

Safety Data Sheet

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

METRIC ULTRACEM

Date of first edition: 9/28/2023

Safety Data Sheet dated 28/09/2023

version 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Mixture identification:

Trade name: METRIC ULTRACEM

Trade code: SK0163 .040

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

Recommended use: Mortars; Waterproofing product

Uses advised against: All uses other than recommended ones

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL S.p.A.

Via dell'Artigianato, 9

41049 Sassuolo (MODENA) - ITALY

Tel.+39 0536 816511 Fax. +39 0536816581

safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112 Kerakoll Italy - +39-0536-816511 Ireland Poison information centre: 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 Irrit. 2	Causes skin irritation.
Eye Dam. 1	Causes serious eye damage.
Skin Sens. 1B	May cause an allergic skin reaction.
STOT SE 3	May cause respiratory irritation.

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

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Precautionary statements

P102	Keep out of reach of children.
P260	Do not breathe dust.
P280	Wear protective gloves and eye/face 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

Portland Cement (Cr VI < 0,0002%)

Calcium dihydroxide

Calcium oxide

Flue Dust, Portland Cement

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

None.

2.3. Other hazards

When mixtures containing cement react with water, for instance when making concrete or mortar, or when the cement becomes wet, a strong alkaline solution is produced (high pH caused by the formation of calcium, sodium and potassium hydroxides).

Cement and mixtures containing cement may irritate the eyes, the mucous system, the throat and the respiratory system and cause coughing. Frequent inhalation of cement dust or mixtures containing cement over a long period of time increases the risk of developing lung diseases.

In case of prolonged contact with the skin, both cement and mixtures containing cement, including pastes, may cause skin sensitisation due to the presence of trace amounts of chromium VI salts. Where necessary, such an effect can be minimized by incorporating a special reducing agent to maintain the water-soluble chromium VI content to concentration rates below 0.0002% (2 ppm) on the total dry weight of cement.

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: METRIC ULTRACEM

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

Qty	Name	Ident. Numb.	Classification	Registration Number
30-40 %	Portland Cement (Cr VI < 0,0002%)	CAS:65997-15-1 EC:266-043-4	Skin Irrit. 2, H315; Eye Dam. 1, H318; Skin Sens. 1B, H317; STOT SE 3, H335	
5-7 %	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
1-2.5 %	Calcium oxide	CAS:1305-78-8 EC:215-138-9	Skin Irrit. 2, H315; Eye Dam. 1, H318; STOT SE 3, H335	01-2119475325-36
1-2.5 %	Flue Dust, Portland Cement	CAS:68475-76-3 EC:270-659-9	Skin Irrit. 2, H315; Eye Dam. 1, H318; Skin Sens. 1, H317; STOT SE 3, H335	01-2119486767-17

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:

In case of inhalation, consult a doctor immediately and show him packing or label.

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.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

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.

Use localized ventilation system.

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.

Contaminated 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

The product must be stored in waterproof, dry, clean conditions and protected from contamination. Do not use aluminum containers due to incompatibility of the materials.

The product contains cement with an addition of a Chromium reducing agent (VI) and its effectiveness decreases with time. Consequently, packagings of the material indicate information about the production date, storing conditions and the appropriate storage period for the maintaining of the activity of the reducing agent and for maintaining the soluble Chromium (VI) amount under 2ppm over the total dry weight referred to cement (EN 196-10).

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
Portland Cement (Cr VI < 0,0002%) CAS: 65997-15-1	ACGIH		Long Term: 1 mg/m ³ (8h) E,R, A4 - Pulm func, resp symptoms, asthma
	NATION AUSTRALIA AL		Long Term: 10 mg/m ³ (8h) This value is for inhalable dust containing no asbestos and < 1% crystalline silica.
	NATION AUSTRIA AL		Long Term: 5 mg/m ³ MAK, E Source: BGBl. II Nr. 156/2021
	NATION BELGIUM AL		Long Term: 1 mg/m ³ Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATION CROATIA AL		Long Term: 10 mg/m ³ U Source: NN 1/2021
	NATION CROATIA AL		Long Term: 4 mg/m ³ R Source: NN 1/2021
	NATION FINLAND AL		Long Term: 5 mg/m ³ hengittyvä pöly Source: HTP-ARVOT 2020
	NATION FINLAND AL		Long Term: 1 mg/m ³ alveolijae Source: HTP-ARVOT 2020
	NATION HUNGARY AL		Long Term: 10 mg/m ³ N Source: 5/2020. (II. 6.) ITM rendelet
	NATION IRELAND AL		Long Term: 1 mg/m ³ R Source: 2021 Code of Practice
	NATION LATVIA AL		Long Term: 6 mg/m ³ Source: KN325P1
	NATION POLAND AL		Long Term: 6 mg/m ³ 4) Source: Dz.U. 2018 poz. 1286
	NATION POLAND AL		Long Term: 2 mg/m ³ 6), 7) Source: Dz.U. 2018 poz. 1286
	NATION SPAIN AL		Long Term: 4 mg/m ³ e, d Source: LEP 2022
Limestone CAS: 1317-65-3	NATION BELGIUM AL		Long Term: 10 mg/m ³ Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATION BULGARIA AL		Long Term: 10 mg/m ³ Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. НАРЕДБА № 10 ОТ 26 СЕПТЕМВРИ 2003
	NATION ESTONIA AL		Long Term: 10 mg/m ³ Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATION ESTONIA AL		Long Term: 5 mg/m ³ Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105

Calcium dihydroxide
CAS: 1305-62-0

NATION GREECE AL	Long Term: 10 mg/m3 e?sp? Source: ΦΕΚ 94/Α` 13.5.1999;
NATION GREECE AL	Long Term: 5 mg/m3 a?ap? Source: ΦΕΚ 94/Α` 13.5.1999;
NATION GREECE AL	Long Term: 10 mg/m3 e?sp?. Source: ΦΕΚ 94/Α` 13.5.1999;
NATION GREECE AL	Long Term: 5 mg/m3 a?ap?. Source: ΦΕΚ 94/Α` 13.5.1999;
NATION HUNGARY AL	Long Term: 10 mg/m3 N Source: 5/2020. (II. 6.) ITM rendelet
NATION IRELAND AL	Long Term: 10 mg/m3 Source: 2021 Code of Practice
NATION IRELAND AL	Long Term: 4 mg/m3 Source: 2021 Code of Practice
ACGIH	Long Term: 5 mg/m3 (8h) Eye, URT and skin irr
EU	Long Term: 1 mg/m3 (8h); Short Term: 4 mg/m3 Respirable fraction
NATION AUSTRALIA AL	Long Term: 5 mg/m3 (8h)
NATION AUSTRIA AL	Long Term: 1 mg/m3; Short Term: Ceiling - 4 mg/m3 5(Mow), 8x, MAK, E Source: GKV, BGBl. II Nr. 156/2021
NATION BELGIUM AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATION BULGARIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 5 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. НАРЕДБА № 10 ОТ 26 СЕПТЕМВРИ 2003
NATION CROATIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 R (14) Source: 2017/164/EU
NATION CYPRUS AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 9 (2019) Source: Οι περί Ασφάλειας και Υγείας στην Εργασία (Χημικοί Παράγοντες) Κανονισμοί του 2001 έως 2021
NATION CZECHIA AL	Long Term: 1 mg/m3; Short Term: Ceiling - 4 mg/m3 I, R Source: Narízení vlády č. 361-2007 Sb
NATION DENMARK AL	Long Term: 5 mg/m3 E Source: BEK nr 2203 af 29/11/2021
NATION DENMARK AL	Long Term: 1 mg/m3 E Source: BEK nr 2203 af 29/11/2021
NATION ESTONIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 1 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
NATION FINLAND AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Source: HTP-ARVOT 2020
NATION FRANCE AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Source: INRS outil65, article R. 4412-149 du Code du travail
NATION GERMANY AL	Long Term: 1 mg/m3 Y, EU, DFG, E, 2 (I)

Source: TRGS 900

NATION GREECE AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 9) Source: Π.Δ. 82/2018 (ΦΕΚ 152/A` 21.8.2018)
NATION HUNGARY AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 resp, EU4, N Source: 5/2020. (II. 6.) ITM rendelet
NATION IRELAND AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 IOELV, R Source: 2021 Code of Practice
NATION ITALY AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Frazione respirabile Source: D.lgs. 81/2008, Allegato XXXVIII
NATION LATVIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Source: KN325P1
NATION LITHUANIA AL	Long Term: 5 mg/m3 O Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
NATION LUXEMBOUR AL G	Long Term: 5 mg/m3 11, 14 Source: Mémorial A n.226 du 22 mars 2021
NATION LUXEMBOUR AL G	Long Term: 1 mg/m3; Short Term: 4 mg/m3 9, 14 Source: Mémorial A n.226 du 22 mars 2021
NATION MALTA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 10 Source: S.L.424.24
NATION NETHERLAND AL S	Long Term: 1 mg/m3; Short Term: 4 mg/m3 (2) Source: Arbeidsomstandighedenregeling - Lijst A
NATION NORWAY AL	Long Term: 1 mg/m3 E Source: FOR-2021-06-28-2248
NATION NORWAY AL	Short Term: 4 mg/m3 S Source: FOR-2021-06-28-2248
NATION POLAND AL	Long Term: 2 mg/m3; Short Term: 6 mg/m3 4) Source: Dz.U. 2018 poz. 1286
NATION POLAND AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 6) Source: Dz.U. 2018 poz. 1286
NATION PORTUGAL AL	Long Term: 1 mg/m3 (9) Source: Decreto-Lei n.º 1/2021
NATION ROMANIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Frac?iune respirabila, Dir. 2017/164 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATION SLOVAKIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 11) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATION SLOVENIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Y, EU4, (A) Source: UL št. 72, 11. 5. 2021
NATION SPAIN AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 VLI, d Source: LEP 2022
NATION SWEDEN AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 3 Source: AFS 2021:3

Calcium oxide
CAS: 1305-78-8

NATION AUSTRALIA AL	Long Term: 2 mg/m3 (8h)
ACGIH	Long Term: 2 mg/m3 (8h) URT irr
EU	Long Term: 1 mg/m3 (8h); Short Term: 4 mg/m3 Respirable fraction
NATION BELGIUM AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
NATION CROATIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 R (14) Source: 2017/164/EU
NATION CYPRUS AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 9 (2019) Source: Οι περί Ασφάλειας και Υγείας στην Εργασία (Χημικοί Παράγοντες) Κανονισμοί του 2001 έως 2021
NATION GERMANY AL	Long Term: 1 mg/m3 Y, DFG, E, 2(I) Source: TRGS 900
NATION GREECE AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 9) Source: Π.Δ. 82/2018 (ΦΕΚ 152/Α` 21.8.2018)
NATION IRELAND AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 IOELV, R Source: 2021 Code of Practice
NATION ITALY AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Frazione respirabile Source: D.lgs. 81/2008, Allegato XXXVIII
NATION LATVIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Source: KN325P1
NATION LUXEMBOUR AL G	Long Term: 1 mg/m3; Short Term: 4 mg/m3 14 Source: Mémorial A n.226 du 22 mars 2021
NATION MALTA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 10 Source: S.L.424.24
NATION PORTUGAL AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 (9) Source: Decreto-Lei n.º 1/2021
NATION ROMANIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Frac?iune respirabila, Dir. 2017/164 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATION SLOVENIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Y, EU4, (A) Source: UL št. 72, 11. 5. 2021
NATION SPAIN AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 d, VLI Source: LEP 2022
NATION AUSTRIA AL	Long Term: 1 mg/m3; Short Term: Ceiling - 4 mg/m3 5(Mow), 8x, MAK, E Source: GKV, BGBl. II Nr. 156/2021
NATION BULGARIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 5 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. НАРЕДБА № 10 ОТ 26 СЕПТЕМВРИ 2003
NATION CZECHIA AL	Long Term: 1 mg/m3; Short Term: Ceiling - 4 mg/m3 I, R Source: Nařízení vlády c. 361-2007 Sb
NATION DENMARK AL	Long Term: 2 mg/m3 Source: BEK nr 2203 af 29/11/2021

Flue Dust, Portland Cement CAS: 68475-76-3	NATION DENMARK AL	Long Term: 1 mg/m3 E Source: BEK nr 2203 af 29/11/2021
	NATION ESTONIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 1 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATION FINLAND AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Source: HTP-ARVOT 2020
	NATION FRANCE AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Source: INRS outil65, article R. 4412-149 du Code du travail
	NATION HUNGARY AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 resp, EU4, N Source: 5/2020. (II. 6.) ITM rendelet
	NATION LITHUANIA AL	Long Term: 2 mg/m3; Short Term: 5 mg/m3 Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
	NATION NETHERLAND AL S	Long Term: 1 mg/m3; Short Term: 4 mg/m3 (2) Source: Arbeidsomstandighedenregeling - Lijst A
	NATION NORWAY AL	Long Term: 1 mg/m3 E Source: FOR-2021-06-28-2248
	NATION NORWAY AL	Short Term: 4 mg/m3 S Source: FOR-2021-06-28-2248
	NATION POLAND AL	Long Term: 2 mg/m3; Short Term: 6 mg/m3 4) Source: Dz.U. 2018 poz. 1286
	NATION POLAND AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 6) Source: Dz.U. 2018 poz. 1286
	NATION SLOVAKIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 11) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
	NATION SWEDEN AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 3 Source: AFS 2021:3
	NATION AUSTRIA AL	Long Term: 5 mg/m3 MAK, E Source: BGBl. II Nr. 156/2021
	NATION GERMANY AL	Long Term: 4 mg/m3 (8h) Inhalable aerosol
	NATION GERMANY AL	Long Term: 1.5 mg/m3 (8h) Respirable aerosol
Aluminium hydroxide CAS: 21645-51-2	NATION SWITZERLAND AL D	Long Term: 3 mg/m3 (8h) Respirable aerosol
	NATION AUSTRALIA AL	Long Term: 2 mg/m3 (8h)
	NATION BELGIUM AL	Long Term: 2 mg/m3 (8h)
	NATION BULGARIA AL	Long Term: 2 mg/m3 (8h)
	NATION CROATIA AL	Long Term: 2 mg/m3 (8h)
	NATION DENMARK AL	Long Term: 1 mg/m3 (8h)
	NATION ESTONIA AL	Long Term: 2 mg/m3 (8h)

NATION FINLAND AL	Long Term: 2 mg/m ³ (8h)
NATION FRANCE AL	Long Term: 2 mg/m ³ (8h)
NATION UNITED AL KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 2 mg/m ³ (8h)
NATION GREECE AL	Long Term: 2 mg/m ³ (8h)
NATION IRELAND AL	Long Term: 2 mg/m ³ (8h)
NATION SLOVENIA AL	Long Term: 6 mg/m ³ (8h)
NATION SPAIN AL	Long Term: 2 mg/m ³ (8h)
NATION SWEDEN AL	Long Term: 1 mg/m ³ (8h)
NATION SWEDEN AL	Long Term: 1 mg/m ³ (8h)
NATION AUSTRIA AL	Long Term: 5 mg/m ³ ; Short Term: 10 mg/m ³ 60(Miw), 2x, A Source: GKV, BGBl. II Nr. 156/2021
NATION LATVIA AL	Long Term: 6 mg/m ³ Source: KN325P1
NATION LITHUANIA AL	Long Term: 6 mg/m ³ F Source: 2011 m. rugsejo 1 d. Nr. V-824/A1-389
NATION POLAND AL	Long Term: 2.5 mg/m ³ 4) Source: Dz.U. 2018 poz. 1286
NATION POLAND AL	Long Term: 1.2 mg/m ³ 6) Source: Dz.U. 2018 poz. 1286
NATION SLOVAKIA AL	Long Term: 1.5 mg/m ³ 11) Source: 355 NARIADENIE VLÁDY z 10. mája 2006

Predicted No Effect Concentration (PNEC) values

Calcium dihydroxide
CAS: 1305-62-0

Exposure Route: Fresh Water; PNEC Limit: 490 µg/l

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

Calcium oxide
CAS: 1305-78-8

Exposure Route: Fresh Water; PNEC Limit: 370 µg/l

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 370 µg/l

Exposure Route: Marine water; PNEC Limit: 240 µg/l

Exposure Route: Intermittent releases (marine water); PNEC Limit: 240 µg/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 2.27 mg/l

Exposure Route: Soil; PNEC Limit: 817 mg/kg

Flue Dust, Portland
Cement
CAS: 68475-76-3

Exposure Route: Fresh Water; PNEC Limit: 282 µg/l

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 282 µg/l

Exposure Route: Marine water; PNEC Limit: 28 µg/l
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 6 mg/kg
Exposure Route: Marine water sediments; PNEC Limit: 88 µg/kg
Exposure Route: Freshwater sediments; PNEC Limit: 875 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/m ³ ; Consumer: 1 mg/m ³ Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects Worker Professional: 4 mg/m ³ ; Consumer: 4 mg/m ³
Calcium oxide CAS: 1305-78-8	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects Worker Professional: 1 mg/m ³ ; Consumer: 1 mg/m ³ Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects Worker Professional: 1 mg/m ³ ; Consumer: 1 mg/m ³
Flue Dust, Portland Cement CAS: 68475-76-3	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects Worker Professional: 840 µg/m ³ ; Consumer: 840 µg/m ³ Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects Worker Professional: 4 mg/m ³

8.2. Exposure controls

Eye protection:

Eye glasses with side protection.(EN166)

Protection for skin:

Chemical protection clothing. Safety shoes.

Protection for hands:

Protection for hands:

Suitable materials for safety gloves; EN 374:

Nitrile rubber - NBR: thickness >=0,35mm; breakthrough time >=480min.

Respiratory protection:

Particle filter P2 .

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: Solid
Color: Grey
Odour: N.A.
Odour threshold: N.A.
pH: Not Relevant (OECD 122)
Kinematic viscosity: N.A.
Melting point / freezing point: N.A.
Initial boiling point and boiling range: N.A.
Flash point: Not Applicable
Upper/lower flammability or explosive limits: N.A.
Vapour density: N.A.
Vapour pressure: N.A.
Relative density: 1.00 g/cm³ (ISO 2811)
Solubility in water: N.A.
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 % ; 0 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

The product is stable as long as it is properly stored (see Section 7).

Wet product is alkaline and incompatible with acids, with ammonium salts, with aluminium or other base metals. When in contact with hydrofluoric acid, mixtures containing cement dissolve to produce corrosive silicon tetrafluoride gas. Mixtures containing cement react with water to form silicates and calcium hydroxide. Silicates in cement react with powerful oxidizers such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride and oxygen difluoride.

Intact packaging and compliance with the appropriate storage conditions as indicated in Subsection 7.2 (adequate tightly closed and sealed containers, dry and cool place, no ventilation) are the essential conditions to keep the effectiveness of the reducing agent unaltered throughout the shelf life declared on bag.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

Acids, ammonium salts, aluminium or other base metals. Uncontrolled use of aluminium dust in wet cement-containing products is to be avoided because it causes the production of hydrogen.

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 Irrit. 2(H315)
c) serious eye damage/irritation	The product is classified: Eye Dam. 1(H318)
d) respiratory or skin sensitisation	The product is classified: Skin Sens. 1B(H317)
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	The product is classified: STOT SE 3(H335)
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
Calcium oxide	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg LC50 Inhalation Dust Rat > 6.04 mg/l 4h	

		LD50 Skin Rabbit > 2500 mg/kg 24h	
	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	Mouse
	f) carcinogenicity	Carcinogenicity	
Flue Dust, Portland Cement	a) acute toxicity	LD50 Oral Rat > 1848 mg/kg	
		LC50 Inhalation Dust Rat > 6.04 mg/l 4h	
		LD50 Skin Rat >= 2000 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Negative	
	c) serious eye damage/irritation	Eye Irritant Yes	
	d) respiratory or skin sensitisation	Skin Sensitization Positive	
	f) carcinogenicity	Genotoxicity Rat Negative	
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 16 mg/kg	

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity

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

Eco-Toxicological Information:

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)
Calcium oxide	CAS: 1305-78-8 - EINECS: 215-138-9	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).
		a) Aquatic acute toxicity : LC50 Fish rainbow trout = 50.6 mg/L 96h OECD 203
		a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna <= 49.1 mg/L 48h OECD 202
		a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata =

1848.57 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 test guideline 207

e) Plant toxicity : NOEC = 1080 mg/kg OECD Guideline 208 (Terrestrial Plants Test: Seedling Emergence and Seedling Growth Test) - 21days

Flue Dust, Portland Cement

CAS: 68475-76-3 - EINECS: 270-659-9

a) Aquatic acute toxicity : NOEC Fish zebrafish = 11.1 mg/L 96h ECHA

a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 100 mg/L 48h OECD 202

b) Aquatic chronic toxicity : NOELR Daphnia Daphnia magna = 50 mg/L 48h OECD 211

b) Aquatic chronic toxicity : EL10 Daphnia Daphnia magna = 68.2 mg/L 48h OECD 211 - 21 days

a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 28.2 mg/L 72h OECD 20

a) Aquatic acute toxicity : EC50 Sludge activated sludge = 596 mg/L OECD Guideline No. 209

b) Aquatic chronic toxicity : EC50 = 9931 mg/kg „PARCOM (1994): MAFF/ERT Harmonised Protocol: A sediment Bioassay using an Amphipod, Corophium sp. Draft 1994. - sediment

d) Terrestrial toxicity : EC50 Worm Eisenia fetida = 1000 mg/kg „OECD Guideline 207 (Earthworm, Acute Toxicity Tests)

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

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.

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

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

HP 4: Irritant — skin irritation and eye damage; HP 13: Sensitising; HP 8: Corrosive

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

EN 196-10 – "Methods of Testing Cement - Part 10: Determination of the water-soluble chromium (VI) content of cement"

According to Annex XVII, Point 47, under Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as amended by Regulation No. 552/2009, cement and mixtures containing cement shall not be placed on the market or used if they contain, after mixing with water, more than 0.0002% (2 ppm) of soluble chromium (VI) of the total dry weight of the cement. Compliance with this threshold limit is ensured through the introduction of a reducing agent into the preparation, the effectiveness of which is guaranteed for a certain period of time (shelf life), and the maintenance of the appropriate storage conditions (see Subsection 7.2 and Section 10).

Cement is a mixture and, as such, is not subject to REACH registration, which is mandatory for substances. Cement clinker is a substance, but it is exempt from registration pursuant to article 2.7 (b) and Annex V.10 of REACH.

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: None.

Restrictions related to the substances contained: 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.

3: Severe hazard to waters

SVHC Substances:

No SVHC substances present in concentration $\geq 0.1\%$

15.2. Chemical safety assessment

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

SECTION 16: Other information

Code	Description
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Code	Hazard class and hazard category	Description
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1B	Skin Sens. 1B	Skin Sensitisation, Category 1B
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, 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
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1B, H317	Calculation method
STOT SE 3, H335	Calculation method

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

Main bibliographic sources:

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

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

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

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

This MSDS cancels and replaces any preceding release.

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

ACGIH: American Conference of Governmental Industrial Hygienists

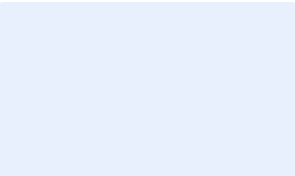
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

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

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor
 BEI: Biological Exposure Index
 BOD: Biochemical Oxygen Demand
 CAS: Chemical Abstracts Service (division of the American Chemical Society).
 CAV: Poison Center
 CE: European Community
 CLP: Classification, Labeling, Packaging.
 CMR: Carcinogenic, Mutagenic and Reprotoxic
 COD: Chemical Oxygen Demand
 COV: Volatile Organic Compound
 CSA: Chemical Safety Assessment
 CSR: Chemical Safety Report
 DMEL: Derived Minimal Effect Level
 DNEL: Derived No Effect Level.
 DPD: Dangerous Preparations Directive
 DSD: Dangerous Substances Directive
 EC50: Half Maximal Effective Concentration
 ECHA: European Chemicals Agency
 EINECS: European Inventory of Existing Commercial Chemical Substances.
 ES: Exposure Scenario
 GefStoffVO: Ordinance on Hazardous Substances, Germany.
 GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
 IARC: International Agency for Research on Cancer
 IATA: International Air Transport Association.
 IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
 IC50: half maximal inhibitory concentration
 ICAO: International Civil Aviation Organization.
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
 IMDG: International Maritime Code for Dangerous Goods.
 INCI: International Nomenclature of Cosmetic Ingredients.
 IRCCS: Scientific Institute for Research, Hospitalization and Health Care
 KAFH: Keep Away From Heat
 KSt: Explosion coefficient.
 LC50: Lethal concentration, for 50 percent of test population.
 LD50: Lethal dose, for 50 percent of test population.
 LDLo: Leathal Dose Low
 N.A.: Not Applicable
 N/A: Not Applicable
 N/D: Not defined/ Not available
 NA: Not available
 NIOSH: National Institute for Occupational Safety and Health
 NOAEL: No Observed Adverse Effect Level
 OSHA: Occupational Safety and Health Administration
 PBT: Persistent, Bioaccumulative and Toxic
 PGK: Packaging Instruction
 PNEC: Predicted No Effect Concentration.
 PSG: Passengers
 RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
 STEL: Short Term Exposure limit.
 STOT: Specific Target Organ Toxicity.
 TLV: Threshold Limiting Value.
 TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
 vPvB: Very Persistent, Very Bioaccumulative.
 WGK: German Water Hazard Class.



Exposure Scenario

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		
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)		
<i>Product (article) characteristics</i>			
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)		
<i>Product (article) characteristics</i>			
Physical form of product: Solid, medium dustiness			
<i>Amount used, frequency and duration of use/exposure</i>			
Duration: Exposure duration <= 480 min			
<i>Technical and organisational conditions and measures</i>			
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 %	
<i>Conditions and measures related to personal protection, hygiene and health evaluation</i>			

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

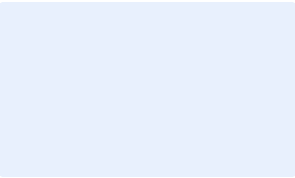
Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative	< 1 mg/m ³	MEASE	N/A

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.



Exposure Scenario

Calcium oxide

Exposure Scenario, 22/06/2021

Substance identity	
	Calcium oxide
CAS No.	1305-78-8
EINECS No.	215-138-9
Registration number	01-2119475325-36

Table of contents

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

1. ES 1		Widespread use by professional workers; Various products (PC9b, PC9a)
1.1 TITLE SECTION		
Exposure Scenario name	Insulators - Professional application of coatings and inks - Use in rigid foams, coatings, adhesives and sealants - Waterproofing agent	
Date - Version	22/06/2021 - 1.0	
Life Cycle Stage	Widespread use by professional workers	
Main user group	Professional uses	
Sector(s) of use	Professional uses (SU22)	
Product Categories	Fillers, putties, plasters, modelling clay (PC9b) - Coatings and paints, thinners, paint removers (PC9a)	
Environment Contributing Scenario		
CS1 Low environmental release	ERC8c - ERC8f	
Worker Contributing Scenario		
CS2 Rolling, Brushing - Material transfers	PROC8a - PROC10	
CS3 Mixing operations	PROC19	
1.2 Conditions of use affecting exposure		
1.2. CS1: Environment Contributing Scenario: Low environmental release (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)	
Product (article) characteristics		
Physical form of product: Solid, medium dustiness		
Amount used, frequency and duration of use (or from service life)		
Amounts used: Application rate = 18000 kg/ha		
Technical and organisational conditions and measures		
Control measures to prevent releases Prevent discharge of undissolved substance to or recover from onsite wastewater.		
1.2. CS2: Worker Contributing Scenario: Rolling, Brushing - Material transfers (PROC8a, PROC10)		
Process Categories	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Roller application or brushing (PROC8a, PROC10)	
Product (article) characteristics		
Physical form of product: Solid, medium dustiness		
Amount used, frequency and duration of use/exposure		
Duration: Exposure duration = 480 h/day		
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.		
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection Use suitable eye protection. Wear suitable respiratory protection.		

Wear suitable gloves tested to EN374.
Wear suitable face shield.

Other conditions affecting worker exposure

Covers indoor and outdoor use
Professional use

Temperature: Covers use at ambient temperatures.

1.2. CS3: Worker Contributing Scenario: Mixing operations (PROC19)

Process Categories	Manual activities involving hand contact (PROC19)
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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 h/day

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.

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

Personal protection

Use suitable eye protection.

Wear suitable respiratory protection.

Wear suitable gloves tested to EN374.

Wear suitable face shield.

Other conditions affecting worker exposure

Covers indoor and outdoor use
Professional use

Temperature: Covers use at ambient temperatures.

1.3 Exposure estimation and reference to its source

1.3. CS1: Environment Contributing Scenario: Low environmental release (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: Rolling, Brushing - Material transfers (PROC8a, 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:

Dermal exposure is considered to be not relevant.

1.3. CS3: Worker Contributing Scenario: Mixing operations (PROC19)

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

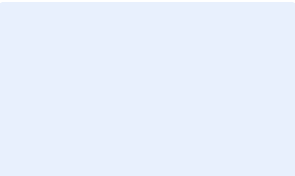
Additional information on exposure estimation:

Dermal exposure is considered to be not relevant.

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

Flue dust, portland cement

Exposure Scenario, 08/06/2021

Substance identity	
	Flue dust, portland cement
CAS No.	68475-76-3
EINECS No.	270-659-9
Registration number	01-2119486767-17

Table of contents

1. **ES 1** Widespread use by professional workers; Various products (PC9b, PC9a, PC1, PC15)

1. ES 1		Widespread use by professional workers; Various products (PC9b, PC9a, PC1, PC15)	
1.1 TITLE SECTION			
Exposure Scenario name	Road and construction applications - Professional use of floor care products - Tackifier		
Date - Version	25/03/2021 - 1.0		
Life Cycle Stage	Widespread use by professional workers		
Main user group	Professional uses		
Sector(s) of use	Professional uses (SU22)		
Product Categories	Fillers, putties, plasters, modelling clay (PC9b) - Coatings and paints, thinners, paint removers (PC9a) - Adhesives, sealants (PC1) - Non-metal surface treatment products (PC15)		
Article Category(ies)	Stone, plaster, cement, glass and ceramic articles: Large surface area articles (AC4a)		
Environment Contributing Scenario			
CS1 Low environmental release		ERC2	
Worker Contributing Scenario			
CS2 Mixing operations - Transfer from/pouring from containers - Hand application - finger paints, pastels, adhesives - Filling of equipment from drums or containers - Manual - Equipment cleaning and maintenance - Roller, spreader, flow application - Equipment maintenance		PROC5 - PROC8a - PROC8b - PROC10 - PROC11 - PROC19 - PROC26 - PROC28	
1.2 Conditions of use affecting exposure			
1.2. CS1: Environment Contributing Scenario: Low environmental release (ERC2)			
Environmental release categories	Formulation into mixture (ERC2)		
<i>Product (article) characteristics</i>			
Physical form of product: Solid, very high dustiness			
Vapour pressure: < 1E-05 Pa			
1.2. CS2: Worker Contributing Scenario: Mixing operations - Transfer from/pouring from containers - Hand application - finger paints, pastels, adhesives - Filling of equipment from drums or containers - Manual - Equipment cleaning and maintenance - Roller, spreader, flow application - Equipment maintenance (PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC19, PROC26, PROC28)			
Process Categories	Mixing or blending in batch processes - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities - Transfer of substance or mixture (charging and discharging) at dedicated facilities - Roller application or brushing - Non industrial spraying - Manual activities involving hand contact - Handling of solid inorganic substances at ambient temperature - Manual maintenance (cleaning and repair) of machinery (PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC19, PROC26, PROC28)		
<i>Product (article) characteristics</i>			
Physical form of product: Solid, very high dustiness Solid in solution pasty			
Concentration of substance in product: Covers percentage substance in the product up to 5 %.			
<i>Amount used, frequency and duration of use/exposure</i>			
Duration: Exposure duration <= 480 min			
Frequency:			

Use frequency = 8 h/event

Technical and organisational conditions and measures

Technical and organisational measures

Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed.
Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.
Ensure operatives are trained to minimise exposures.
For measures to control risks from physicochemical properties, refer to main body of the SDS, section 7 and/or 8.
Do not ingest.

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

Personal protection

Wear suitable gloves tested to EN374.
Use eye protection according to EN 166.
Wear a respirator conforming to EN140.

Other conditions affecting worker exposure

Covers indoor and outdoor use
Professional use

Temperature: Covers use at ambient temperatures. 23°C

Body parts exposed:

Assumes that potential dermal contact is limited to hands and forearms.

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

Additional Good Practice Advice:

Ensure regular inspection, cleaning and maintenance of equipment and machines. Ensure procedures and training for emergency decontamination and disposal are in place. Ensure control measures are regularly inspected and maintained.

1.3 Exposure estimation and reference to its source

1.3. CS2: Worker Contributing Scenario: Mixing operations - Transfer from/pouring from containers - Hand application - finger paints, pastels, adhesives - Filling of equipment from drums or containers - Manual - Equipment cleaning and maintenance - Roller, spreader, flow application - Equipment maintenance (PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC19, PROC26, PROC28)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, local, short-term	< 1 mg/m ³	MEASE	<= 0.83

Additional information on exposure estimation:

Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.

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.