

Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Code: **MATERIA PRO TRAVERTINO**
 Product name: **MATERIA PRO TRAVERTINO**

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

Intended use: **Travertino**

Identified Uses	Industrial	Professional	Consumer
Use in coatings	-	✓	✓

1.3. Details of the supplier of the safety data sheet

Name: **ACM Italy S.r.l**
 Full address: **Via Enrico Mattei, 8**
 District and Country: **20010 Casorezzo (MI)**
Italia
 tel. **+39 02 90361148**

e-mail address of the competent person
 responsible for the Safety Data Sheet

laboratorio@acm-italy.com

1.4. Emergency telephone number

For urgent inquiries refer to

ASST Grande Ospedale Metropolitano Niguarda - Centro Antiveleni
 Tel. : +39 02 6610 1029 – 24h

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Skin corrosion, category 1	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory irritation.
Skin sensitization, category 1B	H317	May cause an allergic skin reaction.

2.2. Label elements

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Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words:

Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
H317 May cause an allergic skin reaction.

Precautionary statements:

P260 Do not breathe dust.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353 IN CASE OF CONTACT WITH THE SKIN (or hair): take off all contaminated clothing immediately. Rinse the skin or take a shower.
P310 Immediately call a POISON CENTER or a doctor.
P264 Wash hands thoroughly after handling.
P284 Wear respiratory protection.
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P280 Wear protective gloves / face protection.

Contains: Calcium Hydroxide
 Portland cement clinker

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
Calcium Hydroxide		
CAS 1305-62-0	20 ≤ x < 21,5	Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335

EC 215-137-3

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Reg. no. 01-2119475151-45-0201

Portland cement clinker

CAS 65997-15-1 10,5 ≤ x < 12 Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, Skin Sens. 1B H317

EC 266-043-4

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Reg. no. Esente all'art. 2.7 (b) e
Allegato V.10 REACH

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures**4.1. Description of first aid measures**

General notes

Personal protective equipment is not necessary for rescuers, who must avoid the inhalation of cement dust and contact with damp cement or with preparations containing it (concrete, mortar, plaster, etc.). If this is not possible, they must adopt the personal protective equipment described in Section 8.

In case of eye contact

Do not rub your eyes to avoid possible corneal damage caused by rubbing.

If present, remove contact lenses. Incline the head in the direction of the affected eye, open the eyelids well and rinse with plenty of water for at least 20 minutes to remove all residues. If possible, use isotonic water (0.9% NaCl). If necessary, contact an occupational health specialist or ophthalmologist.

In case of skin contact

For dry cement, remove and rinse thoroughly with water. For wet / damp concrete, wash the skin with plenty of water and mild pH soap or a suitable mild detergent. Remove contaminated clothing, shoes and glasses and clean them completely before re-using them. Consult a doctor in all cases of irritation or burns.

In case of inhalation

Take the person outdoors. Dust in the throat and nostrils should clean itself spontaneously. Contact a doctor if irritation persists, or if it occurs later or if you have discomfort, cough or other symptoms persist.

If swallowed

Do not induce vomiting. If the person is conscious, wash your mouth with water and give plenty of water to drink. Consult a doctor immediately or contact a Poison Control Center.

4.2. Most important symptoms and effects, both acute and delayed

Eyes: Eye contact with cement dust (dry or wet) can cause serious and potentially irreversible injury.

Skin: Cement and its preparations can have an irritating effect on damp skin (due to sweating or moisture) after prolonged contact or can cause contact dermatitis, after repeated contact.

Inhalation: repeated inhalation of cement dust or mixtures containing cement over a long period of time increases the risk of developing lung diseases.

Ingestion: in case of accidental ingestion, the cement can cause ulceration of the digestive system.

Environment: under normal conditions of use, cement is not dangerous for the environment.

4.3. Indication of any immediate medical attention and special treatment needed

Information not available

SECTION 5. Firefighting measures**5.1. Extinguishing media**

SUITABLE EXTINGUISHING EQUIPMENT

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The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

If there are no contraindications, spray powder with water to prevent the formation of dust.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

Contain the spill. Keep the material dry if possible. Cover the affected area, if possible, to avoid unnecessary dust hazards. Avoid uncontrolled spills in waterways and sewers (pH increase). Large spills into water courses should be reported to the Environment Agency or other regulatory body.

6.3. Methods and material for containment and cleaning up

Collect the leaked product and place it in containers for recovery or disposal. If there are no contraindications, use jets of water to eliminate product residues. Make sure the leakage site is well aired. Evaluate the compatibility of the container to be used, by checking section 10. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Wear protection devices (see point 8 of this safety data sheet). Do not wear contact lenses when working with this product. Keep dust levels to a minimum. Minimize the generation of dust. Cover dust sources with dust, remove dust from the handling point. The handling systems should preferably be closed. When handling loads, follow the normal precautions provided by Council Directive 90/269 / EEC to reduce the risks that these operations entail for workers. Avoid inhalation, ingestion or contact with skin and eyes. It is necessary to apply general measures of occupational hygiene for

guarantee the safe handling of the substance. This means observing the principles of good personal hygiene and cleanliness (eg cleaning

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periodic with suitable devices); do not drink, eat or smoke during use. Take a shower and change at the end of each work shift. Do not wear contaminated clothing at home.

7.2. Conditions for safe storage, including any incompatibilities

White cement must be stored in waterproof, dry conditions (eg with minimal internal condensation), clean and protected from contamination. Risk of burial: the cement can thicken or stick to the walls of the confined space in which it is stored. Cement can collapse, collapse or fall unexpectedly. To prevent burial or suffocation, do not enter confined spaces, such as silos, containers, bulk transport trucks, or other storage containers or containers that store or contain cement without adopting appropriate safety measures. Do not use aluminum containers due to incompatibility of materials.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection**8.1. Control parameters**

Regulatory References:

ESP	España	LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST) EH40/2005 Workplace exposure limits (Third edition, published 2018) Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC. ACGIH 2019
GBR	United Kingdom	
EU	OEL EU	
	TLV-ACGIH	

Calcium Hydroxide**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min	
		mg/m ³	ppm	mg/m ³	ppm
VLA	ESP	5			
WEL	GBR	5			
OEL	EU	1		4	
TLV-ACGIH		5			

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,49	mg/l
Normal value in marine water	0,32	mg/l
Normal value of STP microorganisms	3	mg/l
Normal value for the terrestrial compartment	1080	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation	4 mg/m ³	4 mg/m ³	1 mg/m ³	1 mg/m ³	4 mg/m ³	1 mg/m ³	4 mg/m ³	1 mg/m ³

Portland cement clinker**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min	
		mg/m ³	ppm	mg/m ³	ppm

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TLV-ACGIH

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RESP

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation						1 mg/m3		1 mg/m3

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

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Il regolamento (CE) n. 1907/2006 concernente la registrazione, la valutazione, l'autorizzazione e la restrizione delle sostanze chimiche (REACH), nell'Allegato XVII, punto 47, così come modificato dal Regolamento n. 552/2009, impone il divieto di commercializzare ed utilizzare cemento e suoi preparati se contengono, una volta mescolati ad acqua, oltre lo 0,0002% (2 ppm) di cromo VI idrosolubile sul peso totale a secco del cemento stesso. Considerato che il cemento bianco, una volta miscelato con acqua, non contiene più dello 0,0002% (2 ppm) di Cr(VI) idrosolubile sul peso totale a secco, la stessa miscela può essere commercializzata senza l'additivazione di agenti riducenti.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Use gloves with mechanical abrasion resistance according to EN ISO 388 with nitrile, neoprene or polyurethane coating, preferably for ¾ or totally in the case of more severe activities. In the event of possible contact with a wet substance, use a glove with specific chemical protection according to EN ISO 374 with specific thickness and permeation degree (in particular alkali) depending on the type of use (immersion or possible accidental contact).

SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

RESPIRATORY PROTECTION

When a person is potentially exposed to dust levels above the exposure limits, use appropriate respiratory protection commensurate with the level of dustiness and compliant with the relevant EN standards (eg facial filtering certified according to EN 149). Masks FFP2, FFP3.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

MATERIA PRO TRAVERTINO**SECTION 9. Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Appearance	solid
Colour	Not available
Odour	characteristic
Odour threshold	Not available
pH	13
Melting point / freezing point	Not available
Initial boiling point	Not applicable
Boiling range	Not available
Flash point	Not applicable
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	1,65 g/cm ³
Solubility	partially soluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	not explosive
Oxidising properties	non-oxidizing

9.2. Other information

Information not available

SECTION 10. Stability and reactivity**10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

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White cement, in the presence of water, for example in the production of concrete or mortar, or when it gets wet, produces a strongly alkaline substance.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

Portland cement clinker

As such, cement is stable the longer it is stored appropriately. It must be kept dry. Contact with incompatible materials should be avoided. Wet cement is alkaline and incompatible with acids, ammonium salts, aluminum and other non-noble metals. The cement in contact with the hydrofluoric acid decomposes producing corrosive silicon tetrafluoride gas. The cement reacts with water and forms silicates and calcium hydroxide. The silicates in the cement react with powerful oxidants such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride and oxygen bifluoride.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

Calcium Hydroxide

Calcium hydroxide reacts exothermically with acids. When the temperature is above 580 ° C, calcium hydroxide decomposes, producing calcium oxide (CaO) and water (H₂O): $\text{Ca}(\text{OH})_2 \rightarrow \text{CaO} + \text{H}_2\text{O}$. Calcium oxide reacts with water and generates heat. This can cause risks from flammable materials.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

10.5. Incompatible materials

Calcium Hydroxide

Calcium hydroxide reacts exothermically with acids, forming salts. Calcium hydroxide reacts with aluminum and brass in the presence of moisture, producing hydrogen. $\text{Ca}(\text{OH})_2 + 2\text{Al} + 6\text{H}_2\text{O} \rightarrow \text{Ca}[\text{Al}(\text{OH})_4]_2 + 3\text{H}_2$.

Portland cement clinker

Wet white cement is alkaline and incompatible with acids, ammonium salts, aluminum and other non-noble metals. In contact with aluminum powders, wet white cement causes the formation of hydrogen.

10.6. Hazardous decomposition products

Information not available

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological

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effects of exposure to the product.

11.1. Information on toxicological effects

Calcium Hydroxide

Calcium dihydroxide is classified as an irritant to the skin and the respiratory tract, and carries the risk of serious eye damage. The occupational exposure limit for the prevention of sensory irritation at local level and the reduction of lung function parameters as critical effects is OEL (8 hours) = 1 mg / m³ of respirable dust.

ABSORPTION

The primary effect of calcium dihydroxide on health is local irritation caused by pH change. Therefore, absorption is not a relevant parameter for assessing the effects of the substance.

ACUTE TOXICITY

Calcium dihydroxide is not acutely toxic.

Oral LD50 > 2000 mg / kg of weight (OECD 425, rat)

Dermal LD50 > 2500 mg / kg of weight (OECD 402, rabbit)

Inhalation There is no data available

The classification for acute toxicity is not justified.

For irritant effects on the respiratory tract v. under.

REPEATED DOSE TOXICITY

The toxicity of calcium through the oral exposure route is demonstrated by the increase in tolerable maximum intake levels (UL) for adults determined by the Scientific Committee on Food (SCF), where UL = 2500 mg / day, equal to 36 mg / kg of weight / day (individual weighing 70 kg) for calcium. Ca (OH) 2 toxicity through skin contact is not considered relevant due to the expected insignificant absorption through the skin and due to the fact that local irritation is the primary health effect (pH change). The toxicity of Ca (OH) 2 by inhalation (local effect, irritation of the mucous membranes), taking into account an average time weighted for an 8-hour shift, was determined by the Scientific Committee for Occupational Exposure Limits (SCOEL) in 1 mg / m³ of respirable dust. Therefore, the classification of Ca (OH) 2 on the basis of toxicity following prolonged exposure is not necessary.

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:

Not classified (no significant component)

LD50 (Oral) of the mixture:

Not classified (no significant component)

LD50 (Dermal) of the mixture:

Not classified (no significant component)

Calcium Hydroxide

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LD50 (Oral) > 2000 mg/kg Rat

LD50 (Dermal) > 2500 mg/kg Rabbit

LC50 (Inhalation) > 6,04 mg/l/4h Specie: Rat. Metodo: OECD 46. Fonte ECHA

Portland cement clinker

LD50 (Dermal) 2000 mg/kg

SKIN CORROSION / IRRITATION

Corrosive for the skin
Classification according to the experimental Ph value

Calcium Hydroxide

Skin irritation: Calcium dihydroxide is skin irritant (in vivo, rabbit).

Respiratory tract irritation: From the data obtained on humans it can be concluded that Ca (OH) 2 is an irritant for the respiratory tract.

Based on experimental results, calcium dihydroxide should be classified as a skin irritant [skin irritation 2 (H315 - Causes skin irritation)] and strongly irritating to the eyes [eye damage 1 (H318 - Causes serious eye damage)].

As reported briefly and as recommended by the SCOEL Committee (Anonymous, 2008), based on the data obtained on humans, it is proposed to classify calcium dihydroxide as a respiratory irritant [STOT SE 3 (H335 - may cause respiratory tract irritation)].

Portland cement clinker

Cement in contact with damp skin can cause thickening, cracking and cracking of the skin. Prolonged contact in combination with existing abrasions can cause severe burns. Some individuals may develop eczema following exposure to wet cement dust, caused by the high pH that can induce irritating contact dermatitis after prolonged contact

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

Calcium Hydroxide

Eye irritation: Calcium dihydroxide carries the risk of serious ocular lesions (studies on eye irritation (in vivo, rabbit)).

Portland cement clinker

The clinker caused a set of heterogeneous effects on the cornea and the calculated irritation index was 128.

Direct contact with cement can cause corneal injury due to mechanical stress, immediate or delayed irritation or inflammation. Direct contact with large amounts of dry cement or wet cement projections can cause effects ranging from moderate eye irritation (eg conjunctivitis or blepharitis) to chemical burns and blindness.

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin



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Calcium Hydroxide

There are no data available.

Calcium dihydroxide is not considered a skin sensitizing substance, based on the nature of the effects (pH change) and the importance of calcium for nutrition.

The classification based on awareness is not justified.

Skin sensitization

Portland cement clinker

Some individuals may develop eczema following exposure to wet cement dust, caused by an immunological reaction to soluble Cr (VI) that causes allergic contact dermatitis. The answer may appear in a variety of forms that can range from a mild rash to severe dermatitis. No sensitizing effect is expected if the cement contains a water-soluble reducing agent of Cr (VI) until the indicated period of effectiveness of this reducing agent is exceeded.

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

Calcium Hydroxide

Reverse bacterial mutation assay (Ames test, OECD 471): negative

Chromosomal aberrations test on mammalian cells: negative

Given that calcium is an omnipresent and essential element and that any change in the pH induced by the lime in aqueous media is not relevant, calcium dihydroxide is obviously devoid of any genotoxic potential.

The classification based on genotoxicity is not justified.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

Calcium Hydroxide

Calcium (administered in the form of Ca lactate) is not carcinogenic (experimental result, rat).

The effect on pH produced by calcium dihydroxide does not give rise to any carcinogenic risk.

Epidemiological data obtained on humans confirm that calcium dihydroxide is devoid of any carcinogenic potential.

The classification based on carcinogenicity is not justified.

Portland cement clinker

No causal association was established between exposure to Portland cement and cancer.

Epidemiological literature does not support the identification of Portland cement as a suspected human carcinogen.

Portland cement is not classifiable as a human carcinogen (according to the ACGIH A4: agents that cause concern about the possibility of being carcinogenic to humans but that cannot be definitively evaluated due to the lack of data. In vitro studies or on animals do not provide indications of carcinogenicity that are sufficient to classify the agent with one of the other notations). Based on available data, it does not fall within the classification criteria.

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Calcium Hydroxide

Calcium (administered in the form of Ca carbonate) is not toxic for reproduction (experimental result, mouse).

The effect on the pH does not give rise to any reproductive risk.

Epidemiological data obtained on humans confirm that calcium dihydroxide is devoid of any potential reproductive toxicity.

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No effect on toxicity was detected in either animal studies or in human clinical studies performed on different calcium salts reproductive and developmental. v. also the Scientific Committee for Human Nutrition (Anonymous, 2006). Therefore, calcium dihydroxide is not toxic for reproduction and / or development.

Classification according to reproductive toxicity according to Regulation (EC) 1272/2008 is not necessary.

STOT - SINGLE EXPOSURE

May cause respiratory irritation

Portland cement clinker

Cement dust can irritate the throat and respiratory system. Coughing, sneezing and out of breath may occur following exposures above the occupational exposure limits.

Overall, the evidence gathered clearly indicates that occupational exposure to cement dust has produced deficits in respiratory function. However, the evidence currently available is insufficient to establish with certainty the dose-response relationship for these effects.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Portland cement clinker

There is an indication of COPD. The effects are acute and due to high exposures. No chronic effects or low concentration effects were observed. Based on available data, it does not fall within the classification criteria.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

Calcium Hydroxide

LC50 (96h) on marine fish: 457 mg / l

LC50 (96h) on sea invertebrates: 158 mg / l

NOEC (72 hours) on freshwater algae: 48 mg / l

TOXICITY ON MICROORGANISMS, ES. BACTERIA

At high concentration, calcium dihydroxide is used to disinfect sewage sludge by raising the temperature and pH.

NOEC (14 days) for sea invertebrates: 32 mg / l

EC10 / LC10 or NOEC on soil macro-organisms: 2000 mg / kg soil dw

EC10 / LC10 or NOEC on soil microorganisms: 12000 mg / kg soil dw

NOEC (21 days) on land plants: 1080 mg / kg

GENERAL EFFECT

Acute effect of pH. Although this substance is useful for correcting water acidity, an excess of over 1 g / l

Portland cement clinker

Cement is not dangerous for the environment. Ecotoxicity tests with Portland cement on *Daphnia magna* and *Selenastrum coli* have shown a small toxicological impact. So the LC50 and EC50 values cannot be determined. There are no indications of toxicity in the sedimentary phase. The addition of large amounts of cement to water can, however, cause an increase in pH and can therefore be toxic to aquatic life in certain circumstances.

Calcium Hydroxide

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LC50 - for Fish	50,6 mg/l/96h Freshwater fish
EC50 - for Crustacea	49,1 mg/l/48h Invertebrate
EC50 - for Algae / Aquatic Plants	184,57 mg/l/72h Alga
Chronic NOEC for Crustacea	32 mg/l 14 d
Chronic NOEC for Algae / Aquatic Plants	48 mg/l 72 h

12.2. Persistence and degradability

Information not available

12.3. Bioaccumulative potential

Information not available

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations**13.1. Waste treatment methods**

Product - unused residue or dry spill

CER: 10 13 06 (Powders and particulates)

Collect unused dry residues or dry spills as they are. Mark the containers. If necessary, re-use based on storage life considerations and the obligation to avoid exposure to dust. In case of disposal, harden with water and dispose of according to "Product - after addition of water, hardened".

Product - sludge

Allow to harden, avoid entry into sewage and drainage systems or into water bodies (for example water courses) and dispose of as described below in "Product - after addition of water, hardened".

Product - after adding water, hardened

Dispose of according to Legislative Decree 152/2006 and subsequent amendments. Avoid entry into the sewage system. Dispose of the hardened product as concrete waste. Due to inertization, solid waste is not dangerous.

CER: 10 13 14 (waste and cement sludge) or 17 01 01 (cement).

Packaging

Empty the packaging completely and manage it in accordance with Legislative Decree 152/2006 and subsequent amendments.

SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the

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International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: None



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Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

None

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

VOC (Directive 2004/42/EC) :

One-pack performance coatings.

15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances

Calcium Hydroxide

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Skin Corr. 1	Skin corrosion, category 1
Eye Dam. 1	Serious eye damage, category 1
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3



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Skin Sens. 1B	Skin sensitization, category 1B
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
 4. Regulation (EU) 2015/830 of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
 13. Regulation (EU) 2017/776 (X Atp. CLP)
 14. Regulation (EU) 2018/669 (XI Atp. CLP)
 15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
 16. Regulation (EU) 2019/521 (XII Atp. CLP)
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)

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SAFETY DATA SHEET

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- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Product's classification is based on the calculation methods set out in Annex I of the CLP Regulation, unless otherwise indicated in sections 11 and 12.

The data for evaluation of chemical-physical properties are reported in section 9.

