Safety Data Sheet

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

METRIC PROTECTION

Date of first edition: 9/28/2023

Safety Data Sheet dated 12/10/2026 version 2

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

1.1. Product identifier

Mixture identification:

Trade name: METRIC PROTECTION

Trade code: S100K0063 23

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

Recommended use: Mortars

Uses advised against: All uses other than recommended ones

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL S.p.A.

Via dell'Artigianato, 9

41049 Sassuolo (MODENA) - ITALY

Tel.+39 0536 816511 Fax. +39 0536816581

safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112

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

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

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

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

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

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

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

P260	Do not breathe dust.

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 hydroxide

Portland Cement

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 >= 0.1%

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: METRIC PROTECTION

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

Qty	Name	Ident. Numb.	Classification	Registration Number
≥10-<20 %	Portland Cement	CAS:65997-15-1 EC:266-043-4	Skin Irrit. 2, H315; Eye Dam. 1, H318; Skin Sens. 1B, H317; STOT SE 3, H335	
≥1-<3 %	Triethoxyoctylsilane	CAS:2943-75-1 EC:220-941-2	Skin Irrit. 2, H315	01-2119972313-39
≥1-<3 %	calcium hydroxide	CAS:1305-62-0 EC:215-137-3	Skin Irrit. 2, H315; Eye Dam. 1, H318; STOT SE 3, H335	01-2119475151-45
≥1-<3 %	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
<0.05 %	Quartz	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372	

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 immediatley 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 opthalmologist 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 (CO_2).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

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

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

Wear personal protection equipment.

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.

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

7.2. Conditions for safe storage, including any incompatibilities

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 mantaining of the activity of the reducing agent and for mantaining the soluble Chromium (VI) amount under 2ppm over the total dry weight referred to cement (EN 196-10).

Incompatible materials:

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.

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)

Quartz

CAS: 14808-60-7	ACGIH	Long Term: 0.025 mg/m3 (8h) Notes: R, A2 - Pulm fibrosis, lung cancer
	NATIONAL BELGIUM	Long Term: 0.1 mg/m3 Notes: C Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL DENMARK	Long Term: 0.3 mg/m3 Notes: alveolijae, liite 3 Source: BEK nr 2203 af 29/11/2021 Long Term: 0.1 mg/m3 Notes: EK Source: BEK nr 2203 af 29/11/2021
	NATIONAL SPAIN	Long Term: 0.3 mg/m3 Notes: Respirable fraction Source: LEP 2022
	NATIONAL ESTONIA	Long Term: 0.1 mg/m3 Notes: 1, C Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL FINLAND	Long Term: 0.05 mg/m3 Notes: alveolijae, liite 3 Source: HTP-ARVOT 2020
	NATIONAL FRANCE	Long Term: 0.1 mg/m3 Notes: La VLEP s'applique à la fraction alvéolaire. Forme de silice cristalline. Source: INRS outil65, article R. 4412-149 du Code du travail
	NATIONAL HUNGARY	Long Term: 0.1 mg/m3 Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL IRELAND	Long Term: 0.1 mg/m3 Notes: Respirable fraction Source: 2021 Code of Practice
	NATIONAL ITALY	Long Term: 0.1 mg/m3 Notes: Polvere di silice cristallina respirabile (frazione inalabile). Rif:D.Lgs 81/2008 Source: D.lgs. 81/2008, Allegato XLIII
	NATIONAL LITHUANIA	Long Term: 0.1 mg/m3 Notes: Žiūrėti 1 priedo 3 punktą. Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
	NATIONAL NETHERLANDS	Long Term: 0.075 mg/m3 Notes: (2) Source: Arbeidsomstandighedenregeling - Lijst B1
	NATIONAL NORWAY	Long Term: 0.3 mg/m3 Notes: K 7 Source: FOR-2021-06-28-2248 Long Term: 0.05 mg/m3 Notes: K G 7 21 Source: FOR-2021-06-28-2248
	NATIONAL POLAND	Long Term: 0.1 mg/m3 Notes: 6) Source: Dz.U. 2018 poz. 1286

	NATIONAL	SWEDEN	Long Term: 0.1 mg/m3 Notes: C, M, 3 Source: AFS 2021:3
	SUVA	SWITZERLAND	Long Term: 0.15 mg/m3 Notes: TWA mg/m3: (a), C1A, SSC, P, Cancpulm Silicose / Lugenkrebs Silikose, HSE NIOSH OSHA Source: suva.ch/valeurs-limites

Portland Cement

CAS: 65997-15-1	ACGIH		Long Term: 1 mg/m3 (8h) Notes: E,R, A4 - Pulm func, resp symptoms, asthma
	NATIONAL	AUSTRIA	Long Term: 5 mg/m3 Notes: MAK, E Source: BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 1 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	SPAIN	Long Term: 4 mg/m3 Notes: e, d Source: LEP 2022
	NATIONAL	FINLAND	Long Term: 5 mg/m3 Notes: hengittyvä pöly Source: HTP-ARVOT 2020 Long Term: 1 mg/m3 Notes: alveolijae Source: HTP-ARVOT 2020
	NATIONAL	CROATIA	Long Term: 10 mg/m3 Notes: U Source: NN 1/2021 Long Term: 4 mg/m3 Notes: R Source: NN 1/2021
	NATIONAL	HUNGARY	Long Term: 10 mg/m3 Notes: N Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	IRELAND	Long Term: 1 mg/m3 Notes: R Source: 2021 Code of Practice
	NATIONAL	LATVIA	Long Term: 6 mg/m3 Source: KN325P1
	NATIONAL	POLAND	Long Term: 6 mg/m3 Notes: 4) Source: Dz.U. 2018 poz. 1286 Long Term: 2 mg/m3 Notes: 6), 7) Source: Dz.U. 2018 poz. 1286
	SUVA	SWITZERLAND	Long Term: 5 mg/m3 Notes: TWA mg/m3: (i), S, Poumons Asthme / Lunge Asthma Source: suva.ch/valeurs-limites

Limestone

CAS: 1317-65-3	NATIONAL	BELGIUM	Long Term: 10 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	BULGARIA	Long Term: 10 mg/m3 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL	SWITZERLAND	Long Term: 3 mg/m3 Notes: (1) respirable aerosol Source: suva.ch/valeurs-limites
	NATIONAL	SPAIN	Long Term: 10 mg/m3 Notes: (1) inhalable aerosol Source: LEP 2022

	NATION ESTONIA AL	Long Term: 10 mg/m3 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
		Long Term: 5 mg/m3 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATION GREECE AL	Long Term: 10 mg/m3 Notes: εισπν. Source: ΦΕΚ 94/Α` 13.5.1999
		Long Term: 5 mg/m3 Notes: αναπν. Source: ΦΕΚ 94/Α` 13.5.1999
	NATION HUNGARY AL	Long Term: 10 mg/m3 Notes: N Source: 5/2020. (II. 6.) ITM rendelet
	NATION IRELAND AL	Long Term: 10 mg/m3 Source: 2021 Code of Practice
		Long Term: 4 mg/m3 Source: 2021 Code of Practice

calcium hydroxide

CAS: 1305-62-0	ACGIH	Long Term: 5 mg/m3 (8h) Notes: Eye, URT and skin irr
	EU	Long Term: 1 mg/m3 (8h); Short Term: 4 mg/m3 Notes: Respirable fraction
	NATION AUSTRIA AL	Long Term: 1 mg/m3; Short Term: Ceiling - 4 mg/m3 Notes: 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 Notes: 5 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATION CYPRUS AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: 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 Notes: I, R Source: Nařízení vlády č. 361-2007 Sb
	NATION GERMANY AL	Long Term: 1 mg/m3 Notes: Y, EU, DFG, E, 2 (I) Source: TRGS 900
	NATION DENMARK AL	Long Term: 5 mg/m3 Notes: E Source: BEK nr 2203 af 29/11/2021
		Long Term: 1 mg/m3 Notes: E Source: BEK nr 2203 af 29/11/2021
	NATION SPAIN AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: VLI, d Source: LEP 2022
	NATION ESTONIA AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: 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 GREECE AL	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: 9)

		Source: Π.Δ. 82/2018 (ΦΕΚ 152/Α` 21.8.2018)
NATIONAL	CROATIA	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: R (14) Source: 2017/164/EU
NATIONAL	HUNGARY	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: resp, EU4, N Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	IRELAND	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: IOELV, R Source: 2021 Code of Practice
NATIONAL	ITALY	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: Frazione respirabile Source: D.lgs. 81/2008, Allegato XXXVIII
NATIONAL	LITHUANIA	Long Term: 5 mg/m3 Notes: O Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
NATIONAL	LUXEMBOURG	Long Term: 5 mg/m3 Notes: 11, 14 Source: Mémorial A n.226 du 22 mars 2021 Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: 9, 14 Source: Mémorial A n.226 du 22 mars 2021
NATIONAL	LATVIA	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Source: KN325P1
NATIONAL	MALTA	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: 10 Source: S.L.424.24
NATIONAL	NETHERLANDS	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: (2) Source: Arbeidsomstandighedenregeling - Lijst A
NATIONAL	NORWAY	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: E S Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 2 mg/m3; Short Term: 6 mg/m3 Notes: 4) Source: Dz.U. 2018 poz. 1286 Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: 6) Source: Dz.U. 2018 poz. 1286
NATIONAL	PORTUGAL	Long Term: 1 mg/m3 Notes: (9) Source: Decreto-Lei n.º 1/2021
NATIONAL	ROMANIA	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: Fracțiune respirabilă, Dir. 2017/164 Source: Republicarea 1 - nr. 743 din 29 iulie 2021
NATIONAL	SLOVAKIA	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: 11) Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATIONAL	SLOVENIA	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: Y, EU4, (A) Source: UL št. 72, 11. 5. 2021
NATIONAL	SWEDEN	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: 3 Source: AFS 2021:3
SUVA	SWITZERLAND	Long Term: 1 mg/m3; Short Term: 4 mg/m3 Notes: TWA mg/m3: (i), SSC, VRS / OAW, NIOSH Source: suva.ch/valeurs-limites

Flue Dust, Portland Cement

CAS: 68475-76-3	NATIONAL	AUSTRIA	Long Term: 5 mg/m3 Notes: MAK, E Source: BGBl. II Nr. 156/2021

(+)-tartaric acid

CAS: 87-69-4	NATIONAL	GERMANY	Long Term: 2 mg/m3 Notes: DFG, Y, E, 2 (I) Source: TRGS 900
	NATIONAL	SLOVENIA	Long Term: 2 mg/m3; Short Term: 4 mg/m3 Notes: Y, (I) Source: UL št. 72, 11. 5. 2021
	SUVA	SWITZERLAND	Long Term: 2 mg/m3; Short Term: 4 mg/m3 Notes: TWA mg/m3: (i), SSC, VR / AW Source: suva.ch/valeurs-limites

Quartz

CAS: 14808-60-7	ACGIH		Long Term: 0.025 mg/m3 (8h) Notes: R, A2 - Pulm fibrosis, lung cancer
	EU		Long Term: 0.1 mg/m3 Notes: Polvere di silice cristallina respirabile, frazione inalabile. (R), A2 - Pulm fibrosis, lung cancer. Directive 2017/2398
	NATIONAL	AUSTRIA	Long Term: 0.05 mg/m3 Notes: MAK, III C, A Source: BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 0.1 mg/m3 Notes: C Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	DENMARK	Long Term: 0.3 mg/m3 Source: BEK nr 2203 af 29/11/2021
			Long Term: 0.1 mg/m3 Notes: EK Source: BEK nr 2203 af 29/11/2021
	NATIONAL	SPAIN	Long Term: 0.05 mg/m3 (8h) Notes: Respirable fraction Source: LEP 2022
	NATIONAL	ESTONIA	Long Term: 0.1 mg/m3 Notes: 1, C Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FINLAND	Long Term: 0.05 mg/m3 Notes: alveolijae, liite 3 Source: HTP-ARVOT 2020
	NATIONAL	FRANCE	Long Term: 0.1 mg/m3 Notes: La VLEP s'applique à la fraction alvéolaire. Forme de silice cristalline. Source: INRS outil65, article R. 4412-149 du Code du travail
	NATIONAL	CROATIA	Long Term: 0.1 mg/m3 Source: NN 1/2021
	NATIONAL	HUNGARY	Long Term: 0.1 mg/m3 (8h) Notes: Respirable aerosol Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	IRELAND	Long Term: 0.1 mg/m3 (8h) Notes: Respirable fraction Source: 2021 Code of Practice
	NATIONAL	ITALY	Long Term: 0.1 mg/m3 (8h) Notes: Polvere di silice cristallina respirabile (frazione inalabile). D.Lgs 81/2008 Source: D.lgs. 81/2008, Allegato XLIII
	NATIONAL	LITHUANIA	Long Term: 0.1 mg/m3 Notes: Žiūrėti 1 priedo 3 punktą. Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
	NATIONAL	NETHERLANDS	Long Term: 0.075 mg/m3 Notes: (2) Source: Arbeidsomstandighedenregeling - Lijst B1

	NATIONAL	NORWAY	Long Term: 0.3 mg/m3 Notes: K 7 Source: FOR-2021-06-28-2248
			Long Term: 0.05 mg/m3 Notes: K G 7 21 Source: FOR-2021-06-28-2248
	NATIONAL	POLAND	Long Term: 0.1 mg/m3 Notes: 6) Source: Dz.U. 2018 poz. 1286
	NATIONAL	SWEDEN	Long Term: 0.1 mg/m3 Notes: C, M, 3 Source: AFS 2021:3
	SUVA	SWITZERLAND	Long Term: 0.15 mg/m3 Notes: TWA mg/m3: (a), C1A, SSC, P, Cancpulm Silicose / Lugenkrebs Silikose, HSE NIOSH OSHA Source: suva.ch/valeurs-limites

silicon dioxide, chemically prepared

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

Starch

CAS: 9005-25-8	ACGIH		Long Term: 10 mg/m3 (8h) Notes: A4 - Dermatitis
	NATIONAL	BELGIUM	Long Term: 10 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	SPAIN	Long Term: 10 mg/m3 Source: LEP 2022

NATIONAL	GREECE	Long Term: 10 mg/m3 Notes: εισπν Source: ΦΕΚ 94/Α` 13.5.1999  Long Term: 5 mg/m3 Notes: αναπν Source: ΦΕΚ 94/Α` 13.5.1999
NATIONAL	IRELAND	Long Term: 10 mg/m3 Source: 2021 Code of Practice Long Term: 4 mg/m3 Source: 2021 Code of Practice
WEL-EH40	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	Long Term: 10 mg/m3 Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020) Long Term: 4 mg/m3 Source: EH40/2005 Workplace exposure limits (Fourth Edition 2020)
SUVA	SWITZERLAND	Long Term: 3 mg/m3 Notes: TWA mg/m3: (a) Source: suva.ch/valeurs-limites

Predicted No Effect Concentration (PNEC) values

Triethoxyoctylsilane

CAS: 2943-75-1
Exposure Route: Fresh Water; PNEC Limit: 5.8 mg/m3
Exposure Route: Marine water; PNEC Limit: 580 ng/l
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 100 mg/l
Exposure Route: Freshwater sediments; PNEC Limit: 2.34 mg/l
Exposure Route: Marine water sediments; PNEC Limit: 230 µg/kg
Exposure Route: Soil; PNEC Limit: 90 µg/kg
Exposure Route: Secondary poisoning; PNEC Limit: 10 mg/kg

calcium hydroxide

CAS: 1305-62-0
Exposure Route: Fresh Water; PNEC Limit: 490 mg/m3
Exposure Route: Intermittent releases (fresh water); PNEC Limit: 490 mg/m3
Exposure Route: Marine water; PNEC Limit: 320 mg/m3
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 3 mg/l
Exposure Route: Soil; PNEC Limit: 1080 mg/kg

Flue Dust, Portland Cement

CAS: 68475-76-3
Exposure Route: Fresh Water; PNEC Limit: 282 mg/m3
Exposure Route: Intermittent releases (fresh water); PNEC Limit: 282 mg/m3
Exposure Route: Marine water; PNEC Limit: 28 mg/m3
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

Triethoxyoctylsilane

CAS: 2943-75-1
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 16 mg/kg/day; Consumer: 5.4 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Professional: 16 mg/kg/day; Consumer: 5.4 mg/kg/day

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects
Worker Professional: 9 mg/kg; Consumer: 6.2 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 9 mg/kg; Consumer: 6.2 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects
Consumer: 6.2 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 6.2 mg/kg

calcium hydroxide

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

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

Flue Dust, Portland Cement

CAS: 68475-76-3 Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 840 µg/m³; Consumer: 840 µg/m³

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

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:

Not expected if used as intended

Environmental exposure controls:

Prevent the product from entering sewers or surface and underground water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Solid
Colour:	Grey
Odour:	N.A.
pH:	>11.00
Kinematic viscosity:	Not Relevant Notes: Not determined, as it is not required for CLP classification
Melting point/freezing point:	N.A.
Boiling point or initial boiling point and boiling range:	N.A.
Flash point:	Not Applicable
Lower and upper explosion limit:	Not Relevant Notes: Not applicable as the mixture is not flammable
Relative vapour density:	Not Relevant Notes: Not applicable as the mixture is not liquid
Vapour pressure:	Not Relevant Notes: Not applicable as the mixture is not liquid
Density and/or relative density:	1.28 g/cm3
Solubility in water:	Miscible
Solubility in oil:	Not Relevant Notes: Not determined, as it is not required for CLP classification
Partition coefficient n-octanol/water (log	Not Relevant

value):

Notes: Not applicable to mixtures

Auto-ignition temperature: Not Relevant
Notes: Not applicable as the mixture is not flammable

Decomposition temperature: Not Relevant
Notes: Not applicable, as the mixture is not self-reactive

Flammability: Not Relevant
Notes: Not applicable as the mixture is not flammable

Volatile Organic compounds - VOCs = 0.00%; 0.00g/L

Particle characteristics:

Particle size: N.A.

9.2. Other information

Evaporation rate: Not Relevant
Notes: Not applicable as the mixture is not liquid

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 contaning 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 maintain the effectiveness of the reducing agent during the storage period specified on the 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.

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 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:

Triethoxyoctylsilane

CAS: 2943-75-1	a) acute toxicity	LD50 Oral Rat >= 5110 mg/kg
		LC50 Inhalation Vapour Rat > 22 Ppm 4h
		LD50 Skin Rabbit = 67330 mg/kg 24h
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive
	c) serious eye damage/irritation	Eye Irritant Rabbit No
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 300 mg/kg

calcium hydroxide

CAS: 1305-62-0	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

Flue Dust, Portland Cement

CAS: 68475-76-3	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

Quartz

CAS: 14808-60-7	Generic information:	Informazione tossicologia a livello di sostanza
	a) acute toxicity	LD50 Oral > 2000 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

Triethoxyoctylsilane

CAS: 2943-75-1	a) Aquatic acute toxicity:	LC50 Fish Oncorhynchus mykiss > 0.055 mg/L 96h
	a) Aquatic acute toxicity:	EC50 Daphnia Daphnia magna > 0.049 mg/L 48h
	b) Aquatic chronic toxicity:	NOEC Daphnia Daphnia magna = 0.058 mg/L

a) Aquatic acute toxicity: EC50 Algae Pseudokirchnerella subcapitata > 0.13 mg/L 72h

c) Bacteria toxicity: EC50 Worm activated sludge > 1000 mg/L

calcium hydroxide

CAS: 1305-62-0 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

a) Aquatic acute toxicity: EC50 Algae Pseudokirchneriella subcapitata = 184.57 mg/L 72h

a) Aquatic acute toxicity: EC50 Sludge activated sludge = 300.4 mg/L 3h

d) Terrestrial toxicity: NOEC Worm Eisenia fetida = 2000 mg/kg

d) Terrestrial toxicity: EC10 soil microorganisms = 4000 mg/kg

Flue Dust, Portland Cement

CAS: 68475-76-3 a) Aquatic acute toxicity: NOEC Fish zebrafish = 11.1 mg/L 96h

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

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

b) Aquatic chronic toxicity: EL10 Daphnia Daphnia magna = 68.2 mg/L 48h

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

a) Aquatic acute toxicity: EC50 Sludge activated sludge = 596 mg/L

b) Aquatic chronic toxicity: EC50 = 9931 mg/kg

d) Terrestrial toxicity: EC50 Worm Eisenia fetida = 1000 mg/kg

12.2. Persistence and degradability

Triethoxyoctylsilane

CAS: 2943-75-1 Non-readily biodegradable Test: Oxygen consumption

12.3. Bioaccumulative potential

Triethoxyoctylsilane

CAS: 2943-75-1 Bioaccumulative Test: BCF - Bioconcentrantion factor; Value: 1450

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7. Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

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

A waste code according to the European List of Wastes (LoW) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

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

N.A.

SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number or ID number

N/A

14.2. UN proper shipping name

ADR-Shipping Name: N/A

IATA-Shipping Name: N/A

IMDG-Shipping Name: N/A

14.3. Transport hazard class(es)

ADR-Class: N/A

IATA-Class: N/A

IMDG-Class: N/A

14.4. Packing group

ADR-Packing Group: N/A

IATA-Packing group: N/A

IMDG-Packing group: N/A

14.5. Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

IMDG-EMS: N/A

14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR-Label: N/A

ADR - Hazard identification number: N/A

ADR-Special Provisions: N/A

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

ADR Limited Quantities: N/A

ADR Excepted Quantities: N/A

Air (IATA):

IATA-Passenger Aircraft: N/A

IATA-Cargo Aircraft: N/A

IATA-Label: N/A

IATA-Subsidiary hazards: N/A

IATA-Erg: N/A

IATA-Special Provisions: N/A

Sea (IMDG):

IMDG-Stowage and handling: N/A

IMDG-Segregation: N/A

IMDG-Subsidiary hazards: N/A

IMDG-Special Provisions: N/A

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

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 (EU) n. 2020/878

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

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2021/849 (ATP 17 CLP)

Regulation (EU) n. 2022/692 (ATP 18 CLP)

Regulation (EU) n. 2023/707

Regulation (EU) n. 2023/1434 (ATP 19 CLP)

Regulation (EU) n. 2023/1435 (ATP 20 CLP)

Regulation (EU) n. 2024/197 (ATP 21 CLP)

Regulation (EU) n. 2024/2564 (ATP 22 CLP)

Regulation (EU) n. 2024/2865

Regulation (EU) n. 2025/1222 (ATP 23 CLP)

Regulation (EC) nr 648/2004 (Detergents).

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

Restrictions related to the product: None.

Restrictions related to the substances contained: 75

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

None

Explosives precursors – Regulation 2019/1148

No substances listed

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

No substances listed

German Water Hazard Class.

Class 3: extremely hazardous.

German Lagerklasse according to TRGS 510:

LGK 11

SVHC Substances:

No SVHC substances present in concentration >= 0.1%

15.2. Chemical safety assessment

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

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

calcium hydroxide

Flue Dust, Portland Cement

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.
H372	Causes damage to organs through prolonged or repeated exposure.

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
3.9/1	STOT RE 1	Specific target organ toxicity — repeated exposure, Category 1

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.

Paragraphs modified from the previous revision:

- Safety Data Sheet
- SECTION 1: Identification of the substance/mixture and of the company/undertaking
- SECTION 2: Hazards identification

- SECTION 3: Composition/information on ingredients
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 10: Stability and reactivity
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 13: Disposal considerations
- SECTION 14: Transport information
- SECTION 15: Regulatory information

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)

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)

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

Personal protection
Wear suitable gloves tested to EN374.
Use suitable eye protection.
Wear suitable face shield.

Other conditions affecting worker exposure

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.

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.

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

Process Categories	Roller application or brushing (PROC10)

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.

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

Covers indoor and outdoor use
Professional use
Temperature: Covers use at ambient temperatures.

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. 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)

Product (article) characteristics

Physical form of product:
Solid, medium dustiness

Amount used, frequency and duration of use/exposure

Duration:
Exposure duration <= 240 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
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/m³	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/m³	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/m³	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

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)

Product (article) characteristics

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)

Product (article) characteristics

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 %.

Amount used, frequency and duration of use/exposure

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/m³	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.