Safety Data Sheet

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

KERADECOR COLOR

Date of first edition: 9/3/2020

Safety Data Sheet dated 09/11/2026 version 4

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

1.1. Product identifier

Mixture identification:

Trade name: KERADECOR COLOR

Trade code: 001031004

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

Recommended use: Paints/coatings - Decorative

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

Ireland Emergency medical information: (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland.

Members of the public Number (8 am-10 pm): +353 (0)1 809 2166

Healthcare professional telephone Number (24hrs): +353 (0)1 809 2566

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

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 2-octyl-2H-isothiazol-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)

Interior matt walls and ceilings (Gloss < 25@60°)

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

This product contains max 22.98 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: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: KERADECOR COLOR

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

Qty	Name	Ident. Numb.	Classification	Registration Number
≥0.25-<0.3 %	Alcohols, C16-18 and C18-unsatd., ethoxylated	CAS:68920-66-1 EC:500-236-9	Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 3, H412, M-Acute:1	
<0.036 %	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS:2634-33-5 EC:220-120-9 Index:613-088-00-6	Acute Tox. 2, H330; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318; Skin Sens. 1A, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410, M-Chronic:1, M-Acute:1 Specific Concentration Limits: C ≥ 0.036%: Skin Sens. 1A H317 Acute Toxicity Estimate: ATE - Oral: 450mg/kg bw ATE - Inhalation (Dust/mist): 0.21mg/l	
<0.036 %	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: 221 mg/kg bw	
<0.01 %	bronopol (INN); 2-bromo-2-nitropropane-1,3-diol	CAS:52-51-7 EC:200-143-0 Index:603-085-00-8	STOT SE 3, H335; Skin Irrit. 2, H315; Eye Dam. 1, H318; Aquatic Acute 1, H400; Acute Tox. 4, H312; Aquatic Chronic 1, H410; Acute Tox. 3, H301; Acute Tox. 3, H331, M-Chronic:10, M-Acute:100	
<0.01 %	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	
<0.0015 %	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

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

For non emergency personnel:

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

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, inhalation 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.

Advice on general occupational hygiene:

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)

Limestone

CAS: 1317-65-3	NATIONAL	BELGIUM	Long Term: 10 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	BULGARIA	Long Term: 10 mg/m3 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL	SWITZERLAND	Long Term: 3 mg/m3 Notes: (1) respirable aerosol Source: suva.ch/valeurs-limites
	NATIONAL	SPAIN	Long Term: 10 mg/m3 Notes: (1) inhalable aerosol Source: LEP 2022
	NATIONAL	ESTONIA	Long Term: 10 mg/m3 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105 Long Term: 5 mg/m3 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	GREECE	Long Term: 10 mg/m3 Notes: εισπν. Source: ΦΕΚ 94/Α` 13.5.1999  Long Term: 5 mg/m3 Notes: αναπν. Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	HUNGARY	Long Term: 10 mg/m3 Notes: N Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	IRELAND	Long Term: 10 mg/m3 Source: 2021 Code of Practice Long Term: 4 mg/m3 Source: 2021 Code of Practice

Calcium carbonate

CAS: 471-34-1	NATIONAL	FRANCE	Long Term: 10 mg/m3 Source: INRS outil65
	NATIONAL	CROATIA	Long Term: 10 mg/m3 Notes: U Source: NN 1/2021 Long Term: 4 mg/m3 Notes: R

			Source: NN 1/2021
	NATIONAL	HUNGARY	Long Term: 10 mg/m3 Notes: inhalable aerosol Source: 5/2020. (II. 6.) ITM
	NATIONAL	IRELAND	Long Term: 10 mg/m3 Notes: Inhalable fraction Source: 2021 Code of Practice Long Term: 4 mg/m3 Notes: Respirable fraction Source: 2021 Code of Practice
	NATIONAL	LATVIA	Long Term: 6 mg/m3 Source: KN325P1
	NATIONAL	POLAND	Long Term: 10 mg/m3 Notes: 4) Source: Dz.U. 2018 poz. 1286
	SUVA	SWITZERLAND	Long Term: 3 mg/m3 Notes: TWA mg/m3: (a), Formel / Formal, NIOSH Source: suva.ch/valeurs-limites
Titanium dioxide			
CAS: 13463-67-7	ACGIH		Long Term: 2.5 mg/m3 (8h) Notes: Finescale particles; R ; A3 - LRT irr, pneumoconiosis
	NATIONAL	AUSTRIA	Long Term: 5 mg/m3; Short Term: 10 mg/m3 Notes: 60(Miw), 2x, MAK, A Source: BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 10 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	BULGARIA	Long Term: 10 mg/m3 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL	GERMANY	Long Term: 0.3 mg/m3; Short Term: 2.4 mg/m3 Notes: DFG; Long term and short term: excluding ultrafine particles; respirable fraction; multiplied by the material density; Source: TRGS900
	NATIONAL	DENMARK	Long Term: 6 mg/m3 Notes: K Source: BEK nr 2203 af 29/11/2021
	NATIONAL	SPAIN	Long Term: 10 mg/m3 Source: LEP 2022
	NATIONAL	ESTONIA	Long Term: 5 mg/m3 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FRANCE	Long Term: 10 mg/m3 Notes: Cancérogène de catégorie 2 Source: INRS outil65
	NATIONAL	GREECE	Long Term: 10 mg/m3 Notes: εισπν. Source: ΦΕΚ 94/Α` 13.5.1999  Long Term: 5 mg/m3 Notes: αναπν. Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	CROATIA	Long Term: 10 mg/m3 Notes: U Source: NN 1/2021 Long Term: 4 mg/m3 Notes: R Source: NN 1/2021
	NATIONAL	IRELAND	Long Term: 10 mg/m3 Source: 2021 Code of Practice Long Term: 4 mg/m3 Source: 2021 Code of Practice

	NATIONAL	LITHUANIA Long Term: 5 mg/m3 Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
	NATIONAL	LATVIA Long Term: 10 mg/m3 Source: KN325P1
	NATIONAL	NORWAY Long Term: 5 mg/m3 Source: FOR-2021-06-28-2248
	NATIONAL	POLAND Long Term: 10 mg/m3 Notes: 4), 7) Source: Dz.U. 2018 poz. 1286
	NATIONAL	ROMANIA Long Term: 10 mg/m3; Short Term: 15 mg/m3 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
	NATIONAL	SLOVAKIA Long Term: 5 mg/m3 Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL	SWEDEN Long Term: 5 mg/m3 Notes: 3 Source: AFS 2021:3
	SUVA	SWITZERLAND Long Term: 3 mg/m3 Notes: TWA mg/m3: (a), SSC, Formel / Formal, NIOSH Source: suva.ch/valeurs-limites

Talc (Mg3H2(SiO3)4)

CAS: 14807-96-6	ACGIH	Long Term: 2 mg/m3 (8h) Notes: Containing no asbestos fibers$ E,R, A4 - Pulm fibrosis, pulm func
	NATIONAL	AUSTRIA Long Term: 2 mg/m3 Notes: MAK, A Source: BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM Long Term: 2 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	DENMARK Notes: 0, 3 fiber/cm3, K Source: BEK nr 2203 af 29/11/2021
	NATIONAL	SPAIN Long Term: 2 mg/m3 Notes: d, e Source: LEP 2022
	NATIONAL	FINLAND Notes: 8h: 0.5 kuitua/cm3 Source: HTP-ARVOT 2020
		Long Term: 2 mg/m3 Notes: hengittyvä pöly Source: HTP-ARVOT 2020
		Long Term: 1 mg/m3 Notes: alveolijae Source: HTP-ARVOT 2020
	NATIONAL	GREECE Long Term: 10 mg/m3 Notes: εισην. Source: ΦΕΚ 94/Α` 13.5.1999
		Long Term: 2 mg/m3 Notes: αναην. Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	CROATIA Long Term: 1 mg/m3 Notes: R Source: NN 1/2021
	NATIONAL	HUNGARY Long Term: 2 mg/m3 Notes: Respirable aerosol Source: 5/2020. (II. 6.) ITM
	NATIONAL	IRELAND Long Term: 10 mg/m3 Source: 2021 Code of Practice
		Long Term: 0.8 mg/m3 Source: 2021 Code of Practice

	NATIONAL	LATVIA	Long Term: 4 mg/m3 Source: KN325P1
	NATIONAL	NETHERLANDS	Long Term: 0.25 mg/m3 Source: Arbeidsomstandighedenregeling - Lijst A
	NATIONAL	POLAND	Long Term: 4 mg/m3 Notes: 4) Source: Dz.U. 2018 poz. 1286
			Long Term: 1 mg/m3 Notes: 6), 18) Source: Dz.U. 2018 poz. 1286
	NATIONAL	ROMANIA	Long Term: 2 mg/m3 Notes: fracțiune respirabilă Source: Republicarea 1 - nr. 743 din 29 iulie 2021
	NATIONAL	SWEDEN	Long Term: 2 mg/m3 Notes: 3 Source: AFS 2021:3
			Long Term: 1 mg/m3 Notes: 3 Source: AFS 2021:3
	SUVA	SWITZERLAND	Long Term: 3 mg/m3 Notes: TWA mg/m3: (a), SSC, Formel / Formal, OSHA Source: suva.ch/valeurs-limites

Propane-1,2-diol

CAS: 57-55-6	NATIONAL	CROATIA	Long Term: 474 mg/m3 - 150 ppm Source: NN 1/2021
			Long Term: 10 mg/m3 Source: NN 1/2021
	NATIONAL	IRELAND	Long Term: 470 mg/m3 - 150 ppm Source: 2021 Code of Practice
			Long Term: 10 mg/m3 Source: 2021 Code of Practice
	NATIONAL	LITHUANIA	Long Term: 7 mg/m3 Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
	NATIONAL	LATVIA	Long Term: 7 mg/m3 Source: KN325P1
	NATIONAL	NORWAY	Long Term: 79 mg/m3 - 25 ppm Source: FOR-2021-06-28-2248
	NATIONAL	POLAND	Long Term: 100 mg/m3 Notes: 4) Source: Dz.U. 2018 poz. 1286

Barium sulfate

CAS: 7727-43-7	ACGIH		Long Term: 5 mg/m3 (8h) Notes: I, E - Pneumoconiosis
	NATIONAL	BELGIUM	Long Term: 5 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	BULGARIA	Long Term: 10 mg/m3 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL	SPAIN	Long Term: 10 mg/m3 Notes: e Source: LEP 2022
	NATIONAL	CROATIA	Long Term: 10 mg/m3 Notes: U Source: NN 1/2021
			Long Term: 4 mg/m3 Notes: R Source: NN 1/2021

	NATIONAL	IRELAND	Long Term: 5 mg/m3 Source: 2021 Code of Practice
	NATIONAL	SLOVAKIA	Long Term: 4 mg/m3 Notes: 10) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
			Long Term: 1.5 mg/m3 Notes: 11) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 10 mg/m3 Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
			Long Term: 4 mg/m3 Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
	SUVA	SWITZERLAND	Long Term: 3 mg/m3 Notes: TWA mg/m3: (a), Formel / Formal Source: suva.ch/valeurs-limites

silicon dioxide, chemically prepared

CAS: 7631-86-9	NATIONAL	AUSTRIA	Notes: MAK Source: BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 10 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	GERMANY	Long Term: 4 mg/m3 Notes: DFG, 2, Y, E Source: TRGS 900
	NATIONAL	ESTONIA	Long Term: 2 mg/m3 Notes: 1 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 6 mg/m3 Notes: Inhalable aerosol Source: EH40/2005 Workplace exposure limits
			Long Term: 2.4 mg/m3 Notes: Respirable aerosol Source: EH40/2005 Workplace exposure limits
	NATIONAL	IRELAND	Long Term: 6 mg/m3 Notes: Inhalable fraction Source: 2021 Code of Practice
			Long Term: 2.4 mg/m3 Notes: Respirable fraction Source: 2021 Code of Practice
	NATIONAL	LATVIA	Long Term: 1 mg/m3 Source: KN325P1
	NATIONAL	SLOVENIA	Long Term: 4 mg/m3 Notes: Y, (I) Source: UL št. 72, 11. 5. 2021
	SUVA	SWITZERLAND	Notes: SSC, Fibpulm / Lungenfibrose, Des VMEs se trouvent sous les substances associées / MAK-Werte finden sich unter den zugeordneten Stoffen Source: suva.ch/valeurs-limites
			Long Term: 4 mg/m3 Notes: TWA mg/m3: (i), SSC, Fibpulm / Lungenfibrose Source: suva.ch/valeurs-limites

Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy- Ethane-1,2-diol, ethoxylated

CAS: 25322-68-3	NATIONAL	GERMANY	Long Term: 200 mg/m3 Notes: DFG, Y, E, 2 (II) Source: TRGS 900

	NATIONAL	SLOVAKIA	Long Term: 1000 mg/m3 Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	SUVA	SWITZERLAND	Long Term: 500 mg/m3 Notes: SSC, Mcorp / KG Source: suva.ch/valeurs-limites
Aluminium oxide			
CAS: 1344-28-1	NATIONAL	AUSTRIA	Long Term: 5 mg/m3; Short Term: 10 mg/m3 Notes: 60(Miw), 2x, A Source: GKV, BGBl. II Nr. 156/2021
			Long Term: 5 mg/m3; Short Term: 10 mg/m3 Notes: 60(Miw), 2x, MAK, A Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 1 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	DENMARK	Long Term: 5 mg/m3 Source: BEK nr 2203 af 29/11/2021
	NATIONAL	SPAIN	Long Term: 10 mg/m3 Notes: véase Capítulo 9 Source: LEP 2022
	NATIONAL	ESTONIA	Long Term: 4 mg/m3 Notes: 1 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FRANCE	Long Term: 10 mg/m3 Source: INRS outil65
	NATIONAL	GREECE	Long Term: 10 mg/m3 Notes: εισπν Source: ΦΕΚ 94/Α` 13.5.1999
			Long Term: 5 mg/m3 Notes: αναπν Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	CROATIA	Long Term: 10 mg/m3 Notes: U Source: NN 1/2021
			Long Term: 4 mg/m3 Notes: R Source: NN 1/2021
	NATIONAL	HUNGARY	Long Term: 5 mg/m3 Notes: N Source: 5/2020. (II. 6.) ITM rendelet
			Long Term: 2 mg/m3 Notes: resp, N Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	LATVIA	Long Term: 6 mg/m3 Source: KN325P1
			Long Term: 4 mg/m3 Source: KN325P1
	NATIONAL	NORWAY	Long Term: 10 mg/m3 Notes: 1 Source: FOR-2021-06-28-2248
	NATIONAL	POLAND	Long Term: 2.5 mg/m3 Notes: 4) Source: Dz.U. 2018 poz. 1286
			Long Term: 1.2 mg/m3 Notes: 6) Source: Dz.U. 2018 poz. 1286
	NATIONAL	ROMANIA	Long Term: 2 mg/m3; Short Term: 5 mg/m3 Notes: (Aerosoli) Source: Republicarea 1 - nr. 743 din 29 iulie 2021

	NATIONAL	SLOVAKIA	Long Term: 4 mg/m3 Notes: 10) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	SUVA	SWITZERLAND	Long Term: 3 mg/m3 Notes: TWA mg/m3: (a), B, Formel / Formal, NIOSH Source: suva.ch/valeurs-limites Long Term: 3 mg/m3; Short Term: 24 mg/m3 Notes: TWA mg/m3: (a), Fimétal / Metallrauch, NIOSH Source: suva.ch/valeurs-limites

Magnesium carbonate

CAS: 546-93-0	NATIONAL	BELGIUM	Long Term: 10 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	FRANCE	Long Term: 10 mg/m3 Source: INRS outil65
	NATIONAL	CROATIA	Long Term: 10 mg/m3 Notes: U Source: NN 1/2021 Long Term: 4 mg/m3 Notes: R Source: NN 1/2021
	NATIONAL	LITHUANIA	Long Term: 10 mg/m3 Notes: F Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
	SUVA	SWITZERLAND	Long Term: 3 mg/m3 Notes: TWA mg/m3: (a) Source: suva.ch/valeurs-limites

zinc oxide

CAS: 1314-13-2	ACGIH		Long Term: 2 mg/m3 (8h); Short Term: 10 mg/m3 Notes: R - Metal fume fever
	NATIONAL	AUSTRIA	Long Term: 5 mg/m3 Notes: MAK, A Source: BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 2 mg/m3; Short Term: 10 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	BULGARIA	Long Term: 5 mg/m3; Short Term: 10 mg/m3 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL	CZECHIA	Long Term: 2 mg/m3; Short Term: Ceiling - 5 mg/m3 Source: Nařízení vlády č. 361-2007 Sb
	NATIONAL	DENMARK	Long Term: 4 mg/m3 Source: BEK nr 2203 af 29/11/2021
	NATIONAL	SPAIN	Long Term: 2 mg/m3; Short Term: 10 mg/m3 Notes: d Source: LEP 2022
	NATIONAL	ESTONIA	Long Term: 5 mg/m3 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FINLAND	Long Term: 2 mg/m3; Short Term: 10 mg/m3 Source: HTP-ARVOT 2020
	NATIONAL	FRANCE	Long Term: 5 mg/m3 Source: INRS outil65 Long Term: 10 mg/m3 Source: INRS outil65
	NATIONAL	GREECE	Long Term: 5 mg/m3; Short Term: 10 mg/m3 Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	CROATIA	Long Term: 2 mg/m3; Short Term: 10 mg/m3 Notes: GVI: R Source: NN 1/2021

	NATIONAL HUNGARY	Long Term: 5 mg/m3 Notes: i, N Source: 5/2020. (II. 6.) ITM rendelet Long Term: 5 mg/m3 Notes: i, R Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL IRELAND	Long Term: 2 mg/m3; Short Term: 10 mg/m3 Notes: OEL (8-hour reference period) : R Source: 2021 Code of Practice
	NATIONAL LITHUANIA	Long Term: 5 mg/m3 Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
	NATIONAL LATVIA	Long Term: 0.5 mg/m3 Source: KN325P1
	NATIONAL NORWAY	Long Term: 5 mg/m3 Source: FOR-2021-06-28-2248
	NATIONAL POLAND	Long Term: 5 mg/m3; Short Term: 10 mg/m3 Notes: 4) Source: Dz.U. 2018 poz. 1286
	NATIONAL ROMANIA	Long Term: 5 mg/m3; Short Term: 10 mg/m3 Notes: (Fumuri) Source: Republicarea 1 - nr. 743 din 29 iulie 2021
	NATIONAL SLOVAKIA	Long Term: 1 mg/m3; Short Term: 1 mg/m3 Notes: 11) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL SWEDEN	Long Term: 5 mg/m3 Notes: 3 Source: AFS 2021:3
	SUVA SWITZERLAND	Long Term: 3 mg/m3; Short Term: 3 mg/m3 Notes: TWA mg/m3: (a), Fimétal / Metallrauch, NIOSH OSHA Source: suva.ch/valeurs-limites

Quartz

CAS: 14808-60-7	ACGIH	Long Term: 0.025 mg/m3 (8h) Notes: R, A2 - Pulm fibrosis, lung cancer
	NATIONAL BELGIUM	Long Term: 0.1 mg/m3 Notes: C Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL DENMARK	Long Term: 0.3 mg/m3 Notes: alveolijae, liite 3 Source: BEK nr 2203 af 29/11/2021 Long Term: 0.1 mg/m3 Notes: EK Source: BEK nr 2203 af 29/11/2021
	NATIONAL SPAIN	Long Term: 0.3 mg/m3 Notes: Respirable fraction Source: LEP 2022
	NATIONAL ESTONIA	Long Term: 0.1 mg/m3 Notes: 1, C Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL FINLAND	Long Term: 0.05 mg/m3 Notes: alveolijae, liite 3 Source: HTP-ARVOT 2020
	NATIONAL FRANCE	Long Term: 0.1 mg/m3 Notes: La VLEP s'applique à la fraction alvéolaire. Forme de silice cristalline. Source: INRS outil65, article R. 4412-149 du Code du travail
	NATIONAL HUNGARY	Long Term: 0.1 mg/m3 Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL IRELAND	Long Term: 0.1 mg/m3 Notes: Respirable fraction Source: 2021 Code of Practice

	NATIONAL	ITALY	Long Term: 0.1 mg/m3 Notes: Polvere di silice cristallina respirabile (frazione inalabile). Rif:D.Lgs 81/2008 Source: D.lgs. 81/2008, Allegato XLIII
	NATIONAL	LITHUANIA	Long Term: 0.1 mg/m3 Notes: Žiūrėti 1 priedo 3 punktą. Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
	NATIONAL	NETHERLANDS	Long Term: 0.075 mg/m3 Notes: (2) Source: Arbeidsomstandighedenregeling - Lijst B1
	NATIONAL	NORWAY	Long Term: 0.3 mg/m3 Notes: K 7 Source: FOR-2021-06-28-2248 Long Term: 0.05 mg/m3 Notes: K G 7 21 Source: FOR-2021-06-28-2248
	NATIONAL	POLAND	Long Term: 0.1 mg/m3 Notes: 6) Source: Dz.U. 2018 poz. 1286
	NATIONAL	SWEDEN	Long Term: 0.1 mg/m3 Notes: C, M, 3 Source: AFS 2021:3
	SUVA	SWITZERLAND	Long Term: 0.15 mg/m3 Notes: TWA mg/m3: (a), C1A, SSC, P, Cancpulm Silicose / Lugenkrebs Silikose, HSE NIOSH OSHA Source: suva.ch/valeurs-limites

Dolomite

CAS: 16389-88-1	NATIONAL	LATVIA	Long Term: 6 mg/m3 Source: KN325P1
	NATIONAL	POLAND	Long Term: 10 mg/m3 Notes: 4), 7) Source: Dz.U. 2018 poz. 1286

sodium hydroxide; caustic soda

CAS: 1310-73-2	ACGIH		Short Term: Ceiling - 2 mg/m3 Notes: URT, eye, and skin irr
	NATIONAL	AUSTRIA	Long Term: 2 mg/m3; Short Term: Ceiling - 4 mg/m3 Notes: 5(Mow), 8x, MAK, E Source: BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 2 mg/m3 Notes: M Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	BULGARIA	Long Term: 2 mg/m3 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL	CZECHIA	Long Term: 1 mg/m3; Short Term: Ceiling - 2 mg/m3 Notes: I Source: Nařízení vlády č. 361-2007 Sb
	NATIONAL	DENMARK	Short Term: Ceiling - 2 mg/m3 Notes: L Source: BEK nr 2203 af 29/11/2021
	NATIONAL	SPAIN	Short Term: 2 mg/m3 Source: LEP 2022
	NATIONAL	ESTONIA	Long Term: 1 mg/m3; Short Term: 2 mg/m3 Notes: * Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FINLAND	Short Term: Ceiling - 2 mg/m3 Notes: kattoarvo Source: HTP-ARVOT 2020
	NATIONAL	FRANCE	Long Term: 2 mg/m3 Source: INRS outil65

	NATIONAL	GREECE Long Term: 2 mg/m3; Short Term: 2 mg/m3 Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	CROATIA Short Term: 2 mg/m3 Source: NN 1/2021
	NATIONAL	HUNGARY Long Term: 1 mg/m3; Short Term: 2 mg/m3 Notes: m, N Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	IRELAND Short Term: 2 mg/m3 Source: 2021 Code of Practice
	NATIONAL	LITHUANIA Short Term: Ceiling - 2 mg/m3 Notes: Ū Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
	NATIONAL	LATVIA Long Term: 0.5 mg/m3 Source: KN325P1
	NATIONAL	NORWAY Short Term: Ceiling - 2 mg/m3 Notes: T Source: FOR-2021-06-28-2248
	NATIONAL	POLAND Long Term: 0.5 mg/m3; Short Term: 1 mg/m3 Source: Dz.U. 2018 poz. 1286
	NATIONAL	ROMANIA Long Term: 1 mg/m3; Short Term: 3 mg/m3
	NATIONAL	SLOVAKIA Long Term: 2 mg/m3 Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL	SWEDEN Long Term: 1 mg/m3; Short Term: 2 mg/m3 Notes: 3 Source: AFS 2021:3
	SUVA	SWITZERLAND Long Term: 2 mg/m3; Short Term: 2 mg/m3 Notes: TWA mg/m3: (i), SSC, VRS Peau Yeux / OAW Haut Auge, NIOSH OSHA Source: suva.ch/valeurs-limites

Propylidynetrimethanol

CAS: 77-99-6	NATIONAL	LITHUANIA Short Term: Ceiling - 5 ppm Notes: Ū Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
	NATIONAL	SWEDEN Long Term: 5 mg/m3 Source: AFS 2021:3

2,2' -oxybisethanol; diethylene glycol

CAS: 111-46-6	NATIONAL	AUSTRIA Long Term: 44 mg/m3 - 10 ppm; Short Term: 176 mg/m3 - 40 ppm Notes: 15(Miw), 4x, MAK Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL	GERMANY Long Term: 44 mg/m3 - 10 ppm Notes: DFG, Y, 11, 4(II) Source: TRGS 900
	NATIONAL	DENMARK Long Term: 11 mg/m3 - 2.5 ppm Source: BEK nr 2203 af 29/11/2021
	NATIONAL	ESTONIA Long Term: 45 mg/m3 - 10 ppm; Short Term: 90 mg/m3 - 20 ppm Notes: A Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	CROATIA Long Term: 101 mg/m3 - 23 ppm Source: NN 1/2021
	NATIONAL	IRELAND Long Term: 100 mg/m3 - 23 ppm Source: 2021 Code of Practice
	NATIONAL	LITHUANIA Long Term: 45 mg/m3 - 10 ppm; Short Term: 90 mg/m3 - 20 ppm Notes: O Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
	NATIONAL	LATVIA Long Term: 10 mg/m3 Source: KN325P1

	NATIONAL	POLAND	Long Term: 10 mg/m3 Notes: 4) Source: Dz.U. 2018 poz. 1286
	NATIONAL	ROMANIA	Long Term: 500 mg/m3 - 115 ppm; Short Term: 800 mg/m3 - 184 ppm Source: Republicarea 1 - nr. 743 din 29 iulie 2021
	NATIONAL	SLOVAKIA	Long Term: 44 mg/m3 - 10 ppm; Short Term: 90 mg/m3 - 20 ppm Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL	SLOVENIA	Long Term: 44 mg/m3 - 10 ppm; Short Term: 176 mg/m3 - 40 ppm Notes: Y Source: UL št. 72, 11. 5. 2021
	NATIONAL	SWEDEN	Long Term: 45 mg/m3 - 10 ppm; Short Term: 90 mg/m3 - 20 ppm Notes: H, V Source: AFS 2021:3
	WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 101 mg/m3 - 23 ppm Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
	SUVA	SWITZERLAND	Long Term: 44 mg/m3 - 10 ppm; Short Term: 176 mg/m3 - 40 ppm Notes: SSC, La substance peut être présente sous forme de vapeur et d'aérosol en même temps / Der Stoff kann gleichzeitig als Dampf und Aerosol vorliegen Source: suva.ch/valeurs-limites

3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate

CAS: 55406-53-6	NATIONAL	GERMANY	Long Term: 0.058 mg/m3 - 0.005 ppm Notes: DFG, Y, Sh, 11, 2 (I) Source: TRGS 900
	NATIONAL	SLOVENIA	Long Term: 0.058 mg/m3 - 0.005 ppm; Short Term: 0.116 mg/m3 - 0.01 ppm Notes: Y Source: UL št. 72, 11. 5. 2021
	SUVA	SWITZERLAND	Long Term: 0.12 mg/m3 - 0.01 ppm; Short Term: 0.24 mg/m3 - 0.02 ppm Notes: S, SSC, Cholin / Cholin, La substance peut être présente sous forme de vapeur et d'aérosol en même temps / Der Stoff kann gleichzeitig als Dampf und Aerosol vorliegen Source: suva.ch/valeurs-limites

ethanediol; ethylene glycol

CAS: 107-21-1	ACGIH		Short Term: 10 mg/m3 Notes: I, H, A4 - URT irr
	EU		Long Term: 52 mg/m3 - 20 ppm (8h); Short Term: 104 mg/m3 - 40 ppm Notes: Skin
	NATIONAL	AUSTRIA	Long Term: 26 mg/m3 - 10 ppm; Short Term: Ceiling - 52 mg/m3 - 20 ppm Notes: 5(Mow), 8x, MAK, H Source: BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: D, M Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	BULGARIA	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: Кожа Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL	CYPRUS	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: δέρμα Source: Οι περί Ασφάλειας και Υγείας στην Εργασία (Χημικοί Παράγοντες) Κανονισμοί του 2001 έως 2021
	NATIONAL	CZECHIA	Long Term: 50 mg/m3; Short Term: Ceiling - 100 mg/m3 Notes: D Source: Nařízení vlády č. 361-2007 Sb
	NATIONAL	GERMANY	Long Term: 26 mg/m3 - 10 ppm Notes: DFG, EU, H, Y, 11, 2(I) Source: TRGS 900
	NATIONAL	DENMARK	Long Term: 26 mg/m3 - 10 ppm Notes: EH

		Source: BEK nr 2203 af 29/11/2021 Long Term: 10 mg/m3 Source: BEK nr 2203 af 29/11/2021
NATIONAL	SPAIN	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: vía dérmica, VLI Source: LEP 2022
NATIONAL	ESTONIA	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: A, 18 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATIONAL	FINLAND	Long Term: 50 mg/m3 - 20 ppm; Short Term: 100 mg/m3 - 40 ppm Notes: iho Source: HTP-ARVOT 2020
NATIONAL	FRANCE	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: Risque de pénétration percutanée Source: INRS outil65, arrêté du 30-06-2004 modifié
NATIONAL	GREECE	Long Term: 125 mg/m3 - 50 ppm; Short Term: 125 mg/m3 - 50 ppm Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	HUNGARY	Long Term: 52 mg/m3; Short Term: 104 mg/m3 Notes: b, i, EU1, N Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	IRELAND	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: Sk, IOELV Source: 2021 Code of Practice
NATIONAL	ITALY	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: Cute Source: D.lgs. 81/2008, Allegato XXXVIII
NATIONAL	LITHUANIA	Long Term: 25 mg/m3 - 10 ppm; Short Term: 50 mg/m3 - 20 ppm Notes: O, Šis RD taikomas bendrai garų ir aerozolio koncentracijai. Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
NATIONAL	LUXEMBOURG	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: Peau Source: Mémorial A n.226 du 22 mars 2021
NATIONAL	LATVIA	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: Āda Source: KN325P1
NATIONAL	MALTA	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: skin Source: S.L.424.24
NATIONAL	NETHERLANDS	Long Term: 52 mg/m3; Short Term: 104 mg/m3 Notes: H Source: Arbeidsomstandighedenregeling - Lijst A Long Term: 10 mg/m3; Short Term: 104 mg/m3 Notes: H Source: Arbeidsomstandighedenregeling - Lijst A
NATIONAL	NORWAY	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: H E 5 S Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 15 mg/m3; Short Term: 50 mg/m3 Notes: skóra Source: Dz.U. 2018 poz. 1286
NATIONAL	PORTUGAL	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: Cutânea Source: Decreto-Lei n.º 1/2021
NATIONAL	ROMANIA	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: P, Dir. 2000/39 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVAKIA	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: K Source: 355 NARIADENIE VLÁDY z 10. mája 2006

	NATIONAL	SLOVENIA	Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: K, Y, EU1 Source: UL št. 72, 11. 5. 2021
	NATIONAL	SWEDEN	Long Term: 25 mg/m3 - 10 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: H, 26 Source: AFS 2021:3
	WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 10 mg/m3 Notes: Sk Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
			Long Term: 52 mg/m3 - 20 ppm; Short Term: 104 mg/m3 - 40 ppm Notes: Sk Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
	SUVA	SWITZERLAND	Long Term: 26 mg/m3 - 10 ppm; Short Term: 52 mg/m3 - 20 ppm Notes: R/H, SSC, VRS Yeux / OAW Auge, La substance peut être présente sous forme de vapeur et d'aérosol en même temps / Der Stoff kann gleichzeitig als Dampf und Aerosol vorliegen Source: suva.ch/valeurs-limites

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

CAS: 55965-84-9	NATIONAL	AUSTRIA	Long Term: 0.05 mg/m3 Notes: MAK, Sh Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL	GERMANY	Long Term: 0.2 mg/m3; Short Term: 0.4 mg/m3 Notes: DFG; Long term and short term: inhalable fraction Source: TRGS900
	SUVA	SWITZERLAND	Long Term: 0.2 mg/m3; Short Term: 0.4 mg/m3 Notes: TWA mg/m3: (i), S, SSC, VRS Peau Yeux / OAW Haut Auge Source: suva.ch/valeurs-limites

glyoxal…%; ethandial…%

CAS: 107-22-2	ACGIH		Long Term: 0.1 mg/m3 (8h) Notes: IFV, DSEN, A4 - URT irr, larynx metaplasia
	NATIONAL	BELGIUM	Long Term: 0.1 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	DENMARK	Short Term: Ceiling - 0.5 mg/m3 - 0.2 ppm Notes: L Source: BEK nr 2203 af 29/11/2021
	NATIONAL	SPAIN	Long Term: 0.1 mg/m3 Notes: Sen, FIV, s Source: LEP 2022
	NATIONAL	FINLAND	Long Term: 0.02 mg/m3 Source: HTP-ARVOT 2020
	NATIONAL	IRELAND	Long Term: 0.1 mg/m3 Notes: IFV Source: 2021 Code of Practice

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

CAS: 26530-20-1	NATIONAL	AUSTRIA	Long Term: 0.05 mg/m3; Short Term: Ceiling - 0.05 mg/m3 Notes: Mow, MAK, H, S, E Source: BGBl. II Nr. 156/2021
	NATIONAL	GERMANY	Long Term: 0.05 mg/m3 Notes: DFG, H, Y, E, 2(I) Source: TRGS 900
	NATIONAL	SLOVENIA	Long Term: 0.05 mg/m3; Short Term: 0.1 mg/m3 Notes: K, Y, (I) Source: UL št. 72, 11. 5. 2021
	SUVA	SWITZERLAND	Long Term: 0.05 mg/m3; Short Term: 0.1 mg/m3 Notes: TWA mg/m3: (i), R/H, S, VRS / OAW Source: suva.ch/valeurs-limites

Pyridine-2-thiol 1-oxide, sodium salt

CAS: 3811-73-2	NATIONAL	AUSTRIA	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: 15(Miw), 4x, MAK, H Source: BGBl. II Nr. 156/2021
	NATIONAL	GERMANY	Long Term: 0.2 mg/m3 Notes: DFG, H, Y, E, 2(II) Source: TRGS 900
	NATIONAL	DENMARK	Long Term: 1 mg/m3 Notes: H Source: BEK nr 2203 af 29/11/2021
	NATIONAL	SLOVENIA	Long Term: 1 mg/m3; Short Term: 2 mg/m3 Notes: K, (I) Source: UL št. 72, 11. 5. 2021
	SUVA	SWITZERLAND	Long Term: 0.2 mg/m3; Short Term: 0.4 mg/m3 Notes: TWA mg/m3: (i), R/H, SSC, SNP / PNS Source: suva.ch/valeurs-limites

Predicted No Effect Concentration (PNEC) values

Alcohols, C16-18 and C18-unsatd., ethoxylated

CAS: 68920-66-1
- Exposure Route: Fresh Water; PNEC Limit: 7.2 mg/m3
- Exposure Route: Intermittent releases (fresh water); PNEC Limit: 100 mg/m3
- Exposure Route: Marine water; PNEC Limit: 700 ng/l
- Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 10000 mg/l
- Exposure Route: Freshwater sediments; PNEC Limit: 22.79 mg/kg
- Exposure Route: Marine water sediments; PNEC Limit: 2.28 mg/kg
- Exposure Route: Soil; PNEC Limit: 1 mg/kg

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

CAS: 2634-33-5
- Exposure Route: Fresh Water; PNEC Limit: 4.03 mg/m3
- Exposure Route: Intermittent releases (fresh water); PNEC Limit: 1.1 mg/m3
- Exposure Route: Marine water; PNEC Limit: 403 ng/l
- Exposure Route: Intermittent releases (marine water); PNEC Limit: 110 ng/l
- Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 1.03 mg/l
- Exposure Route: Freshwater sediments; PNEC Limit: 49.9 µg/kg
- Exposure Route: Marine water sediments; PNEC Limit: 4.99 µg/kg
- Exposure Route: Soil; PNEC Limit: 3 mg/kg

Pyrithione zinc

CAS: 13463-41-7
- Exposure Route: Fresh Water; PNEC Limit: 90 ng/l
- Exposure Route: Marine water; PNEC Limit: 90 ng/l
- Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 10 mg/m3
- Exposure Route: Freshwater sediments; PNEC Limit: 9.5 µg/kg
- Exposure Route: Marine water sediments; PNEC Limit: 9.5 µg/kg
- Exposure Route: Soil; PNEC Limit: 1.02 mg/kg

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7
- Exposure Route: Fresh Water; PNEC Limit: 10 mg/m3
- Exposure Route: Intermittent releases (fresh water); PNEC Limit: 2.5 mg/m3
- Exposure Route: Marine water; PNEC Limit: 800 ng/l
- Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 430 mg/m3
- Exposure Route: Freshwater sediments; PNEC Limit: 41 mg/m3
- Exposure Route: Marine water sediments; PNEC Limit: 3.28 µg/kg
- Exposure Route: Soil; PNEC Limit: 500 µg/kg

ethanediol; ethylene glycol

CAS: 107-21-1
- Exposure Route: Fresh Water; PNEC Limit: 10 mg/l
- Exposure Route: Intermittent releases (fresh water); PNEC Limit: 10 mg/l
- Exposure Route: Marine water; PNEC Limit: 1 mg/l
- Exposure Route: Intermittent releases (marine water); PNEC Limit: 10 mg/l
- Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 199.5 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 37 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 3.7 mg/kg

Exposure Route: Soil; PNEC Limit: 1.53 mg/kg

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

CAS: 55965-84-9 Exposure Route: Fresh Water; PNEC Limit: 3.39 mg/m3

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 3.39 mg/m3

Exposure Route: Marine water; PNEC Limit: 3.39 mg/m3

Exposure Route: Intermittent releases (marine water); PNEC Limit: 3.39 mg/m3

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 230 mg/m3

Exposure Route: Freshwater sediments; PNEC Limit: 27 mg/m3

Exposure Route: Marine water sediments; PNEC Limit: 27 mg/m3

Exposure Route: Soil; PNEC Limit: 10 mg/m3

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

CAS: 26530-20-1 Exposure Route: Fresh Water; PNEC Limit: 2.2 mg/m3

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 1.22 mg/m3

Exposure Route: Marine water; PNEC Limit: 220 ng/l

Exposure Route: Intermittent releases (marine water); PNEC Limit: 122 ng/l

Exposure Route: Freshwater sediments; PNEC Limit: 47.5 µg/kg

Exposure Route: Marine water sediments; PNEC Limit: 47.5 µg/kg

Exposure Route: Soil; PNEC Limit: 8.2 µg/kg

Derived No Effect Level (DNEL) values

Alcohols, C16-18 and C18-unsatd., ethoxylated

CAS: 68920-66-1 Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 294 mg/kg/day; Consumer: 87 mg/kg/day

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 2080 mg/kg; Consumer: 1250 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 25 mg/kg

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

CAS: 2634-33-5 Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 6.81 mg/kg/day; Consumer: 1.2 mg/kg/day

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 966 µg/kg; Consumer: 345 µg/kg

Pyrithione zinc

CAS: 13463-41-7 Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 10 µg/kg

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7 Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 4.1 mg/kg/day; Consumer: 1.2 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Professional: 12.3 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 4.2 mg/kg/day; Consumer: 1.3 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 4.2 mg/kg/day; Consumer: 1.3 mg/kg/day

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 2.3 mg/kg; Consumer: 1.4 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects
Worker Professional: 7 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 350 µg/kg

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects

Consumer: 1.1 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Long Term, local effects
Worker Professional: 0.013 mg/cm²; Consumer: 0.008 mg/cm²

Exposure Route: Human Dermal; Exposure Frequency: Short Term, local effects
Worker Professional: 0.013 mg/cm²; Consumer: 0.008 mg/cm²

ethanediol; ethylene glycol

CAS: 107-21-1 Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 35 mg/kg/day; Consumer: 7 mg/kg/day

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 106 mg/kg; Consumer: 53 mg/kg

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

CAS: 55965-84-9 Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 20 µg/m³; Consumer: 20 µg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 40 µg/m³; Consumer: 20 µg/m³

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 90 µg/kg

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects
Consumer: 110 µg/kg

8.2. Exposure controls

Eye protection:

No specific requirements during normal conditions of 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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	In compliance with the product description
Odour:	Characteristic
pH:	N.A.
Kinematic viscosity:	Not Relevant Notes: Not determined, as it is not required for CLP classification
Melting point/freezing point:	N.A.
Boiling point or initial boiling point and boiling range:	100 °C (212 °F)
Flash point:	> 93°C
Lower and upper explosion limit:	N.A.
Relative vapour density:	N.A.
Vapour pressure:	23.00 (kPa 50°C). hPa
Density and/or relative density:	1.74 g/cm3
Solubility in water:	Soluble

Solubility in oil:	Not Relevant Notes: Not determined, as it is not required for CLP classification
Partition coefficient n-octanol/water (log value):	Not Relevant Notes: Not applicable to mixtures
Auto-ignition temperature:	Not Relevant Notes: Not applicable as the mixture is not flammable
Decomposition temperature:	Not Relevant Notes: Not applicable, as the mixture is not self-reactive
Flammability:	Not Relevant Notes: Not applicable as the mixture is not flammable
Volatile Organic compounds - VOCs =	1.32%; 22.98g/L
Particle characteristics:	
Particle size:	N.A.

9.2. Other information

Viscosity: 40,000.00 cPo

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:

Alcohols, C16-18 and C18-unsatd., ethoxylated

CAS: 68920-66-1	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg
		LC50 Inhalation Vapour Rat > 100 mg/m3 6h
		LD50 Skin Rabbit > 2000 mg/kg 24h
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive 4h
	c) serious eye damage/irritation	Eye Irritant Rabbit No
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative
	f) carcinogenicity	Genotoxicity Rat Negative
	g) reproductive toxicity	No Observed Adverse Effect Level Skin Rat >= 250 mg/kg

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

CAS: 2634-33-5	a) acute toxicity	ATE - Oral: 450 mg/kg bw
		ATE - Inhalation (Dust/mist): 0.21 mg/l
		LD50 Oral Rat = 670 mg/kg
		LD50 Skin Rat > 2000 mg/kg
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative
	c) serious eye damage/irritation	Eye Corrosive Positive
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Positive
	f) carcinogenicity	Genotoxicity Rat Negative
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 112 mg/kg

Pyrithione zinc

CAS: 13463-41-7	a) acute toxicity	ATE - Oral: 221 mg/kg bw
		LD50 Oral Rat = 269 mg/kg
		LC50 Inhalation Dust Rat = 0.14 mg/l 4h
		LD50 Skin Rat > 2000 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 = 0.5 mg/kg
		Carcinogenicity Skin = 5 mg/kg
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 1.4 mg/kg

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7	a) acute toxicity	LD50 Oral Rat = 305 mg/kg
		LC50 Inhalation of aerosol Rat >= 0.59 mg/l 4h
		LD50 Skin Rat > 2000 mg/kg 24h
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive 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 Negative
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat 200

ethanediol; ethylene glycol

CAS: 107-21-1	a) acute toxicity	LD50 Oral Rat = 7712 mg/kg
		LC50 Inhalation of aerosol Rat > 2.5 mg/l 6h
		LD50 Skin Mouse > 3500 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
		Carcinogenicity Negative
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat > 1000 mg/kg

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

CAS: 55965-84-9	a) acute toxicity	LD50 Oral Rat = 69 mg/kg
		LD50 Skin Rabbit = 141 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 = 22.7 mg/kg

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

CAS: 26530-20-1	a) acute toxicity	ATE - Oral: 125 mg/kg bw
		ATE - Dermal: 311 mg/kg bw
		LD50 Oral Rat = 125 mg/kg
		LC50 Inhalation Mist Rat = 0.27 mg/l 4h
		LD50 Skin Rabbit = 311 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

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

Alcohols, C16-18 and C18-unsatd., ethoxylated

CAS: 68920-66-1	a) Aquatic acute toxicity: LC50 Fish Danio rerio = 108 mg/L 96h
	b) Aquatic chronic toxicity: EC20 Fish Pimephales promelas = 0.31 mg/L
	a) Aquatic acute toxicity: EL50 Daphnia Daphnia magna = 51 mg/L 48h
	b) Aquatic chronic toxicity: EC20 Daphnia Daphnia magna = 0.07 mg/L
	a) Aquatic acute toxicity: EL50 Algae Pseudokirchneriella subcapitata > 10 mg/L 72h
	c) Bacteria toxicity: EC10 Pseudomonas putida > 10 g/L

d) Terrestrial toxicity: LC50 Worm Eisenia fetida > 1000 mg/kg

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

CAS: 2634-33-5 a) Aquatic acute toxicity: LC50 Fish Oncorynchus mykiss = 2.15 mg/L 96h

a) Aquatic acute toxicity: EC50 Daphnia Daphnia magna = 2.9 mg/L 48h

a) Aquatic acute toxicity: EC50 Algae green alga Selenastrum capricornutum freshwater algae = 110 µg/L

d) Terrestrial toxicity: EC50 Worm Eisenia fetida > 410.6 mg/kg

d) Terrestrial toxicity: EC10 soil microorganisms = 263.7 mg/kg

a) Aquatic acute toxicity: NOEC Sludge activated sludge 10.3 mg/L 3h

e) Plant toxicity: LC50 Triticum aestivum = 200 mg/kg

Pyrithione zinc

CAS: 13463-41-7 a) Aquatic acute toxicity: LC50 Fish Pimephales promelas = 2.6 µg/L 96h

a) Aquatic acute toxicity: LC50 Daphnia Daphnia magna = 8.2 µg/L

a) Aquatic acute toxicity: EC50 Algae Navicula pelliculosa = 3 µg/L

b) Aquatic chronic toxicity: NOEC Fish Pimephales promelas = 1.22 µg/L

b) Aquatic chronic toxicity: EC50 Lemna gibba = 9.6 µg/L

d) Terrestrial toxicity: LC50 Folsomia candida = 822 mg/kg

e) Plant toxicity: NOEC Tomato, Cucumber, Lettuce, Soybean, Cabbage, Carrot, Oat > 0.49 µg/L

d) Terrestrial toxicity: LC50 Avian Northern Bobwhite = 60 mg/kg

d) Terrestrial toxicity: NOEC Avian Northern Bobwhite = 31.2 mg/kg

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7 a) Aquatic acute toxicity: LC50 Fish Lepomis macrochirus = 37.5 mg/L 96h

b) Aquatic chronic toxicity: NOEC Fish Oncorhynchus mykiss = 21.5 mg/L

a) Aquatic acute toxicity: EC50 Daphnia Daphnia magna = 1.4 mg/L 48h

b) Aquatic chronic toxicity: NOEC Daphnia Daphnia magna = 0.27 mg/L

a) Aquatic acute toxicity: NOEC Algae Skeletonema costatum = 0.08 mg/L 72h

a) Aquatic acute toxicity: EC20 Sludge activated sludge = 2 mg/L

d) Terrestrial toxicity: LC50 Worm Eisenia foetida > 500 mg/kg

d) Terrestrial toxicity: EC50 soil microorganisms = 679 mg/kg

ethanediol; ethylene glycol

CAS: 107-21-1 a) Aquatic acute toxicity: LC50 Fish Pimephales promelas = 72860 mg/L 96h

b) Aquatic chronic toxicity: NOEC Fish = 15380 mg/L

b) Aquatic chronic toxicity: NOEC Ceriodaphnia dubia = 8590 mg/L

a) Aquatic acute toxicity: NOEC Algae Pseudokirchnerella subcapitata = 100 mg/L 72h

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

CAS: 55965-84-9 a) Aquatic acute toxicity: LC50 Fish Oncorhynchus mykiss = 0.19 mg/L 96h

b) Aquatic chronic toxicity: NOEC Fish Danio rerio = 0.02 mg/L

a) Aquatic acute toxicity: LC50 Daphnia Daphnia magna = 0.16 mg/L 48h

b) Aquatic chronic toxicity: NOEC Daphnia Daphnia magna = 0.1 mg/L

a) Aquatic acute toxicity: EC50 Algae Skeletonema costatum = 0 mg/L 96h

a) Aquatic acute toxicity: EC50 Sludge activated sludge = 4.5 mg/L 3h

d) Terrestrial toxicity: LC50 Worm Eisenia fetida = 613 mg/kg

e) Plant toxicity: NOEC Trifolium pratense, Oryza sativa, Brassica napus = 1000 mg/L

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

CAS: 26530-20-1 a) Aquatic acute toxicity: LC50 Fish freshwater fish = 0.122 mg/L

b) Aquatic chronic toxicity: EC10 Fish = 0.022 mg/L

a) Aquatic acute toxicity: EC50 freshwater invertebrates = 0.181 mg/L

b) Aquatic chronic toxicity: EC10 freshwater invertebrates = 0.035 mg/L

LC50 Algae freshwater algae = 0.15 mg/L

12.2. Persistence and degradability

Alcohols, C16-18 and C18-unsatd., ethoxylated

CAS: 68920-66-1 Readily biodegradable Test: CO2 production; Value: 99

Notes: 28days

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

CAS: 2634-33-5 Non-readily biodegradable Test: CO2 production
Notes: OECD Guideline 301C

Pyrithione zinc

CAS: 13463-41-7 Non-readily biodegradable Test: CO2 production
Notes: OECD 301B CO2evolution

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7 Readily biodegradable Notes: OECD guideline 301B

ethanediol; ethylene glycol

CAS: 107-21-1 Readily biodegradable Test: Dissolved organic carbon; Value: 90
Notes: 10days

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

CAS: 55965-84-9 Non-readily biodegradable

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

CAS: 26530-20-1 Non-readily biodegradable

12.3. Bioaccumulative potential

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

CAS: 2634-33-5 Bioaccumulative Test: BCF - Bioconcentrantion factor; Value: 6.62

Pyrithione zinc

CAS: 13463-41-7 Bioaccumulative Test: BCF - Bioconcentrantion factor; Value: 1.4

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7 Bioaccumulative Test: BCF - Bioconcentrantion factor

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

CAS: 55965-84-9 Bioaccumulative Test: BCF - Bioconcentrantion factor; Value: 54
Notes: ≤ 54

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

CAS: 26530-20-1 Bioaccumulative Test: BCF - Bioconcentrantion factor; Value: 19.21
Notes: L/kg ww

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT or vPvB substances present in concentration >= 0.1%

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.

The product disposed of as such, pursuant to Regulation (EU) 1357/2014, must be classified as hazardous waste

A waste code according to the European List of Wastes (LoW) 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

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number or ID number

N/A

14.2. UN proper shipping name

ADR-Shipping Name: N/A
IATA-Shipping Name: N/A
IMDG-Shipping 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 Provisions: N/A

Sea (IMDG):

IMDG-Stowage and handling: N/A
IMDG-Segregation: N/A
IMDG-Subsidiary hazards: N/A
IMDG-Special Provisions: 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 (EU) n. 2020/878
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. 2021/849 (ATP 17 CLP)
Regulation (EU) n. 2022/692 (ATP 18 CLP)
Regulation (EU) n. 2023/707
Regulation (EU) n. 2023/1434 (ATP 19 CLP)
Regulation (EU) n. 2023/1435 (ATP 20 CLP)
Regulation (EU) n. 2024/197 (ATP 21 CLP)
Regulation (EU) n. 2024/2564 (ATP 22 CLP)
Regulation (EU) n. 2024/2865
Regulation (EU) n. 2025/1222 (ATP 23 CLP)
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: 30, 40, 70, 75

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

None

Explosives precursors – Regulation 2019/1148

No substances listed

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

Class 1: slightly hazardous for water.

German Lagerklasse according to TRGS 510:

LGK 10

SVHC Substances:

No SVHC substances present in concentration >= 0.1%

Dir. 2004/42/EC (VOC directive)

(ready to use)

Volatile Organic compounds - VOCs = 1.32 %

Volatile Organic compounds - VOCs = 22.98 g/L

15.2. Chemical safety assessment

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

Substances for which a Chemical Safety Assessment has been carried out:

ethanediol; ethylene glycol

SECTION 16: Other information

Code	Description
EUH071	Corrosive to the respiratory tract.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
3.1/2/Dermal	Acute Tox. 2	Acute toxicity (dermal), Category 2
3.1/2/Inhal	Acute Tox. 2	Acute toxicity (inhalation), Category 2
3.1/3/Dermal	Acute Tox. 3	Acute toxicity (dermal), Category 3
3.1/3/Oral	Acute Tox. 3	Acute toxicity (oral), Category 3
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/1	Skin Corr. 1	Skin corrosion, Category 1
3.2/1C	Skin Corr. 1C	Skin corrosion, Category 1C
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A

3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2
4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
4.1/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1
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
Aquatic Chronic 3, H412	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:

- Safety Data Sheet
- SECTION 1: Identification of the substance/mixture and of the company/undertaking
- SECTION 2: Hazards identification
- SECTION 3: Composition/information on ingredients
- SECTION 7: Handling and storage
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 13: Disposal considerations
- SECTION 14: Transport information
- SECTION 15: Regulatory information
- SECTION 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. 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.