielii, Categoria 1A

3.2/1B	Skin Corr. 1B	Corodarea pielii, Categoria 1B
3.2/1C	Skin Corr. 1C	Corodarea pielii, Categoria 1C
3.2/2	Skin Irrit. 2	Iritarea pielii, Categoria 2
3.3/1	Eye Dam. 1	Lezarea gravă a ochilor, Categoria 1
3.3/2	Eye Irrit. 2	Iritarea ochilor, Categoria 2
3.4.2/1A	Skin Sens. 1A	Sensibilizarea pielii, Categoria 1A
3.8/3	STOT SE 3	Toxicitate asupra unui organ ţintă specific – o singură expunere, Categoria 3
3.9/1	STOT RE 1	Toxicitate asupra unui organ ţintă specific – expunere repetată, Categoria 1
4.1/A1	Aquatic Acute 1	Pericol acut pentru mediul acvatic, Categoria 1
4.1/C1	Aquatic Chronic 1	Pericol cronic (pe termen lung) pentru mediul acvatic, Categoria 1
4.1/C2	Aquatic Chronic 2	Pericol cronic (pe termen lung) pentru mediul acvatic, Categoria 2
4.1/C3	Aquatic Chronic 3	Pericol cronic (pe termen lung) pentru mediul acvatic, Categoria 3

Clasificarea și procedura utilizate pentru realizarea clasificării pentru amestecuri în conformitate cu Regulamentul (CE) nr. 1272/2008 [CLP]:

Clasificare conform Regulamentului (CE) nr. 1272/2008	Procedura de clasificare
Aquatic Chronic 2, H411	Metoda de calcul

Acest document a fost întocmit de un tehnician competent în domeniul SDS şi care este pregătit în mod corespunzător.

Principalele surse bibliografice:

ECDIN - Rețeaua de date și informații de mediu privind produsele chimice - Centrul comun de cercetare, Comisia Comunităților Europene

SAX PROPRIETĂȚI PERICULOASE ALE MATERIALELOR INDUSTRIALE - Ediția a opta - Van Nostrand Reinold

Fișe tehnice de securitate ale furnizorilor de materii prime.

Aceste informatii se bazeaza pe cunostintele detinute la data mentionata mai sus. Se refera numai la produsul mentionat si nu constitue o garantie a calitatii pentru cazurile particulare

Este de datoria utilizatorului sa se asigure ca aceste informatii sunt adecvate si corespund domeniului specific de utilizare

Aceasta FTS anuleaza si inlocuieste pe cele emise anterior.

Legenda cu abrevierile şi acronimele folosite în fişa cu date de securitate

ACGIH: Conferința Americană a Igieniștilor Industriali Guvernamentali

ADR: Acordul European referitor la Încărcătura Internaţională de Bunuri Periculoase pe Drumuri

ATE: Toxicitate Acută Estimată

ATEmix: Estimarea toxicităţii acute (Amestecuri)

BEI: Index de Expunere Biologică

CAS: Chemical Abstracts Service (departament al Societăţii Americane de Chimie)

CAV: Centrul de Otrăvuri

CE: Comunitatea Europeană

CLP: Clasificare, Etichetare, Ambalare

CMR: Cancerigene, Mutagene și Toxice pentru reproducere

COV: Compus Organic Volatil

CSA: Evaluarea Securității Chimice

CSR: Raportul Securității Chimice

DNEL: Nivel Derivat Fără Efect

EC50: Jumătate din Concentrația Efectivă Maximă

ECHA: Agenția Europeană pentru Produse Chimice

EINECS: Inventarul European al Substanţelor Chimice Existente pe piaţă

ES: Scenariul de Expunere

GefStoffVO: Ordonanţă în legătură cu Substanţele Periculoase, Germania

GHS: Sistemul Mondial Armonizat de Clasificare şi Etichetare a Produselor Chimice

IARC: Agenția Internațională pentru Cercetare în Domeniul Cancerului

IATA: Asociaţia Internaţională de Transport Aerian

IC50: jumătate din concentrația inhibitorie maximă

IMDG: Coduri Maritime Internaţionale pentru Bunurile Periculoase

LC50: Concentraţia letală pentru un procent de 50% din populaţia test

LD50: Doza letală pentru un procent de 50% din populaţia test

LDLo: Doză Letală Scăzută

N.A.: Nu se aplică

N/A: Nu se aplică

N/D: Nedefinit/Nu este disponibil

N.D.: Nu este disponibil
NIOSH: Institutul Național pentru Securitate și Sănătate în Muncă
NOAEL: Nu există un Nivel al Efectelor Adverse Observat
OSHA: Administrația Securității și Sănătății în Muncă.
PBT: Persistente, Bioacumulative și Toxice
PGK: Instrucțiuni de ambalare
PNEC: Concentraţia Fără Efect Prevăzută
PSG: Pasageri
RID: Regulamentul Referitor la Transportul Internaţional de Bunuri Periculoase pe Calea Ferată
STEL: Limita de Expunere pe Termen Scurt
STOT: Toxicitatea pentru Organul Ţintă Specific
TLV: Valoarea Limită a Pragului
TLV-TWA: Valoarea Limită a Pragului pentru Durata Ponderată Medie 8 ore pe zi (Standard ACGIH)
vPvB: Foarte Persistent, Foarte Bioacumulativ.
WGK: Clasa Germană a Periculozităţii Apei

Paragrafe modificate de la ultima revizuire:

- SECȚIUNEA 2: Identificarea pericolelor
- SECȚIUNEA 3: Compoziție/informații privind componenții
- SECȚIUNEA 8: Controale ale expunerii/protecția personală
- SECȚIUNEA 9: Proprietățile fizice și chimice
- SECȚIUNEA 11: Informații toxicologice
- SECȚIUNEA 12: Informații ecologice
- SECȚIUNEA 14: Informații referitoare la transport
- SECȚIUNEA 15: Informații de reglementare
- SECȚIUNEA 16: Alte informații

trizinc bis(orthophosphate)

Substance identification
Chemical Name: trizinc bis(orthophosphate)
CAS number: 7779-90-0
Date - Version: 07/03/2025

1. EXPOSURE SCENARIO USE AT INDUSTRIAL SITES

Spray application , Exhaust ventilation
SU: 2b, 6a,6b 7, 12, 15, 16, 17, 18, 19,
PROC: 4, 5, 7, 8b
ERC: industrial use: 5
Subsequent service life exposure scenario(s): ES8 Paints

1.1 CONTRIBUTING SCENARIO THAT CONTROLS ENVIRONMENTAL EXPOSURE

Conditions of use

Amount used, frequency and duration of use (or useful life)
Daily use at site: 4.444 ton/day
Annual use at a site: 1E3 toneladas/ano

Conditions and measures for the waste water treatment plant
STP: None effectiveness of water 0%

Other operational conditions affecting environmental exposure
Place of use: internal
Discharge rate of effluent: ≥ 2E3 m^3/d
Water contact during use: yes

Description of the activities and processes described in the exposure scenario
Covers the entire spray application process of organic solvent-based, water-based liquid and powder coatings by industrial users.
Spray application on organic coatings
Cleaning of equipment
Waste management of coatings

Product/substance domain:
Volatile and non-volatile compounds in liquid mixtures
Solids in polymeric liquids
Predicted compounds not classified as carcinogenic or mutagenic, PBT or vPvB
Rapidly degradable volatile compounds
Biocides
Synthetic zinc phosphate anti-rust coating

Local releases to the environment

Release	Substance	Release factor %	Release rate
Water	Zinc ion	0	0 kg/day
Air	Zinc ion	1.5	66.66 kg/day
Farmland	Zinc ion	0	0 kg/day

Release factor external waste: 52%

Exposure and risks for the environment and man via the environment

Protection goal	Assessment authority	Exposure concentration	Risk quantification
Fresh water	Zinc ion	Local PEC 4.9E-3 mg/l	RCR: 0.34
Sediment (freshwater)	Zinc ion	Clocal 0 mg/kg	RCR: 0.461
Sea water	Zinc ion	Clocal 0µg/l	RCR: 0.219
Sediment (marine water)	Zinc ion	Clocal 0 mg/kg	RCR: 0.422
Wastewater treatment plant	Zinc ion	Local PEC 0 mg/l	RCR: <0.01
Farmland	Zinc ion	Local PEC 48.20 mg/kg dw	RCR: 0.58

1.2 CONTRIBUTING SCENARIO CONTROLLING WORKER EXPOSURE

Exposure assessment and risk characterisation are not required for consumers, as no human health hazard has been identified.
Specifically for: PROC4, PROC5, PROC7, PROC8b

2. EXPOSURE SCENARIO INDUSTRIAL USE

Non-spray application , Exhaust ventilation
SU: 2b, 6a,6b 7, 12, 15, 16, 17, 18, 19,
PROC: 4, 5, 10, 13, 8b
ERC: industrial use: 5
Subsequent service life exposure scenario(s): ES8 Paints

2.1 CONTRIBUTING SCENARIO THAT CONTROLS ENVIRONMENTAL EXPOSURE

Conditions of use

Amount used, frequency and duration of use (or useful life)
Daily use at site: 0.018 ton/day
Annual use at a site: 4 tons/year

Conditions and measures for the waste water treatment plant
STP: None effectiveness of water 0%

Other operational conditions affecting environmental exposure
Place of use: internal
Discharge rate of effluent: ≥ 2E3 m^3/d
Water contact during use: yes

Description of the activities and processes described in the exposure scenario
Covers the entire application process of organic solvent-based, water-based liquid and powder coatings by industrial users.
Application
Cleaning of equipment
Waste management of coatings

Product/substance domain:
Volatile and non-volatile compounds in liquid mixtures
Solids in polymeric liquids
Predicted compounds not classified as carcinogenic or mutagenic, PBT or vPvB
Rapidly degradable volatile compounds
Biocides
Synthetic zinc phosphate anti-rust coating
Explanation / Justification Emission or Release Factor: Tool washing for: Paints, inks and/or coatings

Local releases to the environment

Release	Substance	Release factor %	Release rate
Water	Zinc ion	0.2	0.036 kg/day
Air	Zinc ion	0	0 kg/day
Farmland	Zinc ion	0	0 kg/day

Release factor external waste: 2.5%

Exposure and risks for the environment and man via the environment

Protection goal	Assessment authority	Exposure concentration	Risk quantification
Fresh water	Zinc ion	Local PEC 5.95E-3 mg/l	RCR: 0.413
Sediment (freshwater)	Zinc ion	Clocal 48.87 mg/kg	RCR: 0.794
Sea water	Zinc ion	Clocal 0.15 µg/l	RCR: 0.24
Sediment (marine water)	Zinc ion	Clocal 1.58 mg/kg	RCR: 0.432
Wastewater treatment plant	Zinc ion	Local PEC 0 mg/l	RCR: <0.01
Farmland	Zinc ion	Local PEC 43.2 mg/kg dw	RCR: 0.52

2.2 CONTRIBUTING SCENARIO CONTROLLING WORKER EXPOSURE

Exposure assessment and risk characterisation are not required for consumers, as no human health hazard has been identified.
Specifically for: PROC4, PROC5, PROC8b, PROC10, PROC 13

3. EXPOSURE SCENARIO PROFESSIONAL USE

Spray application , Professional end use in paints and coatings
SU: 2b, 6a,6b 7, 12, 15, 16, 17, 18, 19,
PROC: 4, 5, 11, 8a
ERC: professional use: 8c, 8f
Subsequent service life exposure scenario(s): ES8 Paints

3.1 CONTRIBUTING SCENARIO THAT CONTROLS ENVIRONMENTAL EXPOSURE (ERC8c)

Conditions of use

Amount used, frequency and duration of use (or useful life)
Daily use at site: 5.5E-4 ton/day

Conditions and measures for the waste water treatment plant
STP: Standard effectiveness of water 82%

Other operational conditions affecting environmental exposure
Place of use: internal
Water contact during use: yes

Description of the activities and processes described in the exposure scenario
Covers the entire application process of organic solvent-based, water-based liquid and powder coatings by professional users.
Spray application
Cleaning of equipment
Waste management of coatings

Product/substance domain:
Volatile and non-volatile compounds in liquid mixtures
Solids in polymeric liquids
Predicted compounds not classified as carcinogenic or mutagenic, PBT or vPvB
Rapidly degradable volatile compounds
Biocides
Synthetic zinc phosphate anti-rust coating

Local releases to the environment
Release factor external waste: 60%

Exposure and risks for the environment and man via the environment

3.2 CONTRIBUTING SCENARIO THAT CONTROLS ENVIRONMENTAL EXPOSURE (ERC8f)

Conditions of use

Amount used, frequency and duration of use (or useful life)
Daily use at site: 5.5E-4 ton/day

Conditions and measures for the waste water treatment plant
STP: Standard effectiveness of water 82%

Other operational conditions affecting environmental exposure
Place of use: outdoor
Water contact during use: yes

Description of the activities and processes described in the exposure scenario
Covers the entire application process of organic solvent-based, water-based liquid and powder coatings by professional users.
Spray application
Cleaning of equipment
Waste management of coatings

Product/substance domain:
Volatile and non-volatile compounds in liquid mixtures
Solids in polymeric liquids
Predicted compounds not classified as carcinogenic or mutagenic, PBT or vPvB
Rapidly degradable volatile compounds
Biocides
Synthetic zinc phosphate anti-rust coating
When applying coatings outdoors, part of the applied coating may be deposited in water or on the ground.

Local releases to the environment

Release	Substance	Release factor %	Release rate
Water	Zinc ion	2	0.011 kg/day
Air	Zinc ion	0	0 kg/day
Farmland	Zinc ion	2	0 kg/day

Release factor external waste: 10-16%

Exposure and risks for the environment and man via the environment

Protection goal	Assessment authority	Exposure concentration	Risk quantification
Fresh water	Zinc ion	Local PEC 4.96E-3 mg/l	RCR: 0.344
Sediment (freshwater)	Zinc ion	Clocal 2.71 mg/kg	RCR: 0.479
Sea water	Zinc ion	Clocal 9E-3 µg/l	RCR: 0.221
Sediment (marine water)	Zinc ion	Clocal 0.09 mg/kg	RCR: 0.423
Wastewater treatment plant	Zinc ion	Local PEC 9.9E-4 mg/l	RCR: <0.01
Farmland	Zinc ion	Local PEC 43.39 mg/kg dw	RCR: 0.522

The stated estimates have been calculated on the basis of limited information. A more in-depth analysis can be found in the report: "Evaluation of risk due the presence of Zn in EU STP" of 29 May 2023.

3.3 CONTRIBUTING SCENARIO CONTROLLING WORKER EXPOSURE

Exposure assessment and risk characterisation are not required for consumers, as no human health hazard has been identified.
Specifically for: PROC4, PROC5, PROC8a, PROC11

4. EXPOSURE SCENARIO PROFESSIONAL USE

If applied by brush or roller, Professional end use in paints and coatings
SU: 2b, 6a,6b 7, 12, 15, 16, 17, 18, 19,
PROC: 4, 5, 10, 8a
ERC: professional use: 8c, 8f
Subsequent service life exposure scenario(s): ES8 Paints

4.1 CONTRIBUTING SCENARIO THAT CONTROLS ENVIRONMENTAL EXPOSURE (ERC8c)

Conditions of use

Amount used, frequency and duration of use (or useful life)
Daily use at site: 5.5E-4 ton/day

Conditions and measures for the waste water treatment plant
STP: Standard effectiveness of water 82%

Other operational conditions affecting environmental exposure
Place of use: internal
Water contact during use: yes

Description of the activities and processes described in the exposure scenario
Covers the entire application process of organic solvent-based, water-based liquid and powder coatings by professional users.
Roller or brush application
Internal use
Cleaning of equipment
Waste management of coatings

Product/substance domain:
Volatile and non-volatile compounds in liquid mixtures
Solids in polymeric liquids
Predicted compounds not classified as carcinogenic or mutagenic, PBT or vPvB
Rapidly degradable volatile compounds
Biocides
Synthetic zinc phosphate anti-rust coating
Explanation / Justification Emission or Release Factor: the solid component is not emitted into the air

Local releases to the environment

Release	Substance	Release factor %	Release rate
Water	Zinc ion	0	0 kg/day
Air	Zinc ion	0	0 kg/day
Farmland	Zinc ion	0	0 kg/day

Release factor external waste: 30%

Exposure and risks for the environment and man via the environment

Protection goal	Assessment authority	Exposure concentration	Risk quantification
Fresh water	Zinc ion	Local PEC 4.9E-3 mg/l	RCR: 0.34
Sediment (freshwater)	Zinc ion	Clocal 0 mg/kg	RCR: 0.416
Sea water	Zinc ion	Clocal 0 µg/l	RCR: 0.219
Sediment (marine water)	Zinc ion	Clocal 0 mg/kg	RCR: 0.422
Wastewater treatment plant	Zinc ion	Local PEC 0 mg/l	RCR: <0.01
Farmland	Zinc ion	Local PEC 43.2 mg/kg dw	RCR: 0.52

The stated estimates have been calculated on the basis of limited information. A more in-depth analysis can be found in the report: "Evaluation of risk due the presence of Zn in EU STP" of 29 May 2023.

4.2 CONTRIBUTING SCENARIO THAT CONTROLS ENVIRONMENTAL EXPOSURE (ERC8f)

Conditions of use

Amount used, frequency and duration of use (or useful life)
Daily use at site: 5.5E-4 ton/day

Conditions and measures for the waste water treatment plant
STP: Standard effectiveness of water 82%

Other operational conditions affecting environmental exposure
Place of use: outdoor
Water contact during use: yes

Description of the activities and processes described in the exposure scenario
Covers the entire application process of organic solvent-based, water-based liquid and powder coatings by professional users.
Roller or brush application
Cleaning of equipment
Waste management of coatings

Product/substance domain:
Volatile and non-volatile compounds in liquid mixtures
Solids in polymeric liquids
Predicted compounds not classified as carcinogenic or mutagenic, PBT or vPvB
Rapidly degradable volatile compounds
Biocides
Synthetic zinc phosphate anti-rust coating
When applying coatings outdoors, part of the applied coating may be deposited in water or on the ground.

Local releases to the environment

Release	Substance	Release factor %	Release rate
Water	Zinc ion	1	5.5E-3 kg/day
Air	Zinc ion	0	0 kg/day
Farmland	Zinc ion	0.5	0 kg/day

Release factor external waste: 4%

Exposure and risks for the environment and man via the environment

Protection goal	Assessment authority	Exposure concentration	Risk quantification
Fresh water	Zinc ion	Local PEC 4.9E-3 mg/l	RCR: 0.342
Sediment (freshwater)	Zinc ion	Clocal 1.36 mg/kg	RCR: 0.47
Sea water	Zinc ion	Clocal 4E-3 µg/l	RCR: 0.22
Sediment (marine water)	Zinc ion	Clocal 0.04 mg/kg	RCR: 0.423
Wastewater treatment plant	Zinc ion	Local PEC 4.95E-4 mg/l	RCR: <0.01
Farmland	Zinc ion	Local PEC 43.29 mg/kg dw	RCR: 0.521

The stated estimates have been calculated on the basis of limited information. A more in-depth analysis can be found in the report: "Evaluation of risk due the presence of Zn in EU STP" of 29 May 2023.

4.3 CONTRIBUTING SCENARIO CONTROLLING WORKER EXPOSURE

Exposure assessment and risk characterisation are not required for consumers, as no human health hazard has been identified.
Specifically for: PROC4, PROC5, PROC8a, PROC10

2-Butoxyethanol

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

EXPOSURE SCENARIO 5: USE IN COATINGS.

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

SECTION 1

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

SECTION 2: OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES.

SECTION 2.1: Environmental exposure control:

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

SECTION 2.2: Worker exposure control.

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

Contributing scenarios:

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

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

SECTION 3: EXPOSURE ESTIMATION:

Maximum exposure resulting from the contributing scenarios described.

Environment:

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

Health:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SECTION 4: GUIDE FOR VERIFYING COMPLIANCE WITH THE EXPOSURE SCENARIO

Environment:
Msafe: 32900kg/d. Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures [DSU1].

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

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

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

EXPOSURE SCENARIO 6: USE IN COATINGS.

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

SECTION 1

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

SECTION 2: OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES.

SECTION 2.1: Environmental exposure control:

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

SECTION 2.2: Worker exposure control.

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

Contributing scenarios:

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

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

SECTION 3: EXPOSURE ESTIMATION:

Maximum exposure resulting from the contributing scenarios described.

Environment:

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

Health:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SECTION 4: GUIDE FOR VERIFYING COMPLIANCE WITH THE EXPOSURE SCENARIO

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

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

EXPOSURE SCENARIO 8: USE IN CLEANING PRODUCTS.

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

SECTION 1

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

SECTION 2: OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES.

SECTION 2.1 Environmental exposure control:

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

SECTION 2.2: Worker exposure control.

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

Contributing scenarios:

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

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

SECTION 3: EXPOSURE ESTIMATION:

Maximum exposure resulting from the contributing scenarios described.

Environment

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

Health:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SECTION 4: GUIDE FOR VERIFYING COMPLIANCE WITH THE EXPOSURE SCENARIO

Environment:

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

Health:

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

Dermal: Not applicable.