Safety Data Sheet

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

KERAKOVER SILOX FINISH

Date of first edition: 6/29/2021

Safety Data Sheet dated 5/26/2023

version 3

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

1.1. Product identifier

Mixture identification:

Trade name: KERAKOVER SILOX FINISH

Trade code: 001028009 .050C

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

Recommended use: Paints/coatings - Protective and functional

Uses advised against: All uses other than recommended ones

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: (+353) 809 2166 (Daily 8am-10pm)

In case of emergency call 999 or 112

Malta

In case of emergency call: 112 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin Sens. 1A	May cause an allergic skin reaction.
Aquatic Chronic 3	Harmful to aquatic life with long lasting effects.
DECL10	This titanium dioxide-containing product is not classified as carcinogen by inhalation because it does not meet the criteria stated in Note 10, Annex VI of Regulation (EC) 1272/2008. Note 10: The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Pictograms and Signal Words

Warning

Hazard statements

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P102 Keep out of reach of children.

P273 Avoid release to the environment.

P302+P352 IF ON SKIN: Wash with plenty of water.

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

Contains

2-methylisothiazol-3(2H)-one

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one

2-octyl-2H-isothiazol-3-one

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Dir. 2004/42/EC (VOC directive)

Exterior walls of mineral substrate

EU limit value for this product (cat. A/c): 40 g/l

This product contains max 5.35 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:; C(M)IT/MIT (3:1); OIT; IPBC; Pyrithione zinc; Terbutryn; 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: KERAKOVER SILOX FINISH

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

Qty	Name	Ident. Numb.	Classification	Registration Number
1-2,4 %	titanium dioxide	CAS:13463-67-7 EC:236-675-5 Index:022-006-00-2	Carc. 2, H351	
< 0,2 %	Quartz	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372	
< 0,05 %	3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate	CAS:55406-53-6 EC:259-627-5 Index:616-212-00-7	Acute Tox. 4, H302; Eye Dam. 1, H318; Skin Sens. 1, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 3, H331; STOT RE 1, H372, M-Chronic:1, M-Acute:10	
< 0,05 %	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
< 0,01 %	2-methylisothiazol-3(2H)-one	CAS:2682-20-4 EC:220-239-6 Index:613-326-00-9	Acute Tox. 2, H330 Acute Tox. 3, H301 Acute Tox. 3, H311 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410, M-Chronic:1, M-Acute:10, EUH071 Specific Concentration Limits: C ≥ 0.0015%: Skin Sens. 1A H317	01-2120764690-50

< 0,01 %	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	
< 0,01 %	Terbutryn	CAS:886-50-0 EC:212-950-5	Acute Tox. 4, H302; Skin Sens. 1B, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410, M-Chronic:100, M-Acute:100	
< 0,01 %	2-octyl-2H-isothiazol-3-one	CAS:26530-20-1 EC:247-761-7 Index:613-112-00-5	Acute Tox. 2, H330 Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Corrosive to the respiratory tract., M-Chronic:100, M-Acute:100 Specific Concentration Limits: C ≥ 0.0015%: Skin Sens. 1A H317 Acute Toxicity Estimate: ATE - Oral: 125mg/kg bw ATE - Dermal: 311mg/kg bw	
< 0,0015 %	ethanediol; ethylene glycol	CAS:107-21-1 EC:203-473-3	Acute Tox. 4, H302; STOT RE 2, H373	01-2119456816-28
< 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	

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Remove contaminated clothing immediatley and dispose off safely.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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.

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
Calcium carbonate	NATIONAL	AUSTRALIA		10.000				This value is for inhalable dust containing no asbestos and <1 % crystalline silica.
	NATIONAL	FRANCE		10.000				inhalable aerosol
	NATIONAL	HUNGARY		10.000				inhalable aerosol
	NATIONAL	IRELAND		10.000				Inhalable fraction
	NATIONAL	IRELAND		4.000				Respirable fraction
	NATIONAL	LATVIA		6.000				
	NATIONAL	POLAND		10.000				

	NATIONAL	SWITZERLAND	3.000			respirable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	10.000			inhalable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	4.000			respirable aerosol
	NATIONAL	BELGIUM	10.000			
	NATIONAL	CROATIA	10.000			
	NATIONAL	NETHERLANDS	10.000			
	NATIONAL	PORTUGAL	10.000			
	NATIONAL	SPAIN	10.000			
Quartz	NATIONAL	AUSTRALIA	0.050			Respirable fraction
	NATIONAL	AUSTRIA	0.050			MAK value, Respirable fraction
	NATIONAL	BELGIUM	0.100			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
	NATIONAL	DENMARK	0.300		0.600	Inhalable aerosol
	NATIONAL	DENMARK	0.100		0.200	Respirable aerosol
	NATIONAL	FINLAND	0.050			Respirable fraction
	NATIONAL	FRANCE	0.100			Respirable aerosol
	NATIONAL	HUNGARY	0.100			Respirable fraction
	NATIONAL	IRELAND	0.100			Respirable fraction
	NATIONAL	SPAIN	0.050			Respirable fraction
	NATIONAL	SWEDEN	0.100			Respirable fraction
	NATIONAL	SWITZERLAND	0.150			Respirable aerosol
	NATIONAL	NETHERLANDS	0.075			Respirable fraction
	NATIONAL	ITALY	0.100			Polvere di silice cristallina respirabile (frazione inalabile). Rif:D.Lgs 81/2008
	NATIONAL	INDIA	10.000			
	NATIONAL	POLAND	0.100			Respirable fraction Dz. U. 2018 poz. 1286 wraz z późn. zm.
	NATIONAL	PORTUGAL	0.050			Respirable fraction
	NATIONAL	SLOVENIA	0.050	0.400		
titanium dioxide	NATIONAL	AUSTRALIA	10			
	NATIONAL	BELGIUM	10.000			
	NATIONAL	DENMARK	6.000		12.000	Long term and short term: total dust
	NATIONAL	FRANCE	11.000			Inhalable aerosol
	NATIONAL	GERMANY	0.300		2.400	DFG; Long term and short term: excluding ultrafine particles; respirable fraction; multiplied by the material

					density;
	NATIONAL	IRELAND	10.000		Inhalable fraction
	NATIONAL	IRELAND	8.000		Respirable fraction
	NATIONAL	LATVIA	10.000		
	NATIONAL	POLAND	10.000	30.000	Dz. U. 2018 poz. 1286 wraz z późn. zm
	NATIONAL	ROMANIA	10.000	15.000	
	NATIONAL	SPAIN	10.000		Inhalable aerosol
	NATIONAL	SWEDEN	5.000		Inhalable aerosol
	NATIONAL	SWITZERLAND	3.000		Respirable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	10.000		Inhalable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	4.000		Respirable aerosol
	NATIONAL	AUSTRIA	5.000	10.000	
	NATIONAL	BULGARIA	10.000		
	NATIONAL	CROATIA	10.000		total dust
	NATIONAL	CROATIA	4.000		respirable dust
	NATIONAL	GREECE	10.000		
	NATIONAL	GREECE	50.000		
	NATIONAL	GREECE	5.000		
	NATIONAL	LITHUANIA	5.000		
	NATIONAL	PORTUGAL	10.000		
	NATIONAL	SLOVAKIA	5.000		
	NATIONAL	SLOVENIA	6.000		
	ACGIH	NNN	10.000		A4 - LRT irr
Cellulose	NATIONAL	AUSTRALIA	10.000		This value is for inhalable dust containing no asbestos an <1 % crystalline silica
	NATIONAL	BELGIUM	10.000		
	NATIONAL	FRANCE	10.000		Inhalable aerosol
	NATIONAL	IRELAND	10.000	20.000	Long term and short term: inhalable fraction
	NATIONAL	IRELAND	4.000		Respirable fraction
	NATIONAL	LATVIA	2.000		
	NATIONAL	SPAIN	10.000		Inhalable aerosol
	NATIONAL	SWITZERLAND	3.000		Respirable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	10.000	20.000	Long term and short term: inhalable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN	5.000		Respirable aerosol

		AND NORTHERN IRELAND				
	NATIONAL	ESTONIA	10.000			
	NATIONAL	PORTUGAL	10.000			
	NATIONAL	CROATIA	10.000		20.000	Long term and short term: total dust
	NATIONAL	CROATIA	4.000			Respirable dust
	ACGIH	NNN	10.000			URT irr
Diiron trioxide	NATIONAL	AUSTRALIA	5.000			
	NATIONAL	AUSTRIA	5.000		10.000	long term and short term: respirable aerosol
	NATIONAL	BELGIUM	5.000	2.000		
	NATIONAL	DENMARK	3.500		7.000	
	NATIONAL	FINLAND	5.000			Calculed as Fe; fume
	NATIONAL	HUNGARY	6.000			Respirable aerosol
	NATIONAL	IRELAND	5.000		10.000	
	NATIONAL	POLAND	5.000		10.000	
	NATIONAL	ROMANIA	5.000		10.000	
	NATIONAL	SPAIN	5.000			
	NATIONAL	SWEDEN	3.500			
	NATIONAL	SWITZERLAND	3.000			Respirable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	5.000		10.000	
	NATIONAL	BULGARIA	5.000			
	NATIONAL	CROATIA	5.000			
	NATIONAL	ESTONIA	3.500			
	NATIONAL	FRANCE	5.000			
	NATIONAL	GERMANY	1.250			
	NATIONAL	GREECE	10.000		10.000	
	NATIONAL	LITHUANIA	3.500			
	NATIONAL	PORTUGAL	5.000			
	NATIONAL	SLOVAKIA	1.500			
	NATIONAL	SLOVENIA	6.000			
	NATIONAL	HUNGARY	6.000			
	ACGIH	NNN	5.000			(R), A4 - Pneumoconiosis
sodium chloride	NATIONAL	LATVIA	5.000			
	NATIONAL	LITHUANIA	5.000			
Quartz	NATIONAL	AUSTRALIA	0.050			Respirable fraction
	NATIONAL	AUSTRIA	0.050			respirable fraction
	NATIONAL	BELGIUM	0.100			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
	NATIONAL	DENMARK	0.300		0.600	Inhalable aerosol
	NATIONAL	DENMARK	0.100		0.200	Respirable aerosol
	NATIONAL	FINLAND	0.050			Respirable fraction
	NATIONAL	FRANCE	0.100			Respirable aerosol

	NATIONAL	HUNGARY	0.100			Respirable aerosol
	NATIONAL	IRELAND	0.100			Respirable fraction
	NATIONAL	SPAIN	0.050			Respirable fraction
	NATIONAL	SWEDEN	0.100			Respirable aerosol
	NATIONAL	SWITZERLAND	0.150			Respirable aerosol
	NATIONAL	NETHERLANDS	0.075			Respirable dust
	NATIONAL	ITALY	0.100			Polvere di silice cristallina respirabile (frazione inalabile). D.Lgs 81/2008
	NATIONAL	CROATIA	0.100			
	NATIONAL	ESTONIA	0.100			
	NATIONAL	LITHUANIA	0.100			
	NATIONAL	POLAND	0.100			Respirable fraction Dz. U. 2018 poz. 1286 wraz z późn. zm.
	NATIONAL	PORTUGAL	0.050			
	NATIONAL	SLOVENIA	0.050	0.400		
	EU	NNN	0.100			Polvere di silice cristallina respirabile, frazione inalabile. (R), A2 - Pulm fibrosis, lung cancer. Directive 2017/2398
	NATIONAL	INDIA	10.000			
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy- Ethane-1,2-diol, ethoxylated	NATIONAL	AUSTRIA	1000.000		4000.000	Long term and short term: INHALABLE FRACTION
	NATIONAL	DENMARK	1000.000		2000.000	
	NATIONAL	GERMANY	1000.000		8000.000	AGS; Long term and short term: inhalable aerosol
	NATIONAL	GERMANY	200.000		400.000	DFG; Long term and short term: inhalable aerosol
	NATIONAL	SWITZERLAND		1000.000		
	NATIONAL	SLOVAKIA	100.000			
Barium sulfate	NATIONAL	AUSTRALIA	10.000			
	NATIONAL	BELGIUM	5.000			Without asbestos fibers and <1% crystalline silica
	NATIONAL	GERMANY	0.300		2.400	DFG; Multiplied by the density of the material; Long term and short term: respirable fraction
	NATIONAL	GERMANY	4.000			DFG; Inhalable fraction
	NATIONAL	IRELAND	2.000			Respirable fraction
	NATIONAL	LATVIA	6.000			
	NATIONAL	SPAIN	10.000			Inhalable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	10.000			Inhalable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	4.000			Respirable aerosol

	ACGIH	NNN	5.000				(I, E) - Pneumoconiosis
2-amino-2-methylpropanol	NATIONAL	GERMANY	3.700	1.000	7.400	2.000	AGS; Long term and short term: inhalable fraction and vapour
	NATIONAL	GERMANY	3.700	1.000	7.400	2.000	DFG; Long term and short term: inhalable fraction and vapour
	NATIONAL	SWITZERLAND	8.700	2.400	17.400	4.800	
	NATIONAL	SLOVENIA	3.700	1.000	17.400	4.800	
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	FRANCE	10.000				
	NATIONAL	LATVIA	0.500				
	NATIONAL	SPAIN	10.000				
	NATIONAL	SWEDEN	5.000				
	NATIONAL	SWITZERLAND	3.000		3.000		Long term and short term: respirable fraction
	NATIONAL	AUSTRIA	5.000				
	NATIONAL	BULGARIA	5.000		10.000		
	NATIONAL	CZECHIA	2.000		5.000		
	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	IRELAND	2.000		10.000		Long term: respirable fraction
	NATIONAL	LITHUANIA	5.000				
	NATIONAL	POLAND	5.000		10.000		
	NATIONAL	PORTUGAL	2.000		10.000		
	NATIONAL	ROMANIA	5.000		10.000		
	NATIONAL	HUNGARY	5.000		20.000		
	ACGIH	NNN	2.000		10.000		(R) - Metal fume fever
3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate	NATIONAL	GERMANY	0.058	0.005	0.116	0.010	AGS; long term and short term: inhalable fraction and vapour
	NATIONAL	GERMANY	0.058	0.005	0.116	0.010	DFG
	NATIONAL	SWITZERLAND	0.120	0.010	0.240	0.020	
	NATIONAL	SLOVENIA	0.120	0.010	0.240	0.020	
Carbon black	NATIONAL	AUSTRALIA	3.000				
	NATIONAL	BELGIUM	3.000				
	NATIONAL	DENMARK	3.500		7.000		
	NATIONAL	FINLAND	3.500		7.000		
	NATIONAL	FRANCE	3.500				
	NATIONAL	IRELAND	3.500		7.000		
	NATIONAL	SPAIN	3.500				
	NATIONAL	SWEDEN	3.000				
	NATIONAL	UNITED KINGDOM OF GREAT	3.500		7.000		

		BRITAIN AND NORTHERN IRELAND				
	NATIONAL	CROATIA		3.500	7.000	
	NATIONAL	GREECE		3.500	7.000	
	NATIONAL	PORTUGAL		3.000		
	ACGIH	NNN		3.000		(I), A3 - Bronchitis
2-methylisothiazol-3(2H)-one	NATIONAL	AUSTRIA		0.050		
	NATIONAL	GERMANY		0.200	0.400	DFG; long term: inhalable fraction
	NATIONAL	SWITZERLAND		0.100	0.400	Long term and short term: inhalable fraction
	NATIONAL	SLOVENIA		0.050		
Kaolin	NATIONAL	AUSTRALIA		10.000		This value is for inhalable dust containing no asbestos and < 1% crystalline silica.
	NATIONAL	BELGIUM		2.000		
	NATIONAL	DENMARK		2.000	4.000	Respirable aerosol
	NATIONAL	FINLAND		2.000		Respirable fraction
	NATIONAL	FRANCE		10.000		Respirable aerosol
	NATIONAL	IRELAND		2.000		
	NATIONAL	SWITZERLAND		3.000		Respirable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND		2.000		Respirable aerosol
	NATIONAL	POLAND		10.000		inhalable fraction Dz. U. 2018 poz. 1286 wraz z późn. zm.
2-octyl-2H-isothiazol-3-one	NATIONAL	AUSTRIA		0.050	0.050	Long term and short term: inhalable aerosol
	NATIONAL	GERMANY		0.050	0.100	AGS; Long term and short term: inhalable aerosol
	NATIONAL	GERMANY		0.050	0.100	DFG: Long term and short term: inhalable aerosol
	NATIONAL	SWITZERLAND		0.050	0.100	Long term and short term: inhalable aerosol
	NATIONAL	SLOVENIA		0.050	0.100	Long term and short term: inhalable fraction
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	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	LATVIA		0.500		
	NATIONAL	POLAND		0.500	1.000	

	NATIONAL	ROMANIA		1.000		3.000		
	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 KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND				2.000		
	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				
	ACGIH	NNN	C			2.000		URT, eye, and skin irr
ethanediol; ethylene glycol	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	Cute
	NATIONAL	ROMANIA		52.000	20.000	104.000	40.000	
	NATIONAL	SWEDEN		25.000	10.000	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	CZECHIA		50.000		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	IRELAND		20.000		104.000	52.000	
	NATIONAL	LATVIA		52.000	20.000	104.000	40.000	
	NATIONAL	LITHUANIA		25.000	10.000	50.000	20.000	
	NATIONAL	NETHERLANDS		52.000	20.000	104.000	40.000	
	NATIONAL	POLAND		15.000		50.000		
	NATIONAL	PORTUGAL	C			100.000		
	NATIONAL	SLOVAKIA		52.000	20.000	127.000	40.000	
	NATIONAL	SPAIN		52.000	20.000	127.000	40.000	
	NATIONAL	SWITZERLAND		26.000	10.000	52.000	20.000	
	NATIONAL	HUNGARY		52.000		104.000		
	ACGIH	NNN			25.000		50.000	(V), A4 - URT irr
	ACGIH	NNN				10.000		(I, H), A4 - URT irr

	EU	NNN	52.000	20.000	104.000	40.000	Skin
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	NETHERLANDS	0.200				
glyoxal…%; ethandial…%	NATIONAL	BELGIUM	0.1				Inhalable fraction and vapour
	NATIONAL	DENMARK	0.500	0.200	0.500	0.200	
	NATIONAL	FINLAND	0.020				
	NATIONAL	SPAIN	0.100				
	NATIONAL	PORTUGAL	0.100				
	ACGIH	NNN	0.100				(IFV), DSEN, A4 - URT irr, larynx metaplasia

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency
titanium dioxide	13463-67-7	0.184 mg/l	Freshwater	
		0.018 mg/l	Marine water	
		1.000 mg/kg	Intermittent releases (freshwater)	
		100.000 mg/kg	Intermittent releases (marine water)	
		100.000 mg/kg	Microorganisms in sewage treatments	
3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate	55406-53-6	500.000 ng/L	Freshwater	
		530.000 ng/L	Intermittent releases (freshwater)	
		46.000 ng/L	Marine water	
		530.000 ng/L	Intermittent releases (marine water)	
		440.000 ng/L	Microorganisms in sewage treatments	
		440.000 ng/L	Microorganisms in sewage treatments	
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
2-methylisothiazol-3(2H)-one	2682-20-4	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
		47.100 µg/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
2-octyl-2H-isothiazol-3-one	26530-20-1	2.200 µg/l	Freshwater
		1.220 µg/l	Intermittent releases (freshwater)
		220.000 ng/L	Marine water
		122.000 ng/L	Intermittent releases (marine water)
		47.500 µg/kg	Freshwater sediments
		47.500 µg/kg	Marine water sediments
		8.200 µg/kg	Soil
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
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

Derived No Effect Level (DNEL) values

Component	CAS-No.	Worker Industry	Worker Professional	Consumer	Exposure Route	Exposure Frequency
titanium dioxide	13463-67-7		10.000 mg/m³		Human Inhalation	Long Term, local effects
3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate	55406-53-6		23.000 µg/m³		Human Inhalation	Long Term, systemic effects
			70.000 µg/m³		Human Inhalation	Short Term, systemic effects
			1.160 mg/m³		Human Inhalation	Long Term, local effects
			1.160 mg/m³		Human Inhalation	Short Term, local effects
			2.000 mg/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
2-methylisothiazol-3(2H)-one	2682-20-4		21.000 µg/m³	21.000 µg/m³	Human Inhalation	Long Term, local effects
			43.000 µg/m³	43.000 µg/m³	Human Inhalation	Short Term, local effects
				27.000 µg/kg	Human Oral	Long Term, systemic effects
				53.000 µg/kg	Human Oral	Short Term, systemic effects
Pyrithione zinc	13463-41-7		10.000 µg/kg		Human Dermal	Long Term, systemic effects
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
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

8.2. Exposure controls

Eye protection:

Eye glasses with side protection.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Nitrile rubber .

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: Light grey

Odour: Characteristic

Odour threshold: N.A.

pH: =8.70 (OECD 122)

Kinematic viscosity: N.A.

Melting point / freezing point: N.A.

Initial boiling point and boiling range: 100 °C (212 °F) (ASTM-E537)

Flash point: > 100 °C (212 °F) (ISO 3679)

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

Vapour density: N.A.

Vapour pressure: N.A.

Relative density: 1.78 g/cm3 (ISO 2811)

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 = 0.30 % ; 5.35 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	The product is classified: Skin Sens. 1A(H317)

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:

titanium dioxide	a) acute toxicity	LD50 Oral Rat > 5000.00 mg/kg	
		LC50 Inhalation > 6.82 mg/l	
	d) respiratory or skin sensitisation	Skin Sensitization Negative	
	i) STOT-repeated exposure	No Observed Adverse Effect Level 1000.00	
Quartz	a) acute toxicity	LD50 Oral > 2000.00000 mg/kg	
3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate	a) acute toxicity	LD50 Oral Rat = 1056.00000 mg/kg	
		LC50 Inhalation Dust Rat > 6.89000 mg/l 4h	
		LD50 Skin Rabbit > 2000.00000 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 4h	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes	
	f) carcinogenicity	Genotoxicity Negative	Mouse oral route
		Carcinogenicity Oral Negative	Mouse
	g) reproductive toxicity	Reproductive Toxicity Oral Rat Negative	
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	a) acute toxicity	LD50 Oral Rat = 670.00 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	
2-methylisothiazol-3(2H)-one	a) acute toxicity	LC50 Inhalation of aerosol Rat = 0.10000 mg/l 4h	
		LD50 Oral Rat = 120.00000 mg/kg	
		LD50 Skin Rat = 242.00000 mg/kg 24h	
	b) skin corrosion/irritation	Skin Corrosive Rabbit Positive 4h	
	c) serious eye damage/irritation	Eye Corrosive Rabbit Positive	

	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Positive	
	f) carcinogenicity	Genotoxicity Rat Negative	Oral route
		Carcinogenicity Oral Rat Negative	
	g) reproductive toxicity	Reproductive Toxicity Oral Rat = 200.00000 Ppm	NOAEL
Pyrithione zinc	a) acute toxicity	ATE - Oral : 221 mg/kg bw	
		LD50 Oral Rat = 269.00 mg/kg	14 days
		LC50 Inhalation Dust Rat = 0.14 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	
2-octyl-2H-isothiazol-3-one	a) acute toxicity	ATE - Oral : 125 mg/kg bw	
		ATE - Dermal : 311 mg/kg bw	
		LD50 Oral Rat = 125.00 mg/kg	
		LC50 Inhalation Mist Rat = 0.27 mg/l 4h	
		LD50 Skin Rabbit = 311.00000 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes	
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Positive	
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	
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

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
titanium dioxide	CAS: 13463-67-7 - EINECS: 236-675-5 - INDEX: 022-006-00-2	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas (Cavedano americano) > 1000.00 mg/L 96h
		a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata (alghe cloroficee) > 100.00 mg/L 72h
		a) Aquatic acute toxicity : NOEC Algae = 5600.00 mg/L
		a) Aquatic acute toxicity : EC50 Daphnia |Daphnia magna (Pulce d'acqua grande) > 100.00 mg/L 48h
3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate	CAS: 55406-53-6 - EINECS: 259-627-5 - INDEX: 616-212-00-7	a) Aquatic acute toxicity : LC50 Fish Sheapshed minnow = 0.06700 mg/L 96h
		b) Aquatic chronic toxicity : NOEC Fish Pimephales promelas = 8.40000 µg/L EPA OPP 72-4 (Fish Early Life-Stage and Aquatic Invertebrate Life-Cycle Studies) - 35days
		a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 0.64500 mg/L 48h EPA OPP 72-2 (Aquatic Invertebrate Acute Toxicity Test)
		b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna = 49.90000 µg/L OECD 202 - 21days
		a) Aquatic acute toxicity : LC50 Algae Desmodesmus subspicatus = 53.00000 µg/L 72h ,,OECD Guideline 201 (Alga, Growth Inhibition Test)
		a) Aquatic acute toxicity : LC50 Sludge activated sludge = 44.00000 mg/L 3h OECD Guideline 209
		e) Plant toxicity : LC50 Avena sativa = 4.92000 mg/kg OECD Guideline 208 (Terrestrial Plants Test: Seedling Emergence and Seedling Growth Test)
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
2-methylisothiazol-3(2H)-one	CAS: 2682-20-4 - EINECS: 220-239-6 - INDEX: 613-326-00-9	a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 4.77000 mg/L 96h ,,OECD Guideline 203 (Fish, Acute Toxicity Test) b) Aquatic chronic toxicity : NOEC Fish Oncorhynchus mykiss = 4.93000 mg/L Dossier ECHA a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 0.93400 mg/L 48h OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) b) Aquatic chronic toxicity : EC10 Daphnia Daphnia magna = 0.04400 mg/L OECD Guideline 211 (Daphnia magna Reproduction Test) - Duration 21d a) Aquatic acute toxicity : EC50 Algae Selenastrum capricornutum = 0.10300 mg/L 72h Dossier ECHA a) Aquatic acute toxicity : EC50 Sludge activated sludge of a predominantly domestic sewage = 41.00000 mg/L 3h ,,OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test b) Aquatic chronic toxicity : EC50 freshwater sediment = 50.00000 mg/kg Duration 28d Draft OECD Guideline (now OECD Guideline 225) - 28days
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
2-octyl-2H-isothiazol-3-one	CAS: 26530-20-1 - EINECS: 247-761-7 - INDEX: 613-112-00-5	a) Aquatic acute toxicity : LC50 Fish freshwater fish = 0.12200 mg/L dossier ECHA b) Aquatic chronic toxicity : EC10 Fish = 0.02200 mg/L dossier ECHA a) Aquatic acute toxicity : EC50 freshwater invertebrates = 0.18100 mg/L dossier ECHA b) Aquatic chronic toxicity : EC10 freshwater invertebrates = 0.03500 mg/L

		dossier ECHA LC50 Algae freshwater algae = 0.15000 mg/L
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
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

12.2. Persistence and degradability

Component	Persitence/Degradability:	Test	Value	Notes
3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate	Non-readily biodegradable	Oxygen consumption		EU Method C.4-D (Determination of the "Ready" Biodegradability - Manometric Respirometry Test)
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	Non-readily biodegradable	CO2 production		OECD Guideline 301C
2-methylisothiazol-3(2H)-one	Non-readily biodegradable	CO2 production		OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Pyrithione zinc	Non-readily biodegradable	CO2 production		OECD 301B CO2evolution
2-octyl-2H-isothiazol-3-one	Non-readily biodegradable			
ethanediol; ethylene glycol	Readily biodegradable	Dissolved organic carbon	90.000	10days
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Non-readily biodegradable			

12.3. Bioaccumulative potential

Component	Bioaccumulation	Test	Value	Notes
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	Bioaccumulative	BCF - Bioconcentrantion factor	6.620	
2-methylisothiazol-3(2H)-one	Bioaccumulative	BCF - Bioconcentrantion factor	5.750	carcass

	Bioaccumulative	BCF - Bioconcentrantion factor	48.100	viscera
Pyrithione zinc	Bioaccumulative	BCF - Bioconcentrantion factor	1.400	
2-octyl-2H-isothiazol-3-one	Bioaccumulative	BCF - Bioconcentrantion factor	19.210	L/kg ww
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Bioaccumulative	BCF - Bioconcentrantion factor	54.000	≤ 54

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: 70, 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 1: slightly hazardous for water.

SVHC Substances:

No data available

Dir. 2004/42/EC (VOC directive)

(ready to use)

Volatile Organic compounds - VOCs = 0.30 %

Volatile Organic compounds - VOCs = 5.35 g/L

REGULATION (EU) No 528/2012

Nomenclature IUPAC: octhilinone (ISO); 2-octyl-2H-isothiazol-3-one

Nomenclature BPR: OIT

CAS number: 26530-20-1

Product-type 6: Preservatives for products during storage

Assessment status: Initial application for approval in progress.

Product-type 7: Film preservatives

Assessment status: Initial application for approval in progress.

Product-type 8: Film preservatives

Assessment status: Approved

Commission Implementing Regulation EU 2017/1277

Product-type 10: Construction material preservatives

Assessment status: Initial application for approval in progress.; Nomenclature IUPAC: Mixture of 5-chloro-2-methyl-2H- isothiazol-3-one (EINECS 247-500-7) and 2-methyl-2H-isothiazol-3-one (EINECS 220-239-6) (Mixture of CMIT/MIT)

Nomenclature BPR: C(M)IT/MIT (3:1)

CAS number: 55965-84-9

Product-type 6: Preservatives for products during storage

Assessment status: Approved

Commission Implementing Regulation (EU) 2016/131 ; Nomenclature IUPAC:Terbutryn

Nomenclature BPR: Terbutryn

CAS number: 886-50-0

Product-type 7: Film preservatives

Assessment status: Initial application for approval in progress. ; Nomenclature IUPAC: 1,2-benzisothiazol-3(2H)-one

Nomenclature BPR: BIT

CAS number: 2634-33-5

Product-type 6: Preservatives for products during storage

Assessment status: Initial application for approval in progress. ; Nomenclature IUPAC: Bis [1-hydroxy-2(1H)-pyridinethionato-O, S](T-4)-zinc

Nomenclature BPR: Pyrithione zinc

CAS number:13463-41-7

Product-type 6: Preservatives for products during storage

Assessment status: Initial application for approval in progress.

Product-type 7: Film preservatives

Assessment status: Initial application for approval in progress. ; Nomenclature IUPAC: 2-methyl-2H-isothiazol-3-one

Nomenclature BPR: MIT

CAS number: 2682-20-4

Product-type 6: Preservatives for products during storage

Assessment status: Initial application for approval in progress. ; Nomenclature IUPAC: 3-iodo-2-propynyl butylcarbamate

Nomenclature BPR: IPBC

CAS number: 55406-53-6

Product-type 6: Preservatives for products during storage

Assessment status: Approved EU 1037/2013

Commission Implementing Regulation

Product-type 7: Film preservatives

Assessment status: Initial application for approval in progress. Competent authority evaluation

Product-type 8: Film preservatives

Assessment status: Approved

Commission Implementing Regulation EU 2015/1728; Nomenclature IUPAC: Bronopol

Nomenclature BPR: Bronopol

CAS number: 52-51-7

Product-type 6: Preservatives for products during storage

Assessment status: Initial application for approval in progress. ; The product is identified as an article treated pursuant to art. 58 of Regulation (EU) no. 528/2012 and subsequent amendments.

Substances included in Regulation (EU) n. 528/2012 (concerning the making available on the market and use of biocidal products):

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
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
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A
3.6/2	Carc. 2	Carcinogenicity, Category 2
3.9/1	STOT RE 1	Specific target organ toxicity — repeated exposure, Category 1

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
3.4.2/1A	Calculation method
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.

Paragraphs modified from the previous revision:

- 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
- 2. HAZARDS IDENTIFICATION
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 13. DISPOSAL CONSIDERATIONS
- 14. TRANSPORT INFORMATION
- 15. REGULATORY INFORMATION
- 16. OTHER INFORMATION

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.