

Safety Data Sheet

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

BIOCALCE ESTUCO

Date of first edition: 5/26/2021

Safety Data Sheet dated 22/01/2024

version 5

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

1.1. Product identifier

Mixture identification:

Trade name: BIOCALCE ESTUCO

Trade code: K70203

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

Recommended use: Mortar for plasters/renders

Uses advised against: All uses other than recommended ones

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL IBÉRICA S.A.

Carretera de Alcora, Km. 10,450 – 12006 Castellón de la Plana – España

Tel. +34 964 251 500 – Fax +34 964 241 100

safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112

Ireland Poison information centre: 01 809 2166 (Daily 8am-10pm) In case of emergency call 999 or 112

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

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

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

Skin Corr. 1A Causes severe skin burns and eye damage.

Eye Dam. 1 Causes serious eye damage.

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 $\leq 10 \mu\text{m}$.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

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

Hazard pictograms and Signal Word



Danger

Hazard statements

H314 Causes severe skin burns and eye damage.

Precautionary statements

P102 Keep out of reach of children.

P280 Wear protective gloves and eye protection.

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

Contains

Calcium dihydroxide

2-methylisothiazol-3(2H)-one May produce an allergic reaction.

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.

2-octyl-2H-isothiazol-3-one May produce an allergic reaction.

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 14.49 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 $\geq 0.1\%$

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: BIOCALCE ESTUCO

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

Qty	Name	Ident. Numb.	Classification	Registration Number
10-19.9 %	Calcium dihydroxide	CAS:1305-62-0 EC:215-137-3	Skin Irrit. 2, H315; Eye Dam. 1, H318; STOT SE 3, H335	01-2119475151-45
1-2.9 %	Titanium dioxide	CAS:13463-67-7 EC:236-675-5 Index:022-006-00-2	Carc. 2, H351	
<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 %	Pyrrithione 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	
<0.0015 %	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	01-2120764690-50
			Specific Concentration Limits: C $\geq 0.0015\%$: Skin Sens. 1A H317	
<0.0015 %		CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372	
<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 Acute Tox. 2, H330 Acute Tox. 3,
EC:247-761-7 H311 Acute Tox. 3, H301 Skin
Index:613-112-00-5 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

This mixture contains >= 1% titanium dioxide (CAS 13463-67-7). The Annex VI classification of titanium dioxide does not apply to this mixture according to its Note 10.

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

- Immediately take off all contaminated clothing.
- OBTAIN IMMEDIATE MEDICAL ATTENTION.
- Remove contaminated clothing immediately and dispose off safely.
- After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

- After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
- Protect uninjured eye.

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

Eye irritation
Eye damages
Skin Irritation
Erythema

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 (CO2).

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.
- 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)

	OEL Type	Country	Occupational Exposure Limit
Calcium carbonate CAS: 471-34-1	NATIONAL	AUSTRALIA	Long Term: 10 mg/m ³ This value is for inhalable dust containing no asbestos and <1 % crystalline silica.
	NATIONAL	CROATIA	Long Term: 10 mg/m ³ U Source: NN 1/2021
	NATIONAL	CROATIA	Long Term: 4 mg/m ³ R Source: NN 1/2021
	NATIONAL	FRANCE	Long Term: 10 mg/m ³ Source: INRS outil65
	NATIONAL	HUNGARY	Long Term: 10 mg/m ³ inhalable aerosol Source: 5/2020. (II. 6.) ITM
	NATIONAL	IRELAND	Long Term: 10 mg/m ³ Inhalable fraction Source: 2021 Code of Practice

Calcium dihydroxide CAS: 1305-62-0	NATIONAL	IRELAND	Long Term: 4 mg/m ³ Respirable fraction Source: 2021 Code of Practice
	NATIONAL	LATVIA	Long Term: 6 mg/m ³ Source: KN325P1
	NATIONAL	POLAND	Long Term: 10 mg/m ³ 4) Source: Dz.U. 2018 poz. 1286
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 10 mg/m ³ inhalable aerosol Source: EH40/2005 Workplace exposure limits
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 4 mg/m ³ respirable aerosol Source: EH40/2005 Workplace exposure limits
	ACGIH		Long Term: 5 mg/m ³ (8h) Eye, URT and skin irr
	EU		Long Term: 1 mg/m ³ (8h); Short Term: 4 mg/m ³ Respirable fraction
	NATIONAL	AUSTRALIA	Long Term: 5 mg/m ³ (8h)
	NATIONAL	AUSTRIA	Long Term: 1 mg/m ³ ; Short Term: Ceiling - 4 mg/m ³ 5(Mow), 8x, MAK, E Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	BULGARIA	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ 5 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. НАРЕДБА № 10 ОТ 26 СЕПТЕМВРИ 2003
	NATIONAL	CROATIA	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ R (14) Source: 2017/164/EU
	NATIONAL	CYPRUS	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ 9 (2019) Source: Οι περί Ασφάλειας και Υγείας στην Εργασία (Χημικοί Παράγοντες) Κανονισμοί του 2001 έως 2021
	NATIONAL	CZECHIA	Long Term: 1 mg/m ³ ; Short Term: Ceiling - 4 mg/m ³ I, R Source: Narízení vlády č. 361-2007 Sb
	NATIONAL	DENMARK	Long Term: 5 mg/m ³ E Source: BEK nr 2203 af 29/11/2021
	NATIONAL	DENMARK	Long Term: 1 mg/m ³ E Source: BEK nr 2203 af 29/11/2021
	NATIONAL	ESTONIA	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ 1 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FINLAND	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ Source: HTP-ARVOT 2020
	NATIONAL	FRANCE	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ Source: INRS outil65, article R. 4412-149 du Code du travail
	NATIONAL	GERMANY	Long Term: 1 mg/m ³ Y, EU, DFG, E, 2 (I) Source: TRGS 900
NATIONAL	GREECE	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³	

		9) Source: П.Δ. 82/2018 (ΦΕΚ 152/Α` 21.8.2018)
NATIONAL	HUNGARY	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ resp, EU4, N Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	IRELAND	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ IOELV, R Source: 2021 Code of Practice
NATIONAL	ITALY	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ Frazione respirabile Source: D.lgs. 81/2008, Allegato XXXVIII
NATIONAL	LATVIA	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ Source: KN325P1
NATIONAL	LITHUANIA	Long Term: 5 mg/m ³ O Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
NATIONAL	LUXEMBOUR G	Long Term: 5 mg/m ³ 11, 14 Source: Mémorial A n.226 du 22 mars 2021
NATIONAL	LUXEMBOUR G	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ 9, 14 Source: Mémorial A n.226 du 22 mars 2021
NATIONAL	MALTA	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ 10 Source: S.L.424.24
NATIONAL	NETHERLAND S	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ (2) Source: Arbeidsomstandighedenregeling - Lijst A
NATIONAL	NORWAY	Long Term: 1 mg/m ³ E Source: FOR-2021-06-28-2248
NATIONAL	NORWAY	Short Term: 4 mg/m ³ S Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 2 mg/m ³ ; Short Term: 6 mg/m ³ 4) Source: Dz.U. 2018 poz. 1286
NATIONAL	POLAND	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ 6) Source: Dz.U. 2018 poz. 1286
NATIONAL	PORTUGAL	Long Term: 1 mg/m ³ (9) Source: Decreto-Lei n.º 1/2021
NATIONAL	ROMANIA	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ Frac?iune respirabila, Dir. 2017/164 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVAKIA	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ 11) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATIONAL	SLOVENIA	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ Y, EU4, (A) Source: UL št. 72, 11. 5. 2021
NATIONAL	SPAIN	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ VLI, d Source: LEP 2022
NATIONAL	SWEDEN	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ 3 Source: AFS 2021:3
	ACGIH	Long Term: 5 mg/m ³ (8h) R, A4 - Pneumoconiosis

Diiron trioxide
CAS: 1309-37-1

NATIONAL	AUSTRALIA	Long Term: 5 mg/m ³ (8h)
NATIONAL	AUSTRIA	Long Term: 5 mg/m ³ ; Short Term: 10 mg/m ³ 60(Miw), 2x, MAK, A Source: GKV, BGBl. II Nr. 156/2021
NATIONAL	BELGIUM	Long Term: 5 mg/m ³ Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	BULGARIA	Long Term: 5 mg/m ³ Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. НАРЕДБА № 10 ОТ 26 СЕПТЕМВРИ 2003
NATIONAL	CROATIA	Long Term: 5 mg/m ³ ; Short Term: 10 mg/m ³ Source: NN 1/2021
NATIONAL	CROATIA	Long Term: 10 mg/m ³ U Source: NN 1/2021
NATIONAL	CROATIA	Long Term: 4 mg/m ³ R Source: NN 1/2021
NATIONAL	DENMARK	Long Term: 3.5 mg/m ³ Source: BEK nr 2203 af 29/11/2021
NATIONAL	ESTONIA	Long Term: 3.5 mg/m ³ 1 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATIONAL	FINLAND	Long Term: 5 mg/m ³ Fe Source: HTP-ARVOT 2020
NATIONAL	FRANCE	Long Term: 5 mg/m ³ Source: INRS outil65
NATIONAL	GREECE	Long Term: 10 mg/m ³ ; Short Term: 10 mg/m ³ Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	HUNGARY	Long Term: 4 mg/m ³ resp, T Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	IRELAND	Long Term: 5 mg/m ³ ; Short Term: 10 mg/m ³ Source: 2021 Code of Practice
NATIONAL	IRELAND	Long Term: 10 mg/m ³ Source: 2021 Code of Practice
NATIONAL	IRELAND	Long Term: 4 mg/m ³ Source: 2021 Code of Practice
NATIONAL	LITHUANIA	Long Term: 3.5 mg/m ³ Žiureti 1 priedo 3 punkta. Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
NATIONAL	NORWAY	Long Term: 3 mg/m ³ Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 5 mg/m ³ ; Short Term: 10 mg/m ³ 4) Source: Dz.U. 2018 poz. 1286
NATIONAL	POLAND	Long Term: 2.5 mg/m ³ ; Short Term: 5 mg/m ³ 6) Source: Dz.U. 2018 poz. 1286
NATIONAL	ROMANIA	Long Term: 5 mg/m ³ ; Short Term: 10 mg/m ³ (Fumuri, pulberi) Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVAKIA	Long Term: 1.5 mg/m ³ 11) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATIONAL	SLOVAKIA	Long Term: 4 mg/m ³ 10) Source: 355 NARIADENIE VLÁDY z 10. mája 2006

Titanium dioxide
CAS: 13463-67-7

NATIONAL	SPAIN	Long Term: 5 mg/m ³ Source: LEP 2022
NATIONAL	SWEDEN	Long Term: 3.5 mg/m ³ 3 Source: AFS 2021:3
ACGIH		Long Term: 2.5 mg/m ³ (8h) Finescale particles; R ; A3 - LRT irr, pneumoconiosis
NATIONAL	AUSTRALIA	Long Term: 10 mg/m ³ (8h)
NATIONAL	AUSTRIA	Long Term: 5 mg/m ³ ; Short Term: 10 mg/m ³ 60(Miw), 2x, MAK, A Source: BGBl. II Nr. 156/2021
NATIONAL	BELGIUM	Long Term: 10 mg/m ³ Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	BULGARIA	Long Term: 10 mg/m ³ Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. НАРЕДБА № 10 ОТ 26 СЕПТЕМВРИ 2003
NATIONAL	CROATIA	Long Term: 10 mg/m ³ U Source: NN 1/2021
NATIONAL	CROATIA	Long Term: 4 mg/m ³ R Source: NN 1/2021
NATIONAL	DENMARK	Long Term: 6 mg/m ³ K Source: BEK nr 2203 af 29/11/2021
NATIONAL	ESTONIA	Long Term: 5 mg/m ³ Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATIONAL	FRANCE	Long Term: 10 mg/m ³ Cancérogène de catégorie 2 Source: INRS outil65
NATIONAL	GERMANY	Long Term: 0.3 mg/m ³ ; Short Term: 2.4 mg/m ³ DFG; Long term and short term: excluding ultrafine particles; respirable fraction; multiplied by the material density; Source: TRGS900
NATIONAL	GREECE	Long Term: 10 mg/m ³ ε?sp? Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	GREECE	Long Term: 5 mg/m ³ α?ap? Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	IRELAND	Long Term: 10 mg/m ³ Source: 2021 Code of Practice
NATIONAL	IRELAND	Long Term: 4 mg/m ³ Source: 2021 Code of Practice
NATIONAL	LATVIA	Long Term: 10 mg/m ³ Source: KN325P1
NATIONAL	LITHUANIA	Long Term: 5 mg/m ³ Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
NATIONAL	NORWAY	Long Term: 5 mg/m ³ Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 10 mg/m ³ 4), 7) Source: Dz.U. 2018 poz. 1286
NATIONAL	ROMANIA	Long Term: 10 mg/m ³ ; Short Term: 15 mg/m ³ Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVAKIA	Long Term: 5 mg/m ³ Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATIONAL	SPAIN	Long Term: 10 mg/m ³

			Source: LEP 2022
	NATIONAL	SWEDEN	Long Term: 5 mg/m ³ 3 Source: AFS 2021:3
2,2'-oxybisethanol; diethylene glycol CAS: 111-46-6	NATIONAL	AUSTRIA	Long Term: 44 mg/m ³ - 10 ppm; Short Term: 176 mg/m ³ - 40 ppm 15(Miw), 4x, MAK Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL	DENMARK	Long Term: 11 mg/m ³ - 2.5 ppm Source: BEK nr 2203 af 29/11/2021
	NATIONAL	ESTONIA	Long Term: 45 mg/m ³ - 10 ppm; Short Term: 90 mg/m ³ - 20 ppm A Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	LATVIA	Long Term: 10 mg/m ³ Source: KN325P1
	NATIONAL	LITHUANIA	Long Term: 45 mg/m ³ - 10 ppm; Short Term: 90 mg/m ³ - 20 ppm O Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
	NATIONAL	POLAND	Long Term: 10 mg/m ³ 4) Source: Dz.U. 2018 poz. 1286
	NATIONAL	SLOVAKIA	Long Term: 44 mg/m ³ - 10 ppm; Short Term: 90 mg/m ³ - 20 ppm Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL	SWEDEN	Long Term: 45 mg/m ³ - 10 ppm; Short Term: 90 mg/m ³ - 20 ppm H, V Source: AFS 2021:3
	NATIONAL	CROATIA	Long Term: 101 mg/m ³ - 23 ppm Source: NN 1/2021
	NATIONAL	GERMANY	Long Term: 44 mg/m ³ - 10 ppm DFG, Y, 11, 4(II) Source: TRGS 900
	NATIONAL	IRELAND	Long Term: 100 mg/m ³ - 23 ppm Source: 2021 Code of Practice
	NATIONAL	ROMANIA	Long Term: 500 mg/m ³ - 115 ppm; Short Term: 800 mg/m ³ - 184 ppm Source: Republicarea 1 - nr. 743 din 29 iulie 2021
	NATIONAL	SLOVENIA	Long Term: 44 mg/m ³ - 10 ppm; Short Term: 176 mg/m ³ - 40 ppm Y Source: UL št. 72, 11. 5. 2021
Poly(oxy-1,2-ethanediyl), α - hydro- ω -hydroxy- Ethane-1, 2-diol, ethoxylated CAS: 25322-68-3	NATIONAL	AUSTRIA	Long Term: 1000 mg/m ³ (8h); Short Term: 4000 mg/m ³ (15min) Long term and short term: INHALABLE FRACTION
	NATIONAL	DENMARK	Long Term: 1000 mg/m ³ (8h); Short Term: 2000 mg/m ³ (15min)
	NATIONAL	GERMANY	Long Term: 200 mg/m ³ DFG, Y, E, 2 (II) Source: TRGS 900
	NATIONAL	SLOVAKIA	Long Term: 1000 mg/m ³ Source: 355 NARIADENIE VLÁDY z 10. mája 2006
silicon dioxide, chemically prepared CAS: 7631-86-9	NATIONAL	AUSTRALIA	Long Term: 2 mg/m ³ This value is for inhalable dust containing no asbestos and < 1% crystalline silica
	NATIONAL	AUSTRIA	Long Term: 4 mg/m ³ MAK Source: BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 10 mg/m ³ Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	ESTONIA	Long Term: 2 mg/m ³ 1 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105

NATIONAL	GERMANY	Long Term: 4 mg/m ³ DFG, 2, Y, E Source: TRGS 900
NATIONAL	IRELAND	Long Term: 6 mg/m ³ Inhalable fraction Source: 2021 Code of Practice
NATIONAL	IRELAND	Long Term: 2.4 mg/m ³ Respirable fraction Source: 2021 Code of Practice
NATIONAL	LATVIA	Long Term: 1 mg/m ³ Source: KN325P1
NATIONAL	SLOVENIA	Long Term: 4 mg/m ³ Y, (I) Source: UL št. 72, 11. 5. 2021
NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 6 mg/m ³ Inhalable aerosol Source: EH40/2005 Workplace exposure limits
NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 2.4 mg/m ³ Respirable aerosol Source: EH40/2005 Workplace exposure limits
NATIONAL	GERMANY	Long Term: 4 mg/m ³ (8h) Inhalable aerosol
NATIONAL	GERMANY	Long Term: 1.5 mg/m ³ (8h) Respirable aerosol
NATIONAL	SWITZERLAND	Long Term: 3 mg/m ³ (8h) Respirable aerosol
NATIONAL	AUSTRALIA	Long Term: 2 mg/m ³ (8h)
NATIONAL	BELGIUM	Long Term: 2 mg/m ³ (8h)
NATIONAL	BULGARIA	Long Term: 2 mg/m ³ (8h)
NATIONAL	CROATIA	Long Term: 2 mg/m ³ (8h)
NATIONAL	DENMARK	Long Term: 1 mg/m ³ (8h)
NATIONAL	ESTONIA	Long Term: 2 mg/m ³ (8h)
NATIONAL	FINLAND	Long Term: 2 mg/m ³ (8h)
NATIONAL	FRANCE	Long Term: 2 mg/m ³ (8h)
NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 2 mg/m ³ (8h)
NATIONAL	GREECE	Long Term: 2 mg/m ³ (8h)
NATIONAL	IRELAND	Long Term: 2 mg/m ³ (8h)
NATIONAL	SLOVENIA	Long Term: 6 mg/m ³ (8h)
NATIONAL	SPAIN	Long Term: 2 mg/m ³ (8h)
NATIONAL	SWEDEN	Long Term: 1 mg/m ³ (8h)
NATIONAL	SWEDEN	Long Term: 1 mg/m ³ (8h)
NATIONAL	AUSTRIA	Long Term: 5 mg/m ³ ; Short Term: 10 mg/m ³ 60(Miw), 2x, A Source: GKV, BGBl. II Nr. 156/2021
NATIONAL	LATVIA	Long Term: 6 mg/m ³ Source: KN325P1
NATIONAL	LITHUANIA	Long Term: 6 mg/m ³ F Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389

Aluminium hydroxide
CAS: 21645-51-2

Quartz
CAS: 14808-60-7

NATIONAL	POLAND	Long Term: 2.5 mg/m ³ 4) Source: Dz.U. 2018 poz. 1286
NATIONAL	POLAND	Long Term: 1.2 mg/m ³ 6) Source: Dz.U. 2018 poz. 1286
NATIONAL	SLOVAKIA	Long Term: 1.5 mg/m ³ 11) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
ACGIH		Long Term: 0.025 mg/m ³ (8h) R, A2 - Pulm fibrosis, lung cancer
NATIONAL	AUSTRALIA	Long Term: 0.05 mg/m ³ Respirable fraction
NATIONAL	AUSTRIA	Long Term: 0.05 mg/m ³ MAK, III C, A -Respirable fraction Source: BGBl. II Nr. 156/2021
NATIONAL	BELGIUM	Long Term: 0.1 mg/m ³ C - Respirable fraction Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	CROATIA	Long Term: 0.1 mg/m ³ Source: NN 1/2021
NATIONAL	DENMARK	Long Term: 0.3 mg/m ³ Source: BEK nr 2203 af 29/11/2021
NATIONAL	DENMARK	Long Term: 0.1 mg/m ³ EK Source: BEK nr 2203 af 29/11/2021
NATIONAL	ESTONIA	Long Term: 0.1 mg/m ³ 1, C Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATIONAL	FINLAND	Long Term: 0.05 mg/m ³ alveolijae, liite 3 Source: HTP-ARVOT 2020
NATIONAL	FRANCE	Long Term: 0.1 mg/m ³ 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/m ³ Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	INDIA	Long Term: 10 mg/m ³ (8h)
NATIONAL	IRELAND	Long Term: 0.1 mg/m ³ Respirable fraction Source: 2021 Code of Practice
NATIONAL	ITALY	Long Term: 0.1 mg/m ³ Polvere di silice cristallina respirabile (frazione inalabile). Rif:D.Lgs 81/2008 Source: D.lgs. 81/2008, Allegato XXXVIII
NATIONAL	LITHUANIA	Long Term: 0.1 mg/m ³ Žiureti 1 priedo 3 punkta. Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
NATIONAL	NETHERLAND S	Long Term: 0.075 mg/m ³ (2) Source: Arbeidsomstandighedenregeling - Lijst B1
NATIONAL	NORWAY	Long Term: 0.3 mg/m ³ K 7 Source: FOR-2021-06-28-2248
NATIONAL	NORWAY	Long Term: 0.05 mg/m ³ K G 7 21 Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 0.1 mg/m ³ 6) Source: Dz.U. 2018 poz. 1286

Magnesium oxide
CAS: 1309-48-4

NATIONAL	SPAIN	Long Term: 0.05 mg/m3 Respirable fraction Source: LEP 2022
NATIONAL	SWEDEN	Long Term: 0.1 mg/m3 C, M, 3 Source: AFS 2021:3
ACGIH		Long Term: 10 mg/m3 (8h) I, A4 - URT, metal fume fever
NATIONAL	AUSTRALIA	Long Term: 10 mg/m3 (8h)
NATIONAL	AUSTRIA	Long Term: 10 mg/m3; Short Term: 20 mg/m3 60(Miw), 2x, MAK, E Source: BGBl. II Nr. 156/2021
NATIONAL	AUSTRIA	Long Term: 5 mg/m3; Short Term: 10 mg/m3 60(Miw), 2x, MAK, A Source: BGBl. II Nr. 156/2021
NATIONAL	AUSTRIA	Long Term: 5 mg/m3; Short Term: 20 mg/m3 15(Miw), 4x, 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. НАРЕДБА № 10 ОТ 26 СЕПТЕМВРИ 2003
NATIONAL	CROATIA	Long Term: 10 mg/m3 U Source: NN 1/2021
NATIONAL	CROATIA	Long Term: 4 mg/m3 R Source: NN 1/2021
NATIONAL	CZECHIA	Long Term: 5 mg/m3; Short Term: Ceiling - 10 mg/m3 Source: Narízení vlády c. 361-2007 Sb
NATIONAL	DENMARK	Long Term: 6 mg/m3 Source: BEK nr 2203 af 29/11/2021
NATIONAL	FRANCE	Long Term: 10 mg/m3 Source: INRS outil65
NATIONAL	GREECE	Long Term: 10 mg/m3 e?sp? Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	GREECE	Long Term: 5 mg/m3 a?ap? Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	HUNGARY	Long Term: 6 mg/m3 resp, i, R Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	IRELAND	Long Term: 10 mg/m3 (8h) Respirable fraction
NATIONAL	IRELAND	Long Term: 10 mg/m3; Short Term: 4 mg/m3 (15min) Inhalable fraction
NATIONAL	IRELAND	Long Term: 5 mg/m3 (8h) Fume
NATIONAL	LITHUANIA	Long Term: 4 mg/m3 Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
NATIONAL	NORWAY	Long Term: 10 mg/m3 1 Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 10 mg/m3 4) Source: Dz.U. 2018 poz. 1286

	NATIONAL	ROMANIA	Long Term: 5 mg/m ³ ; Short Term: 15 mg/m ³ (Fumuri) Source: Republicarea 1 - nr. 743 din 29 iulie 2021
	NATIONAL	SLOVAKIA	Long Term: 4 mg/m ³ 11) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL	SLOVAKIA	Long Term: 10 mg/m ³ 10) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL	SPAIN	Long Term: 10 mg/m ³ Source: LEP 2022
CAS: 55406-53-6	NATIONAL	GERMANY	Long Term: 0.058 mg/m ³ - 0.005 ppm DFG, Y, Sh, 11, 2 (I) Source: TRGS 900
	NATIONAL	SLOVENIA	Long Term: 0.058 mg/m ³ - 0.005 ppm; Short Term: 0.116 mg/m ³ - 0.01 ppm Y Source: UL št. 72, 11. 5. 2021
2-amino-2-methylpropanol CAS: 124-68-5	NATIONAL	DENMARK	Long Term: 3 ppm Source: At-vejledning C.0.1-1
	NATIONAL	GERMANY	Long Term: 3.7 mg/m ³ - 1 ppm DFG, H, Y, 11, 2(II) Source: TRGS 900
	NATIONAL	SLOVENIA	Long Term: 3.7 mg/m ³ - 1 ppm; Short Term: 7.4 mg/m ³ - 2 ppm K, Y Source: UL št. 72, 11. 5. 2021
zinc oxide CAS: 1314-13-2	ACGIH		Long Term: 2 mg/m ³ (8h); Short Term: 10 mg/m ³ R - Metal fume fever
	NATIONAL	AUSTRALIA	Long Term: 10 mg/m ³ (8h) This value is for inhalable dust containing no asbestos and < 1% crystalline silica
	NATIONAL	AUSTRALIA	Long Term: 10 mg/m ³ (8h); Short Term: 5 mg/m ³ (15min) Long term and short term: Fume
	NATIONAL	AUSTRIA	Long Term: 5 mg/m ³ MAK, A Source: BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 2 mg/m ³ ; Short Term: 10 mg/m ³ Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	BULGARIA	Long Term: 5 mg/m ³ ; Short Term: 10 mg/m ³ Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. НАРЕДБА № 10 ОТ 26 СЕПТЕМВРИ 2003
	NATIONAL	CROATIA	Long Term: 2 mg/m ³ ; Short Term: 10 mg/m ³ GVI: R Source: NN 1/2021
	NATIONAL	CZECHIA	Long Term: 2 mg/m ³ ; Short Term: Ceiling - 5 mg/m ³ Source: Nařízení vlády c. 361-2007 Sb
	NATIONAL	DENMARK	Long Term: 4 mg/m ³ Source: BEK nr 2203 af 29/11/2021
	NATIONAL	ESTONIA	Long Term: 5 mg/m ³ Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FINLAND	Long Term: 2 mg/m ³ ; Short Term: 10 mg/m ³ Source: HTP-ARVOT 2020
	NATIONAL	FRANCE	Long Term: 5 mg/m ³ Source: INRS outil65
	NATIONAL	FRANCE	Long Term: 10 mg/m ³ Source: INRS outil65
	NATIONAL	GREECE	Long Term: 5 mg/m ³ ; Short Term: 10 mg/m ³ Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	HUNGARY	Long Term: 5 mg/m ³

		i, N Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	HUNGARY	Long Term: 5 mg/m3 i, R Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	IRELAND	Long Term: 2 mg/m3; Short Term: 10 mg/m3 OEL (8-hour reference period) : R Source: 2021 Code of Practice
NATIONAL	LATVIA	Long Term: 0.5 mg/m3 Source: KN325P1
NATIONAL	LITHUANIA	Long Term: 5 mg/m3 Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
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 4) Source: Dz.U. 2018 poz. 1286
NATIONAL	ROMANIA	Long Term: 5 mg/m3; Short Term: 10 mg/m3 (Fumuri) Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVAKIA	Long Term: 1 mg/m3; Short Term: 1 mg/m3 11) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATIONAL	SPAIN	Long Term: 2 mg/m3; Short Term: 10 mg/m3 d Source: LEP 2022
NATIONAL	SWEDEN	Long Term: 5 mg/m3 3 Source: AFS 2021:3
Barium sulfate CAS: 7727-43-7	NATIONAL	AUSTRALIA Long Term: 10 mg/m3 (8h)
	ACGIH	Long Term: 5 mg/m3 (8h) 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	CROATIA Long Term: 10 mg/m3 U Source: NN 1/2021
	NATIONAL	CROATIA Long Term: 4 mg/m3 R Source: NN 1/2021
	NATIONAL	IRELAND Long Term: 5 mg/m3 Source: 2021 Code of Practice
	NATIONAL	SPAIN Long Term: 10 mg/m3 e Source: LEP 2022
	NATIONAL	BULGARIA Long Term: 10 mg/m3 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. НАРЕДБА № 10 ОТ 26 СЕПТЕМВРИ 2003
	NATIONAL	SLOVAKIA Long Term: 4 mg/m3 10) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL	SLOVAKIA Long Term: 1.5 mg/m3 11) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
ethanediol; ethylene glycol CAS: 107-21-1	ACGIH	Short Term: 10 mg/m3 I, H, A4 - URT irr
	EU	Long Term: 52 mg/m3 - 20 ppm (8h); Short Term: 104 mg/m3 - 40 ppm

Skin

NATIONAL	AUSTRALIA	Long Term: 52 mg/m ³ - 20 ppm (8h); Short Term: 104 mg/m ³ - 40 ppm (15min)
NATIONAL	AUSTRIA	Long Term: 26 mg/m ³ - 10 ppm; Short Term: Ceiling - 52 mg/m ³ - 20 ppm 5(Mow), 8x, MAK, H Source: BGBl. II Nr. 156/2021
NATIONAL	BELGIUM	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm D, M Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	BULGARIA	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm ???? Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. НАРЕДБА № 10 ОТ 26 СЕПТЕМВРИ 2003
NATIONAL	CYPRUS	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm d??µa Source: Οι περί Ασφάλειας και Υγείας στην Εργασία (Χημικοί Παράγοντες) Κανονισμοί του 2001 έως 2021
NATIONAL	CZECHIA	Long Term: 50 mg/m ³ ; Short Term: Ceiling - 100 mg/m ³ D Source: Narízení vlády c. 361-2007 Sb
NATIONAL	DENMARK	Long Term: 26 mg/m ³ - 10 ppm EH Source: BEK nr 2203 af 29/11/2021
NATIONAL	DENMARK	Long Term: 10 mg/m ³ Source: BEK nr 2203 af 29/11/2021
NATIONAL	ESTONIA	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm A, 18 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATIONAL	FINLAND	Long Term: 50 mg/m ³ - 20 ppm; Short Term: 100 mg/m ³ - 40 ppm iho Source: HTP-ARVOT 2020
NATIONAL	FRANCE	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm Risque de pénétration percutanée Source: INRS outil65, arrêté du 30-06-2004 modifié
NATIONAL	GERMANY	Long Term: 26 mg/m ³ - 10 ppm DFG, EU, H, Y, 11, 2(I) Source: TRGS 900
NATIONAL	GREECE	Long Term: 125 mg/m ³ - 50 ppm; Short Term: 125 mg/m ³ - 50 ppm Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	HUNGARY	Long Term: 52 mg/m ³ ; Short Term: 104 mg/m ³ b, i, EU1, N Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	IRELAND	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm Sk, IOELV Source: 2021 Code of Practice
NATIONAL	ITALY	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm Cute Source: D.lgs. 81/2008, Allegato XXXVIII
NATIONAL	LATVIA	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm Ada Source: KN325P1
NATIONAL	LITHUANIA	Long Term: 25 mg/m ³ - 10 ppm; Short Term: 50 mg/m ³ - 20 ppm O, Šis RD taikomas bendrai garu ir aerozolio koncentracijai. Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
NATIONAL	LUXEMBOUR G	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm Peau Source: Mémorial A n.226 du 22 mars 2021
NATIONAL	MALTA	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm skin Source: S.L.424.24

NATIONAL	NETHERLAND S	Long Term: 52 mg/m ³ ; Short Term: 104 mg/m ³ H Source: Arbeidsomstandighedenregeling - Lijst A
NATIONAL	NETHERLAND S	Long Term: 10 mg/m ³ ; Short Term: 104 mg/m ³ H Source: Arbeidsomstandighedenregeling - Lijst A
NATIONAL	NORWAY	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm H E 5 S Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 15 mg/m ³ ; Short Term: 50 mg/m ³ skóra Source: Dz.U. 2018 poz. 1286
NATIONAL	PORTUGAL	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm Cutânea Source: Decreto-Lei n.º 1/2021
NATIONAL	ROMANIA	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm P, Dir. 2000/39 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVAKIA	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm K Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATIONAL	SLOVENIA	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm K, Y, EU1 Source: UL št. 72, 11. 5. 2021
NATIONAL	SPAIN	Long Term: 52 mg/m ³ - 20 ppm; Short Term: 104 mg/m ³ - 40 ppm vía dérmica, VLI Source: LEP 2022
NATIONAL	SWEDEN	Long Term: 25 mg/m ³ - 10 ppm; Short Term: 104 mg/m ³ - 40 ppm H, 26 Source: AFS 2021:3
sodium hydroxide; caustic soda CAS: 1310-73-2	ACGIH	Short Term: Ceiling - 2 mg/m ³ URT, eye, and skin irr
NATIONAL	AUSTRALIA	Short Term: Ceiling - 2 mg/m ³ (15min)
NATIONAL	AUSTRIA	Long Term: 2 mg/m ³ ; Short Term: Ceiling - 4 mg/m ³ 5(Mow), 8x, MAK, E Source: BGBl. II Nr. 156/2021
NATIONAL	BELGIUM	Long Term: 2 mg/m ³ M Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATIONAL	BULGARIA	Long Term: 2 mg/m ³ Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. НАРЕДБА № 10 ОТ 26 СЕПТЕМВРИ 2003
NATIONAL	CROATIA	Short Term: 2 mg/m ³ Source: NN 1/2021
NATIONAL	CZECHIA	Long Term: 1 mg/m ³ ; Short Term: Ceiling - 2 mg/m ³ I Source: Narízení vlády c. 361-2007 Sb
NATIONAL	DENMARK	Short Term: Ceiling - 2 mg/m ³ L Source: BEK nr 2203 af 29/11/2021
NATIONAL	ESTONIA	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³ * Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATIONAL	FINLAND	Short Term: Ceiling - 2 mg/m ³ kattoarvo Source: HTP-ARVOT 2020
NATIONAL	FRANCE	Long Term: 2 mg/m ³ Source: INRS outil65
NATIONAL	GREECE	Long Term: 2 mg/m ³ ; Short Term: 2 mg/m ³

		Source: ΦEK 94/A` 13.5.1999
	NATIONAL HUNGARY	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³ m, N Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL IRELAND	Short Term: 2 mg/m ³ Source: 2021 Code of Practice
	NATIONAL LATVIA	Long Term: 0.5 mg/m ³ Source: KN325P1
	NATIONAL LITHUANIA	Short Term: Ceiling - 2 mg/m ³ U Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
	NATIONAL NORWAY	Short Term: Ceiling - 2 mg/m ³ T Source: FOR-2021-06-28-2248
	NATIONAL POLAND	Long Term: 0.5 mg/m ³ ; Short Term: 1 mg/m ³ Source: Dz.U. 2018 poz. 1286
	NATIONAL ROMANIA	Long Term: 1 mg/m ³ ; Short Term: 3 mg/m ³
	NATIONAL SLOVAKIA	Long Term: 2 mg/m ³ Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATIONAL SPAIN	Short Term: 2 mg/m ³ Source: LEP 2022
	NATIONAL SWEDEN	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³ 3 Source: AFS 2021:3
2-methylisothiazol-3(2H)-one CAS: 2682-20-4	NATIONAL SLOVENIA	Long Term: 0.05 mg/m ³ (8h)
	NATIONAL AUSTRIA	Long Term: 0.05 mg/m ³ MAK, Sh Source: GKV, BGBl. II Nr. 156/2021
CAS: 14808-60-7	EU	Long Term: 0.1 mg/m ³ Polvere di silice cristallina respirabile, frazione inalabile. (R), A2 - Pulm fibrosis, lung cancer. Directive 2017/2398
	ACGIH	Long Term: 0.025 mg/m ³ (8h) R, A2 - Pulm fibrosis, lung cancer
	NATIONAL AUSTRALIA	Long Term: 0.05 mg/m ³ (8h) Respirable fraction
	NATIONAL AUSTRIA	Long Term: 0.05 mg/m ³ MAK, III C, A Source: BGBl. II Nr. 156/2021
	NATIONAL BELGIUM	Long Term: 0.1 mg/m ³ C Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL CROATIA	Long Term: 0.1 mg/m ³ Source: NN 1/2021
	NATIONAL DENMARK	Long Term: 0.3 mg/m ³ Source: BEK nr 2203 af 29/11/2021
	NATIONAL DENMARK	Long Term: 0.1 mg/m ³ EK Source: BEK nr 2203 af 29/11/2021
	NATIONAL ESTONIA	Long Term: 0.1 mg/m ³ 1, C Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL FINLAND	Long Term: 0.05 mg/m ³ alveolijae, liite 3 Source: HTP-ARVOT 2020
	NATIONAL FRANCE	Long Term: 0.1 mg/m ³ 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/m ³ (8h) Respirable aerosol Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL INDIA	Long Term: 10 mg/m ³
	NATIONAL IRELAND	Long Term: 0.1 mg/m ³ (8h) Respirable fraction Source: 2021 Code of Practice
	NATIONAL ITALY	Long Term: 0.1 mg/m ³ (8h) Polvere di silice cristallina respirabile (frazione inalabile). D.Lgs 81/2008 Source: D.lgs. 81/2008, Allegato XXXVIII
	NATIONAL LITHUANIA	Long Term: 0.1 mg/m ³ Žiureti 1 priedo 3 punkta. Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
	NATIONAL NETHERLANDS	Long Term: 0.075 mg/m ³ (2) Source: Arbeidsomstandighedenregeling - Lijst B1
	NATIONAL NORWAY	Long Term: 0.3 mg/m ³ K 7 Source: FOR-2021-06-28-2248
	NATIONAL NORWAY	Long Term: 0.05 mg/m ³ K G 7 21 Source: FOR-2021-06-28-2248
	NATIONAL POLAND	Long Term: 0.1 mg/m ³ 6) Source: Dz.U. 2018 poz. 1286
	NATIONAL SPAIN	Long Term: 0.05 mg/m ³ (8h) Respirable fraction Source: LEP 2022
	NATIONAL SWEDEN	Long Term: 0.1 mg/m ³ C, M, 3 Source: AFS 2021:3
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/m ³ MAK, Sh Source: GKV, BGBl. II Nr. 156/2021
	NATIONAL GERMANY	Long Term: 0.2 mg/m ³ ; Short Term: 0.4 mg/m ³ DFG; Long term and short term: inhalable fraction Source: TRGS900
2-octyl-2H-isothiazol-3-one CAS: 26530-20-1	NATIONAL AUSTRIA	Long Term: 0.05 mg/m ³ ; Short Term: Ceiling - 0.05 mg/m ³ Mow, MAK, H, S, E Source: BGBl. II Nr. 156/2021
	NATIONAL GERMANY	Long Term: 0.05 mg/m ³ DFG, H, Y, E, 2(I) Source: TRGS 900
	NATIONAL SLOVENIA	Long Term: 0.05 mg/m ³ ; Short Term: 0.1 mg/m ³ K, Y, (I) Source: UL št. 72, 11. 5. 2021
Pyridine-2-thiol 1-oxide, sodium salt CAS: 3811-73-2	NATIONAL GERMANY	Long Term: 0.2 mg/m ³ DFG, H, Y, E, 2(II) Source: TRGS 900
	NATIONAL SLOVENIA	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³ K, (I) Source: UL št. 72, 11. 5. 2021
	NATIONAL AUSTRIA	Long Term: 1 mg/m ³ ; Short Term: 4 mg/m ³ 15(Miw), 4x, MAK, H Source: BGBl. II Nr. 156/2021
	NATIONAL DENMARK	Long Term: 1 mg/m ³ H Source: BEK nr 2203 af 29/11/2021

octamethylcyclotetrasiloxane NATIONAL AUSTRIA f
CAS: 556-67-2 Source: BGBl. II Nr. 156/2021

29H,31H- NATIONAL LATVIA Long Term: 5 mg/m³
phthalocyaninato(2-)- Source: KN325P1
N29,N30,N31,N32 copper
CAS: 147-14-8

NATIONAL LITHUANIA Long Term: 5 mg/m³
Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389

Predicted No Effect Concentration (PNEC) values

Calcium dihydroxide Exposure Route: Fresh Water; PNEC Limit: 490 µg/l
CAS: 1305-62-0

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 490 µg/l

Exposure Route: Marine water; PNEC Limit: 320 µg/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 3 mg/l

Exposure Route: Soil; PNEC Limit: 1080 mg/kg

Titanium dioxide Exposure Route: Fresh Water; PNEC Limit: 0.184 mg/l
CAS: 13463-67-7

Exposure Route: Marine water; PNEC Limit: 0.018 mg/l

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 1 mg/kg

Exposure Route: Intermittent releases (marine water); PNEC Limit: 100 mg/kg

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 100 mg/kg

ethanediol; ethylene Exposure Route: Fresh Water; PNEC Limit: 10 mg/l
glycol
CAS: 107-21-1

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

Pyrrithione zinc Exposure Route: Fresh Water; PNEC Limit: 90 ng/L
CAS: 13463-41-7

Exposure Route: Marine water; PNEC Limit: 90 ng/L

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 10 µg/l

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

2-methylisothiazol-3(2H)- Exposure Route: Fresh Water; PNEC Limit: 3.39 µg/l
one
CAS: 2682-20-4

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 3.39 µg/l

Exposure Route: Marine water; PNEC Limit: 3.39 µg/l

Exposure Route: Intermittent releases (marine water); PNEC Limit: 3.39 µg/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 230 µg/l

Exposure Route: Soil; PNEC Limit: 47.1 µg/kg

Exposure Route: Fresh Water; PNEC Limit: 3.39 µg/l

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: Intermittent releases (fresh water); PNEC Limit: 3.39 µg/l

Exposure Route: Marine water; PNEC Limit: 3.39 µg/l

Exposure Route: Intermittent releases (marine water); PNEC Limit: 3.39 µg/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 230 µg/l

Exposure Route: Freshwater sediments; PNEC Limit: 27 µg/l
Exposure Route: Marine water sediments; PNEC Limit: 27 µg/l
Exposure Route: Soil; PNEC Limit: 10 µg/l

2-octyl-2H-isothiazol-3-one
CAS: 26530-20-1
Exposure Route: Fresh Water; PNEC Limit: 2.2 µg/l

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 1.22 µg/l
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

Calcium dihydroxide
CAS: 1305-62-0
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 1 mg/m³; Consumer: 1 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 4 mg/m³; Consumer: 4 mg/m³

Titanium dioxide
CAS: 13463-67-7
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 10 mg/m³

ethanediol; ethylene glycol
CAS: 107-21-1
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 35 mg/m³; Consumer: 7 mg/m³

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

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

2-methylisothiazol-3(2H)-one
CAS: 2682-20-4
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 21 µg/m³; Consumer: 21 µg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 43 µg/m³; Consumer: 43 µg/m³

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 27 µg/kg

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects
Consumer: 53 µg/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:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or 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

Colour: In compliance with the product description

Odour: Odourless

Odour threshold: N.A.

pH: Not Relevant

Kinematic viscosity: N.A.

Melting point / freezing point: N.A.

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

Flash point: Not Applicable

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

Vapour density: N.A.

Vapour pressure: N.A.

Relative density: 1.60 g/cm³

Solubility in water: Miscible

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 = 0.91 % ; 14.49 g/l

Particle characteristics:

Particle size: N.A.

9.2. Other information

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	The product is classified: Skin Corr. 1A(H314)
c) serious eye damage/irritation	The product is classified: Eye Dam. 1(H318)
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:

Calcium dihydroxide	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg LC50 Inhalation Dust Rat > 6.04 mg/l 4h LD50 Skin Rabbit > 2500 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 Negative		
	f) carcinogenicity	Carcinogenicity Oral Rat = 517 mg/kg	NOAEL	
	Titanium dioxide	a) acute toxicity	LD50 Oral Rat > 5000 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		
ethanediol; ethylene glycol		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	Oral route	
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat > 1000 mg/kg		
	Pyrrithione zinc	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	14 days
		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	NOAEL NOAEL; mouse	
g) reproductive toxicity		No Observed Adverse Effect Level Oral Rat = 1.4		

		mg/kg	
2-methylisothiazol-3(2H)-one	a) acute toxicity	LC50 Inhalation of aerosol Rat = 0.1 mg/l 4h	
		LD50 Oral Rat = 120 mg/kg	
		LD50 Skin Rat = 242 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 Ppm	NOAEL
	a) acute toxicity	LD50 Oral > 2000 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 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	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 $\geq 0.1\%$

SECTION 12: Ecological information

12.1. Toxicity

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

Eco-Toxicological Information:

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

No data available for the product

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
Calcium dihydroxide	CAS: 1305-62-0 - EINECS: 215-137-3	a) Aquatic acute toxicity : LC50 Fish rainbow trout = 50.6 mg/L 96h a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 49.1 mg/L 48h b) Aquatic chronic toxicity : NOEC Crangon septemspinosa = 32 mg/L 48h - 14days a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 184.57 mg/L 72h „OECD Guideline 201 (Alga, Growth Inhibition Test) a) Aquatic acute toxicity : EC50 Sludge activated sludge = 300.4 mg/L 3h „OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test d) Terrestrial toxicity : NOEC Worm Eisenia fetida = 2000 mg/kg „OECD Guideline 207 (Earthworm, Acute Toxicity Tests) d) Terrestrial toxicity : EC10 soil microorganisms = 4000 mg/kg „Guideline: BBA VI, 1-1 (1990) under consideration of OECD 216 (2000) and OECD 217 (2000).
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 mg/L 96h a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata (alghe cloroficee) > 100 mg/L 72h a) Aquatic acute toxicity : NOEC Algae = 5600 mg/L a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna (Pulce d'acqua grande) > 100 mg/L 48h
ethanediol; ethylene glycol	CAS: 107-21-1 - EINECS: 203-473-3	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 72860 mg/L 96h b) Aquatic chronic toxicity : NOEC Fish = 15380 mg/L - 7 days b) Aquatic chronic toxicity : NOEC Ceriodaphnia dubia = 8590 mg/L - 7days a) Aquatic acute toxicity : NOEC Algae Pseudokirchnerella subcapitata = 100 mg/L 72h OECD guideline 201
Pyrrithione zinc	CAS: 13463-41-7 - EINECS: 236-671-3 - INDEX: 613-333-00-7	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 2.6 µg/L 96h US EPA-72-1 a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 8.2 µg/L US EPA-72-2 a) Aquatic acute toxicity : EC50 Algae Navicula pelliculosa = 3 µg/L dossier ECHA b) Aquatic chronic toxicity : NOEC Fish Pimephales promelas = 1.22 µg/L „OECD Guideline 210 (Fish, Early-Life Stage Toxicity Test) - 28days b) Aquatic chronic toxicity : EC50 Lemna gibba = 9.6 µg/L EPA OPPTS 850.4400 (Aquatic Plant Toxicity Test using Lemna spp. Tiers I & II) d) Terrestrial toxicity : LC50 Folsomia candida = 822 mg/kg ISO 11267 (Inhibition of Reproduction of Collembola by Soil Pollutants) e) Plant toxicity : NOEC Tomato, Cucumber, Lettuce, Soybean, Cabbage, Carrot, Oat > 0.49 µg/L USEPA OPPTS 850.4100 d) Terrestrial toxicity : LC50 Avian Northern Bobwhite = 60 mg/kg EPA FIFRA Guideline 71-1 - 14days d) Terrestrial toxicity : NOEC Avian Northern Bobwhite = 31.2 mg/kg EPA FIFRA Guideline 71-1 - 14days

2-methylisothiazol-3(2H)-one	CAS: 2682-20-4 - EINECS: 220-239-6 - INDEX: 613-326-00-9	<p>a) Aquatic acute toxicity : LC50 Fish <i>Oncorhynchus mykiss</i> = 4.77 mg/L 96h „OECD Guideline 203 (Fish, Acute Toxicity Test)</p> <p>b) Aquatic chronic toxicity : NOEC Fish <i>Oncorhynchus mykiss</i> = 4.93 mg/L Dossier ECHA</p> <p>a) Aquatic acute toxicity : LC50 <i>Daphnia magna</i> = 0.934 mg/L 48h OECD Guideline 202 (<i>Daphnia</i> sp. Acute Immobilisation Test)</p> <p>b) Aquatic chronic toxicity : EC10 <i>Daphnia magna</i> = 0.044 mg/L OECD Guideline 211 (<i>Daphnia magna</i> Reproduction Test) - Duration 21d</p> <p>a) Aquatic acute toxicity : EC50 Algae <i>Selenastrum capricornutum</i> = 0.103 mg/L 72h Dossier ECHA</p> <p>a) Aquatic acute toxicity : EC50 Sludge activated sludge of a predominantly domestic sewage = 41 mg/L 3h „OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)</p> <p>b) Aquatic chronic toxicity : EC50 freshwater sediment = 50 mg/kg Duration 28d Draft OECD Guideline (now OECD Guideline 225) - 28days</p>
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	<p>a) Aquatic acute toxicity : LC50 Fish <i>Oncorhynchus mykiss</i> = 0.19 mg/L 96h EPA OPP 72-1 (Fish Acute Toxicity Test)</p> <p>b) Aquatic chronic toxicity : NOEC Fish <i>Danio rerio</i> = 0.02 mg/L „OECD Guideline 210 (Fish, Early-Life Stage Toxicity Test) - 35days</p> <p>a) Aquatic acute toxicity : LC50 <i>Daphnia magna</i> = 0.16 mg/L 48h EPA OPP 72-2 (Aquatic Invertebrate Acute Toxicity Test)</p> <p>b) Aquatic chronic toxicity : NOEC <i>Daphnia magna</i> = 0.1 mg/L EPA OPP 72-4 (Fish Early Life-Stage and Aquatic Invertebrate Life-Cycle Studies) - 21days</p> <p>a) Aquatic acute toxicity : EC50 Algae <i>Skeletonema costatum</i> = 0 mg/L 96h „OECD Guideline 201 (Alga, Growth Inhibition Test)</p> <p>a) Aquatic acute toxicity : EC50 Sludge activated sludge = 4.5 mg/L 3h „OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)</p> <p>d) Terrestrial toxicity : LC50 Worm <i>Eisenia fetida</i> = 613 mg/kg „OECD Guideline 207 (Earthworm, Acute Toxicity Tests) - 14days</p> <p>e) Plant toxicity : NOEC <i>Trifolium pratense</i>, <i>Oryza sativa</i>, <i>Brassica napus</i> = 1000 mg/L OECD Guideline 208 (Terrestrial Plants Test: Seedling Emergence and Seedling Growth Test) - 21days</p>
2-octyl-2H-isothiazol-3-one	CAS: 26530-20-1 - EINECS: 247-761-7 - INDEX: 613-112-00-5	<p>a) Aquatic acute toxicity : LC50 Fish freshwater fish = 0.122 mg/L dossier ECHA</p> <p>b) Aquatic chronic toxicity : EC10 Fish = 0.022 mg/L dossier ECHA</p> <p>a) Aquatic acute toxicity : EC50 freshwater invertebrates = 0.181 mg/L dossier ECHA</p> <p>b) Aquatic chronic toxicity : EC10 freshwater invertebrates = 0.035 mg/L dossier ECHA</p> <p>LC50 Algae freshwater algae = 0.15 mg/L</p>

12.2. Persistence and degradability

Component	Persitence/Degradability:	Test	Value	Notes:
ethanediol; ethylene glycol	Readily biodegradable	Dissolved organic carbon	90.000	10days
Pyrrithione zinc	Non-readily biodegradable	CO2 production		OECD 301B CO2evolution
2-methylisothiazol-3(2H)-one	Non-readily biodegradable	CO2 production		OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Non-readily biodegradable			

2-octyl-2H-isothiazol-3-one Non-readily biodegradable

12.3. Bioaccumulative potential

Component	Bioaccumulation	Test	Value	Notes:
Pyrrithione zinc	Bioaccumulative	BCF - Bioconcentration factor	1.400	
2-methylisothiazol-3(2H)-one	Bioaccumulative	BCF - Bioconcentration factor	5.750	carcass
	Bioaccumulative	BCF - Bioconcentration factor	48.100	viscera
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Bioaccumulative	BCF - Bioconcentration factor	54.000	≤ 54
2-octyl-2H-isothiazol-3-one	Bioaccumulative	BCF - Bioconcentration factor	19.210	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 $\geq 0.1\%$

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration $\geq 0.1\%$

12.7. Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force. Disposal through discharge into wastewater is not permitted

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.

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-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 Provisions: N/A

Sea (IMDG):

IMDG-Stowage Code: N/A

IMDG-Stowage Note: 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 (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. 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: 30, 70, 75

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

N.A.

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

No substances listed

German Water Hazard Class.

1: Low hazard to waters

SVHC Substances:

No SVHC substances present in concentration \geq 0.1%

Dir. 2004/42/EC (VOC directive)

(ready to use)

Volatile Organic compounds - VOCs = 0.91 %

Volatile Organic compounds - VOCs = 14.49 g/L

15.2. Chemical safety assessment

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

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

Calcium dihydroxide
ethanediol; ethylene glycol

SECTION 16: Other information

Code	Description
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
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.

Code	Hazard class and hazard category	Description
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/1A	Skin Corr. 1A	Skin corrosion, Category 1A
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.6/2	Carc. 2	Carcinogenicity, Category 2
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
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

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
Skin Corr. 1A, H314	On basis of test data (pH)
Eye Dam. 1, H318	On basis of test data (pH)

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:

- 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
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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)
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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 %
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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)
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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 %
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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)
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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 %
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operation conditions followed.	
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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 %
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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)
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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 %
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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)
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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/m ³	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/m ³	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/m ³	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/m ³	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.



Exposure Scenario

Calcium dihydroxide

Exposure Scenario, 24/06/2021

Substance identity	
	Calcium dihydroxide
CAS No.	1305-62-0
EINECS No.	215-137-3
Registration number	01-2119475151-45

Table of contents

1. **ES 1** Widespread use by professional workers; Various products (PC9a, PC9b, PC15)

1. ES 1 Widespread use by professional workers; Various products (PC9a, PC9b, PC15)

1.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks - Use in rigid foams, coatings, adhesives and sealants
Date - Version	24/06/2021 - 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) - Non-metal surface treatment products (PC15)

Environment Contributing Scenario

CS1	ERC8c - ERC8f
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Worker Contributing Scenario

CS2 Material transfers	PROC8a
CS3 Hand application - finger paints, pastels, adhesives - Rolling, Brushing	PROC10
CS4 Mixing operations - Manual	PROC19

1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario (ERC8c, ERC8f)

Environmental release categories	Widespread use leading to inclusion into/onto article (indoor) - Widespread use leading to inclusion into/onto article (outdoor) (ERC8c, ERC8f)
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Product (article) characteristics

Physical form of product:

Solid, medium dustiness

Vapour pressure:

< 1E-05 Pa

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

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

Physical form of product:

Solid, medium dustiness

Amount used, frequency and duration of use/exposure

Duration:

Exposure duration <= 480 min

Technical and organisational conditions and measures

Technical and organisational measures

Ensure operatives are trained to minimise exposures.

Avoid direct eye contact with product, also via contamination on hands.

Do not ingest.

Local exhaust ventilation

Inhalation - minimum efficiency of: 72 %

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

<p>Personal protection Wear suitable gloves tested to EN374. Use suitable eye protection. Wear suitable face shield.</p>	
<p><i>Other conditions affecting worker exposure</i></p>	
<p>Covers indoor and outdoor use Professional use Temperature: Covers use at ambient temperatures. Body parts exposed: Assumes that potential dermal contact is limited to upper part of the body.</p>	
<p><i>Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.</i></p>	
<p>Additional Good Practice Advice: Ensure control measures are regularly inspected and maintained. Open doors and windows. Prevent leaks and prevent soil / water pollution caused by leaks.</p>	
<p>1.2. CS3: Worker Contributing Scenario: Hand application - finger paints, pastels, adhesives - Rolling, Brushing (PROC10)</p>	
<p>Process Categories</p>	<p>Roller application or brushing (PROC10)</p>
<p><i>Product (article) characteristics</i></p>	
<p>Physical form of product: Solid, medium dustiness</p>	
<p><i>Amount used, frequency and duration of use/exposure</i></p>	
<p>Duration: Exposure duration <= 480 min</p>	
<p><i>Technical and organisational conditions and measures</i></p>	
<p>Technical and organisational measures Ensure operatives are trained to minimise exposures. Avoid direct eye contact with product, also via contamination on hands. Do not ingest.</p>	
<p><i>Conditions and measures related to personal protection, hygiene and health evaluation</i></p>	
<p>Personal protection Wear suitable gloves tested to EN374. Use suitable eye protection. Wear suitable face shield.</p>	
<p><i>Other conditions affecting worker exposure</i></p>	
<p>Covers indoor and outdoor use Professional use Temperature: Covers use at ambient temperatures.</p>	
<p><i>Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.</i></p>	
<p>Additional Good Practice Advice: Ensure control measures are regularly inspected and maintained. Prevent leaks and prevent soil / water pollution caused by leaks.</p>	
<p>1.2. CS4: Worker Contributing Scenario: Mixing operations - Manual (PROC19)</p>	
<p>Process Categories</p>	<p>Manual activities involving hand contact (PROC19)</p>
<p><i>Product (article) characteristics</i></p>	
<p>Physical form of product: Solid, medium dustiness</p>	
<p><i>Amount used, frequency and duration of use/exposure</i></p>	
<p>Duration: Exposure duration <= 240 min</p>	
<p><i>Technical and organisational conditions and measures</i></p>	
<p>Technical and organisational measures Ensure operatives are trained to minimise exposures. Avoid direct eye contact with product, also via contamination on hands. Do not ingest.</p>	

Local exhaust ventilation

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

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

Personal protection

Wear suitable gloves tested to EN374.

Use suitable eye protection.

Wear suitable face shield.

Other conditions affecting worker exposure

Outdoor use

Professional use

Temperature: Covers use at ambient temperatures.

Body parts exposed:

Assumes that potential dermal contact is limited to upper part of the body.

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:

Ensure control measures are regularly inspected and maintained. Open doors and windows. Prevent leaks and prevent soil / water pollution caused by leaks.

1.3 Exposure estimation and reference to its source

1.3. CS1: Environment Contributing Scenario (ERC8c, ERC8f)

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
soil	N/A	N/A	= 0.65

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

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative	< 1 mg/m ³	MEASE	N/A

1.3. CS3: Worker Contributing Scenario: Hand application - finger paints, pastels, adhesives - Rolling, Brushing (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative	< 1 mg/m ³	MEASE	N/A

Additional information on exposure estimation:

If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to EN374.

1.3. CS4: Worker Contributing Scenario: Mixing operations - Manual (PROC19)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative	< 1 mg/m ³	MEASE	N/A

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.