Safety Data Sheet

Conforms to Regulation (EC) No. 1907/2006 (REACH), Article 31, Annex II, as amended by Commission Regulation (EU) 2020/878

KERADECOR PRONTOFIX

Date of first edition: 10/11/2021

Safety Data Sheet dated 10/11/2021

version 4

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Mixture identification:

Trade name: KERADECOR PRONTOFIX

Trade code: FS226 .014X

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use: primer

Uses advised against: Data not available.

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL S.p.A.

Via dell'Artigianato, 9

41049 Sassuolo (MODENA) - ITALY

Tel.+39 0536 816511 Fax. +39 0536816581

safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112

Kerakoll Italy - +39-0536-816511

Ireland

Poison information centre: 01 809 2166 (Daily 8am-10pm)

In case of emergency call 999 or 112

Malta

In case of emergency call: +356 2395 2000 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Aquatic Chronic 3 Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P102 Keep out of reach of children.

P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

EUH208 Contains 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one. May produce an allergic reaction.

EUH208 Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

Dir. 2004/42/EC (VOC directive)

Primers

EU limit value for this product (cat. A/g): 30 g/l

This product contains max 5.01 g/l VOC.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%.

Other Hazards: Contains:biocidal product. Contains: C(M)IT/MIT (3:1).The product is identified as an article treated pursuant to art. 58 of Regulation (EU) no. 528/2012 and subsequent amendments. It is recommended to avoid possible exposure to the skin. Protective gloves and work clothes are recommended. Minimize the uncontrolled release of product into the environment. When washing work equipment, water must not be dispersed in the soil or on surface water.

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: KERADECOR PRONTOFIX

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
< 1 %	ethanediol; ethylene glycol	CAS:107-21-1 EC:203-473-3	Acute Tox. 4, H302; STOT RE 2, H373	01-2119456816-28
< 0,1 %	Pyrithione zinc	CAS:13463-41-7 EC:236-671-3 Index:613-333-00-7	Acute Tox. 2, H330 Acute Tox. 3, H301 STOT RE 1, H372 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Repr. 1B, H360, M-Chronic:10, M-Acute:1000 Acute Toxicity Estimate: ATE - Oral: 221mg/kg bw	
< 0,1 %	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS:2634-33-5 EC:220-120-9 Index:613-088-00-6	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Acute Tox. 4, H302 Skin Sens. 1, H317 Aquatic Chronic 2, H411, M-Acute:1 Specific Concentration Limits: C ≥ 0.05%: Skin Sens. 1 H317	01-2120761540-60
< 0,0015 %	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	CAS:55965-84-9 Index:613-167-00-5	Acute Tox. 2, H330 Acute Tox. 2, H310 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 Specific Concentration Limits: 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	
< 0,0015 %	ethyl acrylate	CAS:140-88-5 EC:205-438-8 Index:607-032-00-X	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Skin Sens. 1, H317 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Specific Concentration Limits: C ≥ 5%: Skin Irrit. 2 H315 C ≥ 5%: Eye Irrit. 2 H319 C ≥ 5%: STOT SE 3 H335	01-2119459301-46

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

Wash immediately with water.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed

N.A.

4.3. Indication of any immediate medical attention and special treatment needed

N.A.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO_2).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhaltion of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Notes
ethanediol; ethylene glycol	NATIONAL	ARGENTINA	C			100.000		
	EU	NNN		52.000	20.000	104.000	40.000	Skin
	NATIONAL	BELGIUM		52.000	20.000	104.000	40.000	
	NATIONAL	ITALY		52.000	20.000	104.000	40.000	
	NATIONAL	ROMANIA		52.000	20.000	104.000	40.000	
	NATIONAL	SWEDEN		25.000	10.000	104.000	40.000	
	NATIONAL	TURKEY		52.000	20.000	104.000	40.000	
	NATIONAL	AUSTRALIA		52.000	20.000	104.000	40.000	
	NATIONAL	AUSTRIA		26.000	10.000	52.000	20.000	
	NATIONAL	BULGARIA		52.000	20.000	104.000	40.000	
	NATIONAL	CANADA		10.000		20.000		
	NATIONAL	CANADA	C			100.000	50.000	
	NATIONAL	CZECHIA		50.000		100.000		
	NATIONAL	CHILE	C			100.000	40.000	
	NATIONAL	CHINA		20.000		40.000		
	NATIONAL	KOREA, REPUBLIC OF	C			100.000		
	NATIONAL	CROATIA		52.000	20.000	104.000	40.000	
	NATIONAL	DENMARK		26.000	10.000			
	NATIONAL	ESTONIA		52.000	20.000	104.000	40.000	
	NATIONAL	FRANCE		52.000	20.000	104.000	40.000	
	NATIONAL	GERMANY		26.000	10.000			
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND		52.000	20.000	104.000	40.000	
	NATIONAL	GREECE		125.000	50.000	125.000	50.000	
	NATIONAL	INDONESIA				100.000		
	NATIONAL	IRELAND		20.000		104.000	52.000	
	NATIONAL	ICELAND		26.000	10.000	104.000	40.000	
	NATIONAL	LATVIA		52.000	20.000	104.000	40.000	
	NATIONAL	LITHUANIA		25.000	10.000	50.000	20.000	
	NATIONAL	MALAYSIA	C			100.000	39.400	
	NATIONAL	MEXICO	C			100.000		
	NATIONAL	NORWAY		52.000	20.000	104.000	40.000	
	NATIONAL	NEW ZEALAND	C			127.000	50.000	
	NATIONAL	NETHERLANDS		52.000	20.000	104.000	40.000	
	NATIONAL	POLAND		15.000		50.000		
	NATIONAL	PORTUGAL	C			100.000		
	NATIONAL	RUSSIAN FEDERATIO		5.000		10.000		

		N						
	NATIONAL	SINGAPORE				127.000	50.000	
	NATIONAL	SLOVAKIA		52.000	20.000	127.000	40.000	
	NATIONAL	SPAIN		52.000	20.000	127.000	40.000	
	NATIONAL	SOUTH AFRICA			20.000		40.000	
	NATIONAL	SWITZERLAND		26.000	10.000	52.000	20.000	
	NATIONAL	TAIWAN, PROVINCE OF CHINA		127.000	50.000			
	NATIONAL	HUNGARY		52.000		104.000		
	ACGIH	NNN			25		50	(V), A4 - URT irr
	ACGIH	NNN				10		(I, H), A4 - URT irr
	EU	NNN		52	20	104	40	Skin
sodium hydroxide; caustic soda	NATIONAL	AUSTRALIA	C			2		
	NATIONAL	AUSTRIA		2.000		4.000		Long term and short term: inhalable aerosol
	NATIONAL	BELGIUM		2.000				
	NATIONAL	CANADA	C			2.000		Ontario
	NATIONAL	CANADA	C			2.000		Quebec
	NATIONAL	DENMARK		2.000		2.000		
	NATIONAL	FINLAND	C			2.000		
	NATIONAL	FRANCE		2.000				
	NATIONAL	HUNGARY		2.000		2.000		
	NATIONAL	IRELAND				2.000		
	NATIONAL	JAPAN	C	2.000				JSOH; Reference value to the maximal exposure concentration of the substance during a working day
	NATIONAL	LATVIA		0.500				
	NATIONAL	NEW ZEALAND	C			2.000		
	NATIONAL	CHINA	C			2.000		
	NATIONAL	POLAND		0.500		1.000		
	NATIONAL	ROMANIA		1.000		3.000		
	NATIONAL	SINGAPORE				2.000		
	NATIONAL	KOREA, REPUBLIC OF	C			2.000		
	NATIONAL	SPAIN		2.000				
	NATIONAL	SWEDEN		1.000		1.000		Long term and short term: inhalable fraction
	NATIONAL	SWITZERLAND		2.000		2.000		long term and short term: inhalable fraction
	NATIONAL	UNITED STATES OF AMERICA	C			2.000		NIOSH
	NATIONAL	UNITED STATES OF AMERICA	C	2.000				OSHA
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND				2.000		

		NORTHERN IRELAND				
	NATIONAL	BULGARIA		2.000		
	NATIONAL	CZECHIA		1.000	2.000	
	NATIONAL	ESTONIA		1.000	2.000	
	NATIONAL	GREECE		2.000	2.000	
	NATIONAL	SLOVAKIA		2.000		
	NATIONAL	SLOVENIA		2.000		
	NATIONAL	TAIWAN, PROVINCE OF CHINA		2.000		
	ACGIH	NNN	C		2	URT, eye, and skin irr
zinc oxide	NATIONAL	AUSTRALIA		10.000		This value is for inhalable dust containing no asbestos and < 1% crystalline silica
	NATIONAL	AUSTRALIA		10.000	5.000	Long term and short term: Fume
	NATIONAL	BELGIUM		10.000		
	NATIONAL	CANADA		2.000	10.000	Ontario; Long term and short term: respirable aerosol
	NATIONAL	CANADA		10.000		Quebec
	NATIONAL	FRANCE		10.000		
	NATIONAL	JAPAN		1.000		Respirable dust
	NATIONAL	JAPAN		4.000		Total dust: Total dust comprises particles with a flow speed of 50 to 80 cm/sec at the entry of a particle sampler
	NATIONAL	LATVIA		0.500		
	NATIONAL	NEW ZEALAND		10.000	10.000	
	NATIONAL	CHINA		3.000	5.000	
	NATIONAL	SINGAPORE		10.000		
	NATIONAL	SPAIN		10.000		
	NATIONAL	SWEDEN		5.000		
	NATIONAL	SWITZERLAND		3.000	3.000	Long term and short term: respirable fraction
	NATIONAL	UNITED STATES OF AMERICA	C	15.000	5.000	Total dust
	NATIONAL	ITALY		2.000	10.000	
	NATIONAL	ARGENTINA		5.000	10.000	Long term and short term: fume
	NATIONAL	ARGENTINA		10.000		Dust
	NATIONAL	AUSTRIA		5.000		
	NATIONAL	BULGARIA		5.000	10.000	
	NATIONAL	CZECHIA		2.000	5.000	
	NATIONAL	CHILE		10.000	4.400	
	NATIONAL	KOREA, REPUBLIC OF		5.000	10.000	
	NATIONAL	CROATIA		2.000	10.000	Long term: respirable dust
	NATIONAL	DENMARK		4.000		
	NATIONAL	ESTONIA		5.000		
	NATIONAL	FINLAND		2.000	10.000	
	NATIONAL	GREECE		5.000	10.000	
	NATIONAL	INDONESIA		2.000	10.000	

	NATIONAL	IRELAND	2.000		10.000		Long term: respirable fraction
	NATIONAL	LITHUANIA	5.000				
	NATIONAL	MALAYSIA	5.000		10.000		
	NATIONAL	NORWAY	5.000				
	NATIONAL	POLAND	5.000		10.000		
	NATIONAL	PORTUGAL	2.000		10.000		
	NATIONAL	ROMANIA	5.000		10.000		
	NATIONAL	RUSSIAN FEDERATION	0.500		1.500		
	NATIONAL	SOUTH AFRICA	5.000		10.000		
	NATIONAL	TAIWAN, PROVINCE OF CHINA	5.000				
	NATIONAL	HUNGARY	5.000		20.000		
	ACGIH	NNN	2		10		(R) - Metal fume fever
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	NATIONAL	AUSTRIA	0.050				
	NATIONAL	GERMANY	0.200		0.400		DFG; Long term and short term: inhalable fraction
	NATIONAL	SWITZERLAND	0.200		0.400		Inhalable fraction
	NATIONAL	KOREA, REPUBLIC OF	0.100				
	NATIONAL	NETHERLANDS	0.200				
White mineral oil (petroleum)	NATIONAL	GERMANY	5.000		20.000		AGS; long term and short term: respirable fraction
	NATIONAL	GERMANY	5.000		20.000		DFG; long term and short term: respirable fraction
	NATIONAL	ROMANIA	5.000		10.000		
	NATIONAL	SWITZERLAND	5.000				Inhalable fraction
ethyl acrylate	EU	NNN	21	5	42	10	
	NATIONAL	AUSTRIA	20.000	5.000	40.000	10.000	
	NATIONAL	BELGIUM	21.000	5.000	42.000	10.000	
	NATIONAL	CANADA		5.000		15.000	Ontario
	NATIONAL	CANADA	20.000	5.000	61.000	15.000	Québec
	NATIONAL	DENMARK	20.000	5.000	40.000	10.000	
	NATIONAL	FINLAND	21.000	5.000	42.000	10.000	
	NATIONAL	FRANCE	21.000	5.000	42.000	10.000	
	NATIONAL	GERMANY	8.300	2.000	16.600	4.000	AGS
	NATIONAL	GERMANY	8.300	2.000	16.600	4.000	DFG
	NATIONAL	HUNGARY	21.000		42.000		
	NATIONAL	IRELAND	20.000	5.000	41.000	10.000	
	NATIONAL	ITALY	21.000	5.000	42.000	10.000	
	NATIONAL	LATVIA		5.000			
	NATIONAL	NEW ZEALAND C			20.000	5.000	
	NATIONAL	POLAND	20.000		40.000		
	NATIONAL	ROMANIA	21.000	5.000	42.000	10.000	

NATIONAL	SINGAPORE	20.000	5.000	61.000	15.000	
NATIONAL	KOREA, REPUBLIC OF	20.000	5.000			
NATIONAL	SPAIN	21.000	5.000	62.000	15.000	
NATIONAL	SWITZERLAND	10.000	2.500	42.000	10.000	
NATIONAL	NETHERLANDS	21.000		42.000		
NATIONAL	TURKEY	21.000	5.000	42.000	10.000	
NATIONAL	UNITED STATES OF AMERICA	100.000	25.000			OSHA
NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	24.000	5.000	42.000	10.000	
NATIONAL	ARGENTINA		5.000		15.000	
NATIONAL	BULGARIA	25.000	5.000	42.000	10.000	
NATIONAL	CZECHIA	20.000		40.000		
NATIONAL	CROATIA	21.000	5.000	42.000	10.000	
NATIONAL	ESTONIA	21.000	5.000	42.000	10.000	
NATIONAL	GREECE	21.000	5.000	42.000	10.000	
NATIONAL	ICELAND	21.000	5.000	42.000	10.000	
NATIONAL	LITHUANIA	21.000	5.000	42.000	10.000	
NATIONAL	MALAYSIA	20.000	5.000			
NATIONAL	MEXICO		5.000		15.000	
NATIONAL	NORWAY	21.000	5.000	42.000	10.000	
NATIONAL	PORTUGAL		5.000		15.000	
NATIONAL	PORTUGAL		5.000		15.000	
NATIONAL	SLOVAKIA	21.000	5.000	42.000	10.000	
NATIONAL	SLOVENIA	21.000	5.000	42.000	10.000	
NATIONAL	SOUTH AFRICA	20.000	5.000	60.000	15.000	
NATIONAL	TAIWAN, PROVINCE OF CHINA	102.000	25.000			
ACGIH	NNN		5		15	A4 - URT, eye, and GI irr, CNS impair, skin sens
EU	NNN	21	5	42	10	

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency
ethanediol; ethylene glycol	107-21-1	10.000 mg/l	Freshwater	
		10.000 mg/l	Intermittent releases (freshwater)	
		1.000 mg/l	Marine water	
		10.000 mg/l	Intermittent releases (marine water)	
		199.500 mg/l	Microorganisms in sewage treatments	
		37.000 mg/kg	Freshwater sediments	
		3.700 mg/kg	Marine water sediments	

		1.530 mg/kg	Soil
Pyrithione zinc	13463-41-7	90.000 ng/L	Freshwater
		90.000 ng/L	Marine water
		10.000 µg/l	Microorganisms in sewage treatments
		9.500 µg/kg	Freshwater sediments
		9.500 µg/kg	Marine water sediments
		1.020 mg/kg	Soil
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	2634-33-5	4.030 µg/l	Freshwater
		1.100 µg/l	Intermittent releases (freshwater)
		403.000 ng/L	Marine water
		110.000 ng/L	Intermittent releases (marine water)
		1.030 mg/l	Microorganisms in sewage treatments
		49.900 µg/kg	Freshwater sediments
		4.990 µg/kg	Marine water sediments
		3.000 mg/kg	Soil
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	3.390 µg/l	Freshwater
		3.390 µg/l	Intermittent releases (freshwater)
		3.390 µg/l	Marine water
		3.390 µg/l	Intermittent releases (marine water)
		230.000 µg/l	Microorganisms in sewage treatments
		27.000 µg/l	Freshwater sediments
		27.000 µg/l	Marine water sediments
		10.000 µg/l	Soil
ethyl acrylate	140-88-5	2.720 µg/l	Freshwater
		11.000 µg/l	Intermittent releases (freshwater)
		270.000 ng/L	Marine water
		10.000 mg/l	Microorganisms in sewage treatments
		21.300 µg/kg	Freshwater sediments
		21.300 µg/kg	Marine water sediments
		1.000 mg/kg	Soil
		10.000 mg/kg	Secondary poinsoning

Derived No Effect Level (DNEL) values

Component	CAS-No.	Worker Industry	Worker Professional	Consumer	Exposure Route	Exposure Frequency
ethanediol; ethylene glycol	107-21-1		35.000 mg/m³	7.000 mg/m³	Human Inhalation	Long Term, local effects
			106.000 mg/kg	53.000 mg/kg	Human Dermal	Long Term, systemic effects
Pyrithione zinc	13463-41-7		10.000 µg/kg		Human Dermal	Long Term, systemic effects

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	2634-33-5	6.810 mg/m³	1.200 mg/m³	Human Inhalation	Long Term, systemic effects
		966.000 µg/kg	345.000 µg/kg	Human Dermal	Long Term, systemic effects
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	20.000 µg/m³	20.000 µg/m³	Human Inhalation	Long Term, local effects
		40.000 µg/m³	20.000 µg/m³	Human Inhalation	Short Term, local effects
			90.000 µg/kg	Human Oral	Long Term, systemic effects
			110.000 µg/kg	Human Oral	Short Term, systemic effects
ethyl acrylate	140-88-5	21.000 mg/m³	2.500 mg/m³	Human Inhalation	Long Term, local effects
		0.920 mg/cm²	0.920 mg/cm²	Human Dermal	Short Term, local effects

8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Not needed for normal use.

Respiratory protection:

N.A.

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Liquid

Color: In compliance with the product description

Odour: Characteristic

Odour threshold: N.A.

pH: =8.60

Kinematic viscosity: <= 20,5 mm2/sec (40 °C)

Melting point / freezing point: N.A.

Initial boiling point and boiling range: 100 °C (212 °F)

Flash point: Not Applicable

Upper/lower flammability or explosive limits: N.A.

Vapour density: N.A.

Vapour pressure: N.A.

Relative density: 1.01 g/cm3

Solubility in water: Soluble

Solubility in oil: N.A.

Partition coefficient (n-octanol/water): N.A.

Auto-ignition temperature: N.A.

Decomposition temperature: N.A.

Flammability: N.A.

Volatile Organic compounds - VOCs = 0.50 % ; 5.01 g/l

Particle characteristics:

Particle size: N.A.

9.2. Other information

Miscibility: N.A.

Conductivity: N.A.

Evaporation rate: N.A. No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Data not available.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological Information of the Preparation

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified
	Based on available data, the classification criteria are not met
c) serious eye damage/irritation	Not classified
	Based on available data, the classification criteria are not met
d) respiratory or skin sensitisation	Not classified
	Based on available data, the classification criteria are not met
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified
	Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified
	Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

ethanediol; ethylene glycol	a) acute toxicity	LD50 Oral Rat = 7712.00 mg/kg	
		LC50 Inhalation of aerosol Rat > 2.50 mg/l 6h	
		LD50 Skin Mouse > 3500.00 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative	
	c) serious eye damage/irritation	Eye Irritant Rabbit No 24h	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity Rat Negative	Oral route
		Carcinogenicity Negative	
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat > 1000.00 mg/kg	

Pyrithione zinc	a) acute toxicity	ATE - Oral : 221 mg/kg bw	
		LD50 Oral Rat = 269.00000 mg/kg	14 days
		LC50 Inhalation Rat = 1.03000 mg/l 4h	
		LD50 Skin Rat > 2000.00000 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 4h	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative	
	f) carcinogenicity	Genotoxicity Negative	
		Carcinogenicity Oral Rat = 0.50000 mg/kg	NOAEL
		Carcinogenicity Skin = 5.00000 mg/kg	NOAEL; mouse
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 1.40000 mg/kg	
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	a) acute toxicity	LD50 Oral Rat = 670.00000 mg/kg	
		LD50 Skin Rat > 2000.00000 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative	
	c) serious eye damage/irritation	Eye Corrosive Positive	irreversible damage
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Positive	
	f) carcinogenicity	Genotoxicity Rat Negative	Oral route
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 112.00000 mg/kg	
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	a) acute toxicity	LD50 Oral Rat = 69.00 mg/kg	
		LD50 Skin Rabbit = 141.00 mg/kg	
		LC50 Inhalation Rat = 0.33 mg/l 4h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive	
	c) serious eye damage/irritation	Eye Corrosive Rabbit Positive	
	d) respiratory or skin sensitisation	Skin Sensitization Positive	
	f) carcinogenicity	Genotoxicity Negative	
		Carcinogenicity Skin Negative	
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 22.70000 mg/kg	
ethyl acrylate	a) acute toxicity	LD50 Oral Rat = 1120.00 ml/Kg	
		LC50 Inhalation Vapour Rat < 9.13 mg/l 4h	
		LD50 Skin Rat = 3049.00 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes 72h	
	d) respiratory or skin sensitisation	Skin Sensitization Positive	Mouse
	f) carcinogenicity	Genotoxicity Negative	Mouse intraperitoneal rout

g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 110.00 mg/kg

11.2 Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

Harmful to aquatic life with long lasting effects.

List of Eco-Toxicological properties of the product

The product is classified: Aquatic Chronic 3(H412)

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
ethanediol; ethylene glycol	CAS: 107-21-1 - EINECS: 203-473-3	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 72860.00 mg/L 96h b) Aquatic chronic toxicity : NOEC Fish = 15380.00 mg/L - 7 days b) Aquatic chronic toxicity : NOEC Ceriodaphnia dubia = 8590.00 mg/L - 7days a) Aquatic acute toxicity : NOEC Algae Pseudokirchnerella subcapitata = 100.00 mg/L 72h OECD guideline 201
Pyrithione zinc	CAS: 13463-41-7 - EINECS: 236-671-3 - INDEX: 613-333-00-7	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 2.60000 µg/L 96h US EPA- 72-1 a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 8.20000 µg/L US EPA- 72-2 a) Aquatic acute toxicity : EC50 Algae Navicula pelliculosa = 3.00000 µg/L dossier ECHA b) Aquatic chronic toxicity : NOEC Fish Pimephales promelas = 1.22000 µg/L ,,OECD Guideline 210 (Fish, Early-Life Stage Toxicity Test) - 28days b) Aquatic chronic toxicity : EC50 Lemna gibba = 9.60000 µg/L EPA OPPTS 850.4400 (Aquatic Plant Toxicity Test using Lemna spp. Tiers I & II)) d) Terrestrial toxicity : LC50 Folsomia candida = 822.00000 mg/kg ISO 11267 (Inhibition of Reproduction of Collembola by Soil Pollutants) e) Plant toxicity : NOEC Tomato, Cucumber, Lettuce, Soybean, Cabbage, Carrot, Oat > 0.49000 µg/L USEPA OPPTS 850.4100 d) Terrestrial toxicity : LC50 Avian Northern Bobwhite = 60.00000 mg/kg EPA FIFRA Guideline 71-1 - 14days d) Terrestrial toxicity : NOEC Avian Northern Bobwhite = 31.20000 mg/kg EPA FIFRA Guideline 71-1 - 14days
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS: 2634-33-5 - EINECS: 220-120-9 - INDEX: 613-088-00-6	a) Aquatic acute toxicity : LC50 Fish Oncorynchus mykiss = 2.15000 mg/L 96h OECD Guideline 203 a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 2.90000 mg/L 48h OECD Guideline 202 a) Aquatic acute toxicity : EC50 Algae green alga Selenastrum capricornutum freshwater algae = 110.00000 µg/L OECD Guideline 201 d) Terrestrial toxicity : EC50 Worm Eisenia fetida > 410.60000 mg/kg OECD Guideline 207 - Duration 14d d) Terrestrial toxicity : EC10 soil microorganisms = 263.70000 mg/kg - long

		term a) Aquatic acute toxicity : NOEC Sludge activated sludge 10.30000 mg/L 3h OECD Guideline 209 e) Plant toxicity : LC50 Triticum aestivum = 200.00000 mg/kg OECD Guideline 208
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	CAS: 55965-84-9 - INDEX: 613-167-00-5	a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 0.19000 mg/L 96h EPA OPP 72-1 (Fish Acute Toxicity Test) b) Aquatic chronic toxicity : NOEC Fish Danio rerio = 0.02000 mg/L ,,OECD Guideline 210 (Fish, Early-Life Stage Toxicity Test) - 35days a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 0.16000 mg/L 48h EPA OPP 72-2 (Aquatic Invertebrate Acute Toxicity Test) b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna = 0.10000 mg/L EPA OPP 72-4 (Fish Early Life-Stage and Aquatic Invertebrate Life-Cycle Studies) - 21days a) Aquatic acute toxicity : EC50 Algae Skeletonema costatum = 0.00 mg/L 96h ,,OECD Guideline 201 (Alga, Growth Inhibition Test) a) Aquatic acute toxicity : EC50 Sludge activated sludge = 4.50000 mg/L 3h ,,OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test) d) Terrestrial toxicity : LC50 Worm Eisenia fetida = 613.00000 mg/kg ,,OECD Guideline 207 (Earthworm, Acute Toxicity Tests) - 14days e) Plant toxicity : NOEC Trifolium pratense, Oryza sativa, Brassica napus = 1000.00000 mg/L OECD Guideline 208 (Terrestrial Plants Test: Seedling Emergence and Seedling Growth Test) - 21days
ethyl acrylate	CAS: 140-88-5 - EINECS: 205-438-8 - INDEX: 607-032-00-X	a) Aquatic acute toxicity : LC50 Fish Salmo gairdneri = 4.60 mg/L 96h EPA OTS 797.1400 a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 7.90 mg/L 48h EPA OTS 797.1300 b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna = 0.19 mg/L EPA OTS 797.1330 a) Aquatic acute toxicity : EC50 Algae Selenastrum capricornutum = 4.50 mg/L 72h OECD TG 201 a) Aquatic acute toxicity : NOEC Sludge activated sludge = 100.00 mg/L

12.2. Persistence and degradability

Component	Persitence/Degradability:	Test	Value	Notes
ethanediol; ethylene glycol	Readily biodegradable	Dissolved organic carbon	90.000	10days
Pyrithione zinc	Non-readily biodegradable	CO2 production		OECD 301B CO2evolution
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	Non-readily biodegradable	CO2 production		OECD Guideline 301C
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Non-readily biodegradable			
ethyl acrylate	Readily biodegradable	Biochemical oxigen demand	100.000	

12.3. Bioaccumulative potential

Component	Bioaccumulation	Test	Value	Notes
Pyrithione zinc	Bioaccumulative	BCF - Bioconcentrantion factor	1.400	
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	Bioaccumulative	BCF - Bioconcentrantion factor	6.620	
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-	Bioaccumulative	BCF - Bioconcentrantion factor	54.000	≤ 54

methyl-2H-isothiazol-3-one (3:1)

ethyl acrylate	Bioaccumulative	BCF - Bioconcentrantion factor	2.000

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT/vPvB Ingredients are present

12.6 Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7 Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

A waste code according to European waste catalogue (EWC) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Properties of waste which render it hazardous (Annex III, Directive 2008/98/EC):

N.A.

SECTION 14: Transport information

14.1. UN number or ID number

N/A

14.2. UN proper shipping name

ADR-Shipping Name: N/A

IATA-Technical name: N/A

IMDG-Technical name: N/A

14.3. Transport hazard class(es)

ADR-Class: N/A

IATA-Class: N/A

IMDG-Class: N/A

14.4. Packing group

ADR-Packing Group: N/A

IATA-Packing group: N/A

IMDG-Packing group: N/A

14.5. Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

IMDG-EMS: N/A

14.6. Special precautions for user

Road and Rail (ADR-RID) :

ADR-Label: N/A

ADR - Hazard identification number: N/A

ADR-Special Provisions: N/A

ADR-Transport category (Tunnel restriction code): N/A

ADR Limited Quantities: N/A

ADR Excepted Quantities: N/A

Air (IATA) :

IATA-Passenger Aircraft: N/A

IATA-Cargo Aircraft: N/A

IATA-Label: N/A

IATA-Subsidiary hazards: N/A

IATA-Erg: N/A

IATA-Special Provisioning: N/A

Sea (IMDG) :

IMDG-Stowage Code: N/A

IMDG-Stowage Note: N/A

IMDG-Subsidiary hazards: N/A

IMDG-Special Provisioning: N/A

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)
Regulation (EU) n. 2020/217 (ATP 14 CLP)
Regulation (EU) n. 2020/1182 (ATP 15 CLP)
Regulation (EU) n. 2021/643 (ATP 16 CLP)
Regulation (EU) n. 2020/878
Regulation (EC) nr 648/2004 (Detergents).

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3

Restrictions related to the substances contained: 28, 40, 75

Provisions related to directive EU 2012/18 (Seveso III):

N.A.

Regulation (EU) 649/2012 (PIC regulation):

No Substance Listed

German Water Hazard Class.

Class 2: hazardous for water.

SVHC Substances:

No data available

Dir. 2004/42/EC (VOC directive)

(ready to use)

Volatile Organic compounds - VOCs = 0.50 %

Volatile Organic compounds - VOCs = 5.01 g/L

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
2.6/2	Flam. Liq. 2	Flammable liquid, Category 2
3.1/4/Dermal	Acute Tox. 4	Acute toxicity (dermal), Category 4
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
4.1/C3	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

IC50: half maximal inhibitory concentration

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: Keep Away From Heat
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

Exposure Scenario
Ethane-1,2-diol

Exposure Scenario, 09/08/2021

Substance identity	
	Ethane-1,2-diol
CAS No.	107-21-1
INDEX No.	603-027-00-1
EINECS No.	203-473-3
Registration number	01-2119456816-28

Table of contents

1. ES 1 Widespread use by professional workers; Various products (PC9a, PC9b)

1.1 TITLE SECTION

Exposure Scenario name	Use in coatings - Use in rigid foams, coatings, adhesives and sealants
Date - Version	09/08/2021 - 1.0
Life Cycle Stage	Widespread use by professional workers
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22)
Product Categories	Coatings and paints, thinners, paint removers (PC9a) - Fillers, putties, plasters, modelling clay (PC9b)

Environment Contributing Scenario

CS1	ERC8d

Worker Contributing Scenario

CS2 Material transfers	PROC8a
CS3 Rolling, Brushing	PROC10
CS4 Roller, spreader, flow application	PROC11
CS5 Handling and dilution of concentrates	PROC19

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario (ERC8d)

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

Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 1 %.

Amount used, frequency and duration of use (or from service life)

Amounts used:

Daily amount per site = 5479 kg

Release type: Continuous release

Emission days: 365 days per year

Technical and organisational conditions and measures

Control measures to prevent releases

Municipal sewage treatment plant is assumed.	Air - minimum efficiency of: = 95 % Water - minimum efficiency of: = 87 %

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

Waste treatment

Contain and dispose of waste according to local regulations.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100
Local freshwater dilution factor: 10

1.2. CS2: Worker Contributing Scenario: Material transfers (PROC8a)

Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities (PROC8a)

Product (article) characteristics

Physical form of product:
Liquid

Concentration of substance in product:
Covers percentage substance in the product up to 1 %.

Amount used, frequency and duration of use/exposure

Duration:
Exposure duration < 8 h

Frequency:
Use frequency < 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Provide extract ventilation to points where emissions occur. Ensure operatives are trained to minimise exposures. Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	Inhalation - minimum efficiency of: 80 %

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

Personal protection
Wear suitable respiratory protection.

Other conditions affecting worker exposure

Indoor use
Professional use
Temperature: Assumes use at not more than 20 °C above ambient temperature.
Body parts exposed:
Assumes that potential dermal contact is limited to hands.

1.2. CS3: Worker Contributing Scenario: Rolling, Brushing (PROC10)

Process Categories	Roller application or brushing (PROC10)

Product (article) characteristics

Physical form of product:
Liquid

Concentration of substance in product:
Covers percentage substance in the product up to 1 %.

Amount used, frequency and duration of use/exposure

Duration:
Exposure duration < 8 h

Frequency:
Use frequency < 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Provide extract ventilation to points where emissions occur. Ensure operatives are trained to minimise exposures. Supervision in place to check that the risk management measures in place are being used correctly and	Inhalation - minimum efficiency of: 80 %

operation conditions followed.	

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

Personal protection

Wear suitable respiratory protection. Wear chemically resistant gloves (tested to EN374) in combination with ''basic'' employee training.	Dermal - minimum efficiency of: 90 %

Other conditions affecting worker exposure

Indoor use
Professional use
Temperature: Assumes use at not more than 20 °C above ambient temperature.
Body parts exposed:
Assumes that potential dermal contact is limited to hands.

1.2. CS4: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)

Process Categories	Non industrial spraying (PROC11)

Product (article) characteristics

Physical form of product:
Liquid

Concentration of substance in product:
Covers percentage substance in the product up to 1 %.

Amount used, frequency and duration of use/exposure

Amounts used:
Application rate 0.05 L/min

Duration:
Exposure duration < 150 min

Frequency:
Use frequency < 5 days per week

Technical and organisational conditions and measures

Technical and organisational measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
Ensure operatives are trained to minimise exposures.
Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.

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

Personal protection

Wear suitable respiratory protection. Wear chemically resistant gloves (tested to EN374) in combination with ''basic'' employee training. Wear suitable coveralls to prevent exposure to the skin.	Dermal - minimum efficiency of: 80 % Inhalation - minimum efficiency of: 40 %

Other conditions affecting worker exposure

Indoor use
Professional use
Room size: Covers use in room size of < 1000 m³
Temperature: Assumes use at not more than 20 °C above ambient temperature.
Body parts exposed:
Assumes that potential dermal contact is limited to hands and forearms.

1.2. CS5: Worker Contributing Scenario: Handling and dilution of concentrates (PROC19)

Process Categories	Manual activities involving hand contact (PROC19)

Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers percentage substance in the product up to 1 %.

Amount used, frequency and duration of use/exposure

Duration:

Exposure duration < 15 min

Frequency:

Use frequency < 240 days per year

Technical and organisational conditions and measures

Technical and organisational measures

Provide extract ventilation to points where emissions occur. Ensure operatives are trained to minimise exposures. Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.	Inhalation - minimum efficiency of: 80 %

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

Personal protection

Wear suitable respiratory protection. Wear chemically resistant gloves (tested to EN374) in combination with ''basic'' employee training.	Dermal - minimum efficiency of: 90 %

Other conditions affecting worker exposure

Indoor use

Professional use

Temperature: Assumes use at not more than 20 °C above ambient temperature.

Body parts exposed:

Assumes that potential dermal contact is limited to hands.

1.3 Exposure estimation and reference to its source

1.3. CS2: Worker Contributing Scenario: Material transfers (PROC8a)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 12.94 mg/m³	ECETOC TRA worker v2.0	= 0.37
dermal, systemic, long-term	= 13.71 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.01

1.3. CS3: Worker Contributing Scenario: Rolling, Brushing (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 12.94 mg/m³	ECETOC TRA worker v2.0	= 0.37
dermal, systemic, long-term	= 2.74 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.03

1.3. CS4: Worker Contributing Scenario: Roller, spreader, flow application (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 14.05 mg/m³	ECETOC TRA worker v2.0	= 0.4
dermal, systemic, long-term	= 53.75 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.51

1.3. CS5: Worker Contributing Scenario: Handling and dilution of concentrates (PROC19)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 6.47 mg/m³	ECETOC TRA worker v2.0	= 0.18
dermal, systemic, long-term	= 14.14 mg/kg bw/day	ECETOC TRA worker v2.0	= 0.13

1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance to check compliance with the exposure scenario:

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