

Safety Data Sheet

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

GEOLITE MAGMA 20

Date of first edition: 9/17/2021

Safety Data Sheet dated 9/17/2021

version 6

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

1.1. Product identifier

Mixture identification:

Trade name: GEOLITE MAGMA 20

Trade code: SK0206 .070

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

Recommended use: Natural geo-mortars for structural and anti-seismic reinforcement of walls

Uses advised against: Data not available.

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL PTY LTD

88 Sutton Street, North Melbourne VIC 3051

Tel. +61 3 9448 8588

sales@kerakoll.com.au

1.4. Emergency telephone number

Kerakoll AU +61 3 9448 8588

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):

Pictograms and Signal Words



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

Portland Cement (Cr VI < 0,0002%)
aluminous cement (Cr VI < 0,0002%)
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: GEOLITE MAGMA 20

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

| Qty | Name | Ident. Numb. | Classification | Registration Number |
|-----------|------------------------------------|--------------------------------|---|---------------------|
| 20-24,9 % | 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 | |
| 1-2,4 % | aluminous cement (Cr VI < 0,0002%) | CAS:65997-16-2 EC:266-045-5 | Skin Irrit. 2, H315; Eye Dam. 1, H318 | |
| 1-2,4 % | 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 |
| < 0,1 % | 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 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

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.

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.

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).

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)

| Component | OEL Type | Country | Ceiling | Long Term mg/m ³ | Long Term ppm | Short Term mg/m ³ | Short Term ppm | Notes |
|-----------|----------|--------------------------|---------|--------------------------------|------------------|---------------------------------|-------------------|--|
| Quartz | NATIONAL | AUSTRALIA | | 0.100 | | | | Respirable fraction |
| | NATIONAL | AUSTRIA | | 0.150 | | | | Respirable aerosol |
| | NATIONAL | BELGIUM | | 0.100 | | | | |
| | NATIONAL | CANADA | | 0.100 | | | | Canada Ontario; Respirable aerosol |
| | NATIONAL | CANADA | | 0.100 | | | | Canada Quebec |
| | NATIONAL | DENMARK | | 0.300 | | 0.600 | | Inhalable aerosol |
| | NATIONAL | DENMARK | | 0.100 | | 0.200 | | Respirable aerosol |
| | NATIONAL | FINLAND | | 0.050 | | | | Respirable fraction |
| | NATIONAL | FRANCE | | 0.100 | | | | Respirable aerosol |
| | NATIONAL | HUNGARY | | 0.150 | | | | Respirable aerosol |
| | NATIONAL | IRELAND | | 0.100 | | | | Respirable fraction |
| | NATIONAL | NEW ZEALAND | | 0.200 | | | | Respirable aerosol |
| | NATIONAL | CHINA | | 1.000 | | | | Inhalable fraction. 10% <= free SiO ₂ <= 50%. |
| | NATIONAL | CHINA | | 0.700 | | | | Inhalable fraction. 50% < free SiO ₂ <= 80%. |
| | NATIONAL | CHINA | | 0.500 | | | | Inhalable fraction. Free SiO ₂ < 80%. |
| | NATIONAL | SINGAPORE | | 0.100 | | | | Respirable aerosol. |
| | NATIONAL | SPAIN | | 0.100 | | | | Respirable fraction |
| | NATIONAL | SWEDEN | | 0.100 | | | | Respirable aerosol |
| | NATIONAL | SWITZERLAND | | 0.150 | | | | Respirable aerosol |
| | NATIONAL | NETHERLANDS | | 0.075 | | | | Respirable dust |
| | NATIONAL | ITALY | | 0.050 | | | | Silice cristallina |
| | NATIONAL | ITALY | | 0.025 | | | | A2 |
| | NATIONAL | ITALY | | 10.000 | | | | Come particelle non altrimenti specificate PNOC |
| | NATIONAL | KOREA, REPUBLIC OF | | 0.050 | | | | |
| | NATIONAL | UNITED STATES OF AMERICA | | 0.050 | | | | NIOSH |
| | NATIONAL | ARGENTINA | | 0.050 | | | | |
| | NATIONAL | CHILE | | 0.080 | | | | |
| | NATIONAL | CROATIA | | 0.100 | | | | |
| | NATIONAL | ESTONIA | | 0.100 | | | | |
| | NATIONAL | INDIA | | 10.000 | | | | |
| | NATIONAL | LITHUANIA | | 0.100 | | | | |
| | NATIONAL | MALAYSIA | | 0.100 | | | | |
| | NATIONAL | MEXICO | | 0.025 | | | | Respirable fraction |

| | | | | | |
|-----------------------------------|----------|--------------------------|--------|-------|--|
| Portland Cement (Cr VI < 0,0002%) | NATIONAL | NORWAY | 0.300 | 0.400 | Total dust |
| | NATIONAL | NORWAY | 0.100 | | Respirable dust |
| | NATIONAL | PORTUGAL | 0.025 | | Respirable fraction |
| | NATIONAL | SLOVENIA | 0.050 | | |
| | NATIONAL | SOUTH AFRICA | 0.100 | | |
| | ACGIH | NNN | 0.025 | | (R), A2 - Pulm fibrosis, lung cancer |
| | NATIONAL | AUSTRALIA | 10.000 | | This value is for inhalable dust containing no asbestos and < 1% crystalline silica. |
| | NATIONAL | AUSTRIA | 5.000 | | Inhalable aerosol |
| | NATIONAL | BELGIUM | 10.000 | | Respirable fraction |
| | NATIONAL | CANADA | 1.000 | | Canada Ontario. The value is for particulate matter containing no asbestos an <1 % crystalline silica. Respirable fraction |
| | NATIONAL | CANADA | 10.000 | | Canada Québec. Total |
| | NATIONAL | CANADA | 5.000 | | Canada Québec. Respirable |
| | NATIONAL | KOREA, REPUBLIC OF | 10.000 | | |
| | NATIONAL | CROATIA | 10.000 | | |
| | NATIONAL | FINLAND | 5.000 | | Inhalable fraction |
| | NATIONAL | FINLAND | 1.000 | | Respirable fraction |
| | NATIONAL | GERMANY | 5.000 | | DFG |
| | NATIONAL | HUNGARY | 10.000 | | Inhalable |
| | NATIONAL | IRELAND | 1.000 | | Respirable fraction |
| | NATIONAL | ITALY | 10.000 | | Come particelle non altrimenti specificate PNOC |
| | NATIONAL | ITALY | 5.000 | | MAK |
| | NATIONAL | ITALY | 1.000 | | TWA |
| | NATIONAL | JAPAN | 1.000 | | Respirable dust |
| | NATIONAL | JAPAN | 4.000 | | Total dust: Total dust comprises particles with a flow speed of 50 to 80 cm/sec at the entry of a particle sampler. |
| | NATIONAL | LATVIA | 6.000 | | |
| | NATIONAL | NEW ZEALAND | 10.000 | | The value for inhalable dust containing no asbestos and less than 1% free silica. |
| | NATIONAL | NETHERLANDS | 1.000 | | Respirable dust |
| | NATIONAL | POLAND | 2.000 | | Respirable fraction |
| | NATIONAL | PORTUGAL | 10.000 | | |
| | NATIONAL | PORTUGAL | 1.000 | | |
| | NATIONAL | SINGAPORE | 10.000 | | |
| | NATIONAL | SPAIN | 4.000 | | Respirable fraction |
| | NATIONAL | SWITZERLAND | 5.000 | | Inhalable aerosol |
| | NATIONAL | UNITED STATES OF AMERICA | 15.000 | | OSHA; Total dust |
| | NATIONAL | UNITED STATES OF AMERICA | 10.000 | | NIOSH; Total dust |

| | | | | |
|-----------|----------|--|--------|--|
| Limestone | NATIONAL | UNITED STATES OF AMERICA | 5.000 | NIOSH; Respirable fraction |
| | NATIONAL | UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND | 10.000 | Inhalable aerosol |
| | NATIONAL | UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND | 4.000 | Respirable aerosol |
| | NATIONAL | CHILE | 8.800 | |
| | NATIONAL | INDONESIA | 1.000 | |
| | NATIONAL | MALAYSIA | 10.000 | |
| | NATIONAL | MEXICO | 1.000 | |
| | ACGIH | NNN | 1 | (E,R), A4 - Pulm func, resp symptoms, asthma |
| | NATIONAL | BELGIUM | 10.000 | |
| | NATIONAL | HUNGARY | 10.000 | Inhalable aerosol |
| | NATIONAL | CHINA | 8.000 | Inhalable fraction |
| | NATIONAL | CHINA | 4.000 | Inhalable aerosol |
| | NATIONAL | KOREA, REPUBLIC OF | 10.000 | |
| | NATIONAL | JAPAN | 2.000 | Respirable dust |
| | NATIONAL | JAPAN | 8.000 | Total dust: Total dust comprises particles with a flow speed of 50 to 80 cm/sec at the entry of a particle sampler |
| | NATIONAL | SPAIN | 10.000 | Inhalable aerosol |
| | NATIONAL | SWITZERLAND | 3.000 | Respirable aerosol |
| | NATIONAL | UNITED STATES OF AMERICA | 15.000 | OSHA: Total dust |
| | NATIONAL | UNITED STATES OF AMERICA | 5.000 | OSHA: Respirable dust |
| | NATIONAL | UNITED STATES OF AMERICA | 10.000 | NIOSH: total dust, calcium carbonate |
| | NATIONAL | UNITED STATES OF AMERICA | 5.000 | NIOSH: Respirable aerosol, calcium carbonate |
| | NATIONAL | UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND | 10.000 | Inhalable aerosol |
| | NATIONAL | UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN | 4.000 | Respirable aerosol |

| | | | | | |
|-----------------|----------|--------------------------|--------|--------|---|
| Calcium sulfate | IRELAND | | | | |
| | NATIONAL | ITALY | 10.000 | | Come particelle non altrimenti specificate PNOC |
| | NATIONAL | CROATIA | 10.000 | | |
| | NATIONAL | FRANCE | 10.000 | | |
| | NATIONAL | NETHERLANDS | 10.000 | | |
| | NATIONAL | PORTUGAL | 10.000 | | |
| | NATIONAL | AUSTRALIA | 10.000 | | This value is for inhalable dust containing no asbestos and <1 % crystalline silica |
| | NATIONAL | AUSTRIA | 5.000 | 10.000 | Long term and short term: respirable aerosol |
| | NATIONAL | BELGIUM | 10.000 | | |
| | NATIONAL | CANADA | 10.000 | | Ontario; inhalable aerosol |
| | NATIONAL | CANADA | 10.000 | | Quebec |
| | NATIONAL | CANADA | 5.000 | | Quebec |
| | NATIONAL | GERMANY | 6.000 | | AGS; respirable aerosol |
| | NATIONAL | GERMANY | 4.000 | | DFG; inhalable aerosol |
| | NATIONAL | GERMANY | 1.500 | | DFG; respirable aerosol |
| | NATIONAL | HUNGARY | 6.000 | | Respirable aerosol |
| | NATIONAL | IRELAND | 10.000 | | |
| | NATIONAL | LATVIA | 4.000 | | |
| | NATIONAL | NEW ZEALAND | 10.000 | | The value for inhalable dust containing no asbestos and less than 1% free silica. |
| | NATIONAL | SINGAPORE | 10.000 | | |
| | NATIONAL | KOREA, REPUBLIC OF | 10.000 | | |
| | NATIONAL | SPAIN | 10.000 | | |
| | NATIONAL | SWITZERLAND | 3.000 | | Respirable aerosol |
| | NATIONAL | UNITED STATES OF AMERICA | 10.000 | | NIOSH; total dust |
| | NATIONAL | UNITED STATES OF AMERICA | 5.000 | | NIOSH; respirable aerosol |
| | NATIONAL | UNITED STATES OF AMERICA | 15.000 | | OSHA; total dust |
| | NATIONAL | UNITED STATES OF AMERICA | 5.000 | | OSHA; respirable dust |
| | NATIONAL | ITALY | 10.000 | | |
| | NATIONAL | ARGENTINA | 10.000 | | |
| | NATIONAL | CHILE | 8.800 | | |
| | NATIONAL | FRANCE | 10.000 | | |
| | NATIONAL | GREECE | 10.000 | | |
| | NATIONAL | INDONESIA | 10.000 | | |
| | NATIONAL | IRELAND | 10.000 | | |
| | NATIONAL | MALAYSIA | 10.000 | | |
| | NATIONAL | MEXICO | 10.000 | | |
| | NATIONAL | NETHERLANDS | 10.000 | | |

| | | | | |
|-------------------|----------|--|--------|--|
| Calcium carbonate | NATIONAL | POLAND | 10.000 | |
| | NATIONAL | PORTUGAL | 10.000 | |
| | NATIONAL | SLOVAKIA | 4.000 | Inhalable fraction |
| | NATIONAL | SLOVAKIA | 1.500 | Respirable fraction |
| | NATIONAL | SLOVENIA | 6.000 | |
| | ACGIH | NNN | 10 | (I) - Nasal symptoms |
| | NATIONAL | AUSTRALIA | 10.000 | This value is for inhalable dust containing no asbestos and <1 % crystalline silica. |
| | NATIONAL | CANADA | 10.000 | |
| | NATIONAL | FRANCE | 10.000 | inhalable aerosol |
| | NATIONAL | HUNGARY | 10.000 | inhalable aerosol |
| | NATIONAL | IRELAND | 10.000 | Inhalable fraction |
| | NATIONAL | IRELAND | 4.000 | Respirable fraction |
| | NATIONAL | LATVIA | 6.000 | |
| | NATIONAL | NEW ZEALAND | 10.000 | The value for inhalable dust containing no asbestos and less than 1% free silica. |
| | NATIONAL | POLAND | 10.000 | |
| | NATIONAL | SINGAPORE | 10.000 | (limestone, marble) |
| | NATIONAL | SWITZERLAND | 3.000 | respirable aerosol |
| | NATIONAL | UNITED STATES OF AMERICA | 15.000 | total dust |
| | NATIONAL | UNITED STATES OF AMERICA | 5.000 | respirable dust |
| | NATIONAL | UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND | 10.000 | inhalable aerosol |
| | NATIONAL | UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND | 4.000 | respirable aerosol |
| | NATIONAL | ITALY | 10.000 | |
| | NATIONAL | BELGIUM | 10.000 | |
| | NATIONAL | KOREA, REPUBLIC OF | 10.000 | |
| | NATIONAL | CROATIA | 10.000 | |
| | NATIONAL | NETHERLANDS | 10.000 | |
| | NATIONAL | PORTUGAL | 10.000 | |
| | NATIONAL | SPAIN | 10.000 | |
| | NATIONAL | CHILE | 5.000 | respirable fraction |
| | NATIONAL | AUSTRALIA | 10.000 | This value is for inhalable dust containing no asbestos and < 1% crystalline silica. |
| Kaolin | NATIONAL | BELGIUM | 2.000 | |
| | NATIONAL | CANADA | 2.000 | Canada Ontario. Respirable aerosol. The value for this particulate matter containing |

| | | | | | |
|---------------------|----------|--|--------|--------|---|
| | | | | | no asbestos and <1 percent crystalline silica. |
| | NATIONAL | CANADA | 5.000 | | Canada Québec |
| | NATIONAL | DENMARK | 2.000 | 4.000 | Respirable aerosol |
| | NATIONAL | FINLAND | 2.000 | | Respirable fraction |
| | NATIONAL | FRANCE | 10.000 | | Respirable aerosol |
| | NATIONAL | IRELAND | 2.000 | | |
| | NATIONAL | NEW ZEALAND | 10.000 | | Inhalable aerosol |
| | NATIONAL | NEW ZEALAND | 2.000 | | Respirable aerosol |
| | NATIONAL | SWITZERLAND | 3.000 | | Respirable aerosol |
| | NATIONAL | UNITED STATES OF AMERICA | 15.000 | | OSHA: Total dust |
| | NATIONAL | UNITED STATES OF AMERICA | 5.000 | | OSHA: Respirable dust |
| | NATIONAL | UNITED STATES OF AMERICA | 10.000 | | NIOSH: Respirable dust |
| | NATIONAL | UNITED STATES OF AMERICA | 5.000 | | NIOSH: Respirable fraction |
| | NATIONAL | UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND | 2.000 | | Respirable aerosol |
| (+) - tartaric acid | ACGIH | NNN | 2 | | (E,R), A4 - Pneumoconiosis |
| | NATIONAL | GERMANY | 2.000 | 4.000 | AGS; long term and short term: inhalable fraction |
| | NATIONAL | GERMANY | 2.000 | 4.000 | DFG; long term and short term: inhalable fraction |
| | NATIONAL | SWITZERLAND | 2.000 | 4.000 | Long term and short term: inhalable fraction |
| Aluminium hydroxide | NATIONAL | AUSTRIA | 10.000 | 20.000 | Long term and short term: inhalable fraction; short term: 60 minutes average value |
| | NATIONAL | AUSTRIA | 5.000 | 10.000 | Long term and short term: respirable fraction; short term: 60 minutes average value |
| | NATIONAL | GERMANY | 4.000 | | Inhalable aerosol |
| | NATIONAL | GERMANY | 1.500 | | Respirable aerosol |
| | NATIONAL | LATVIA | 6.000 | | |
| | NATIONAL | POLAND | 2.500 | | Fume, total dust |
| | NATIONAL | POLAND | 1.200 | | Fume, respirable dust |
| | NATIONAL | SWITZERLAND | 3.000 | | Respirable aerosol |
| | NATIONAL | ARGENTINA | 2.000 | | |
| | NATIONAL | AUSTRALIA | 2.000 | | |
| | NATIONAL | BELGIUM | 2.000 | | |
| | NATIONAL | BULGARIA | 2.000 | | |
| | NATIONAL | CANADA | 10.000 | | |

| | | | | | |
|--------|----------|--|-------|-------|---|
| Quartz | NATIONAL | KOREA, REPUBLIC OF | 2.000 | | |
| | NATIONAL | CROATIA | 2.000 | | |
| | NATIONAL | DENMARK | 1.000 | | |
| | NATIONAL | ESTONIA | 2.000 | | |
| | NATIONAL | FINLAND | 2.000 | | |
| | NATIONAL | FRANCE | 2.000 | | |
| | NATIONAL | UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND | 2.000 | | |
| | NATIONAL | GREECE | 2.000 | | |
| | NATIONAL | INDONESIA | 2.000 | | |
| | NATIONAL | IRELAND | 2.000 | | |
| | NATIONAL | ICELAND | 2.000 | | |
| | NATIONAL | LITHUANIA | 6.000 | | |
| | NATIONAL | NORWAY | 2.000 | | |
| | NATIONAL | NEW ZEALAND | 5.000 | | |
| | NATIONAL | RUSSIAN FEDERATIO N | 6.000 | | |
| | NATIONAL | SLOVAKIA | 2.000 | | |
| | NATIONAL | SLOVENIA | 6.000 | | |
| | NATIONAL | SPAIN | 2.000 | | |
| | NATIONAL | SWEDEN | 1.000 | | |
| | NATIONAL | SWEDEN | 1.000 | | |
| | NATIONAL | AUSTRALIA | 0.100 | | Respirable fraction |
| | NATIONAL | AUSTRIA | 0.150 | | respirable aerosol |
| | NATIONAL | BELGIUM | 0.100 | | |
| | NATIONAL | CANADA | 0.100 | | Canada Ontario. Respirable aerosol |
| | NATIONAL | CANADA | 0.100 | | Canada Quebec |
| | NATIONAL | DENMARK | 0.300 | 0.600 | Inhalable aerosol |
| | NATIONAL | DENMARK | 0.100 | 0.200 | Respirable aerosol |
| | NATIONAL | FINLAND | 0.050 | | Respirable fraction |
| | NATIONAL | FRANCE | 0.100 | | Respirable aerosol |
| | NATIONAL | HUNGARY | 0.150 | | Respirable aerosol |
| | NATIONAL | IRELAND | 0.100 | | Respirable fraction |
| | NATIONAL | NEW ZEALAND | 0.200 | | Respirable aerosol |
| | NATIONAL | CHINA | 1.000 | | Inhalable fraction. 10% <= free SiO2 <= 50%. |
| | NATIONAL | CHINA | 0.700 | | Inhalable fraction. 50% < free SiO2 <= 80%. |
| | NATIONAL | CHINA | 0.500 | | Inhalable fraction. Free SiO2 < 80%. |
| | NATIONAL | SINGAPORE | 0.100 | | Respirable aerosol. |
| | NATIONAL | SPAIN | 0.100 | | Respirable fraction |
| | NATIONAL | SWEDEN | 0.100 | | Respirable aerosol |
| | NATIONAL | SWITZERLA ND | 0.150 | | Respirable aerosol |

| | | | | | |
|---|----------|--------------------------|--------|-------|---|
| silicon dioxide, chemically prepared | NATIONAL | NETHERLANDS | 0.075 | | Respirable dust |
| | NATIONAL | ITALY | 0.050 | | Silice cristallina |
| | NATIONAL | ITALY | 0.025 | | A2 |
| | NATIONAL | UNITED STATES OF AMERICA | 0.050 | | NIOSH |
| | NATIONAL | KOREA, REPUBLIC OF | 0.050 | | |
| | NATIONAL | ARGENTINA | 0.050 | | |
| | NATIONAL | CHILE | 0.080 | | |
| | NATIONAL | CROATIA | 0.100 | | |
| | NATIONAL | ESTONIA | 0.100 | | |
| | NATIONAL | INDIA | 10.000 | | |
| | NATIONAL | LITHUANIA | 0.100 | | |
| | NATIONAL | MALAYSIA | 0.100 | | |
| | NATIONAL | MEXICO | 0.025 | | Respirable fraction |
| | NATIONAL | NORWAY | 0.300 | | Total dust |
| | NATIONAL | NORWAY | 0.100 | | Respirable dust |
| | NATIONAL | PORTUGAL | 0.025 | | |
| | NATIONAL | SLOVENIA | 0.050 | 0.400 | |
| | NATIONAL | SOUTH AFRICA | 0.100 | | |
| | ACGIH | NNN | 0.025 | | (R), A2 - Pulm fibrosis, lung cancer |
| | EU | NNN | 0.100 | | (R), A2 - Pulm fibrosis, lung cancer |
| | NATIONAL | AUSTRALIA | 2.000 | | This value is for inhalable dust containing no asbestos and < 1% crystalline silica |
| | NATIONAL | AUSTRIA | 4.000 | | Inhalable aerosol |
| | NATIONAL | BELGIUM | 10.000 | | |
| | NATIONAL | CANADA | 10.000 | | Ontario |
| | NATIONAL | CANADA | 6.000 | | Quebec |
| | NATIONAL | DENMARK | 2.000 | 4.000 | Inhalable aerosol |
| | NATIONAL | FINLAND | 5.000 | | |
| | NATIONAL | GERMANY | 4.000 | | AGS; Inhalable aerosol |
| | NATIONAL | GERMANY | 4.000 | | DFG; Inhalable aerosol |
| | NATIONAL | IRELAND | 6.000 | | Inhalable fraction |
| | NATIONAL | IRELAND | 2.400 | | Respirable fraction |
| | NATIONAL | LATVIA | 1.000 | | |
| | NATIONAL | NEW ZEALAND | 1.000 | | |
| | NATIONAL | CHINA | 2.000 | | Inhalable fraction |
| | NATIONAL | SINGAPORE | 10.000 | | |
| | NATIONAL | KOREA, REPUBLIC OF | 10.000 | | |
| | NATIONAL | SWITZERLAND | 4.000 | | Inhalable aerosol |
| | NATIONAL | UNITED STATES OF AMERICA | 80.000 | | OSHA; 80/ % silica total dust (MG3) |
| | NATIONAL | UNITED KINGDOM | 6.000 | | Inhalable aerosol |

| | | | | | |
|-------------------|----------|--|--------|--------|--|
| | | OF GREAT BRITAIN AND NORTHERN IRELAND | | | |
| | NATIONAL | UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND | 2.400 | | Respirable aerosol |
| | NATIONAL | ESTONIA | 2.000 | | |
| | NATIONAL | SLOVENIA | 4.000 | | Inhalable fraction |
| | NATIONAL | SOUTH AFRICA | 6.000 | | Inhalable particulate |
| | NATIONAL | SOUTH AFRICA | 3.000 | | Respirable particulate |
| Dimethyl siloxane | NATIONAL | ROMANIA | 60.000 | 80.000 | |
| Starch | NATIONAL | AUSTRALIA | 10.000 | | This value is for inhalable dust containing no asbestos and < 1% crystalline silica. |
| | NATIONAL | BELGIUM | 10.000 | | |
| | NATIONAL | CANADA | 10.000 | | Ontario |
| | NATIONAL | CANADA | 10.000 | | Quebec |
| | NATIONAL | IRELAND | 10.000 | | Inhalable fraction |
| | NATIONAL | IRELAND | 4.000 | | Respirable fraction |
| | NATIONAL | NEW ZEALAND | 10.000 | | The value for inhalable dust containing no asbestos and less than 1% free silica |
| | NATIONAL | SINGAPORE | 10.000 | | |
| | NATIONAL | KOREA, REPUBLIC OF | 10.000 | | |
| | NATIONAL | SPAIN | 10.000 | | Inhalable aerosol |
| | NATIONAL | SWITZERLA ND | 3.000 | | Respirable dust |
| | NATIONAL | UNITED STATES OF AMERICA | 10.000 | | NIOSH; total dust |
| | NATIONAL | UNITED STATES OF AMERICA | 5.000 | | NIOSH; respirable dust |
| | NATIONAL | UNITED STATES OF AMERICA | 15.000 | | OSHA; inhalable aerosol |
| | NATIONAL | UNITED STATES OF AMERICA | 5.000 | | OSHA; respirable aerosol |
| | NATIONAL | UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND | 10.000 | | Inhalable aerosol |
| | NATIONAL | UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN | 4.000 | | Respirable aerosol |

IRELAND

| | | | |
|----------|-----------------------|--------|------------------------|
| NATIONAL | ITALY | 10.000 | |
| NATIONAL | ARGENTINA | 10.000 | |
| NATIONAL | GREECE | 10.000 | |
| NATIONAL | INDONESIA | 10.000 | |
| NATIONAL | MALAYSIA | 10.000 | |
| NATIONAL | MEXICO | 10.000 | |
| NATIONAL | PORTUGAL | 10.000 | |
| NATIONAL | RUSSIAN FEDERATION | | 10.000 |
| NATIONAL | SOUTH AFRICA | 10.000 | Inhalable particulate |
| NATIONAL | SOUTH AFRICA | 5.000 | Respirable particulate |
| ACGIH | NNN | 10 | A4 - Dermatitis |

Predicted No Effect Concentration (PNEC) values

| Component | CAS-No. | PNEC Limit | Exposure Route | Exposure Frequency |
|------------------------------------|------------|---------------|-------------------------------------|--------------------|
| aluminous cement (Cr VI < 0,0002%) | 65997-16-2 | 260.000 mg/l | Freshwater | |
| | | 260.000 mg/l | Intermittent releases (freshwater) | |
| | | 10.000 mg/l | Microorganisms in sewage treatments | |
| Flue dust, portland cement | 68475-76-3 | 282.000 µg/l | Freshwater | |
| | | 282.000 µg/l | Intermittent releases (freshwater) | |
| | | 28.000 µg/l | Marine water | |
| | | 6.000 mg/kg | Microorganisms in sewage treatments | |
| | | 88.000 µg/kg | Marine water sediments | |
| | | 875.000 µg/kg | Freshwater sediments | |

Derived No Effect Level (DNEL) values

| Component | CAS-No. | Worker Industry | Worker Professional | Consumer | Exposure Route | Exposure Frequency |
|------------------------------------|------------|-----------------|---------------------------|---------------------------|------------------|-----------------------------|
| aluminous cement (Cr VI < 0,0002%) | 65997-16-2 | | 2.500 mg/m ³ | | Human Inhalation | Long Term, systemic effects |
| Flue dust, portland cement | 68475-76-3 | | 840.000 µg/m ³ | 840.000 µg/m ³ | Human Inhalation | Long Term, local effects |
| | | | 4.000 mg/m ³ | | Human Inhalation | Short Term, local effects |

8.2. Exposure controls

Eye protection:

Eye glasses with side protection.

Protection for skin:

Safety shoes.

Protection for hands:

Nitrile rubber .

Respiratory protection:

Particle filter P2 .

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

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: =12.30 Notes 1% (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: 1.42 g/cm³
Solubility in water: Slightly soluble
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

Miscibility: N.A.
Conductivity: N.A.
Evaporation rate: N.A. 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:

| | | | |
|------------------------------------|--------------------------------------|--|------------------|
| aluminous cement (Cr VI < 0,0002%) | a) acute toxicity | LD50 Oral Rat > 2000.00 mg/kg | |
| | | LC50 Inhalation of aerosol Rat = 7.60 mg/l 1h | |
| | | LD50 Skin Rat > 2000.00 mg/kg 24h | |
| | b) skin corrosion/irritation | Skin Irritant Negative | |
| | c) serious eye damage/irritation | Eye Irritant Rabbit Yes 24h | |
| | d) respiratory or skin sensitisation | Skin Sensitization Guinea pig Negative | |
| | f) carcinogenicity | Genotoxicity Negative | Mouse oral route |
| | g) reproductive toxicity | No Observed Adverse Effect Level Oral Rat = 266.00 mg/kg | |
| | | | |
| | | | |
| Flue dust, portland cement | a) acute toxicity | LD50 Oral Rat > 1848.00000 mg/kg | |
| | | LC50 Inhalation Dust Rat > 6.04000 mg/l 4h | |
| | | LD50 Skin Rat >= 2000.00000 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 = 16.00000 mg/kg | |
| Quartz | a) acute toxicity | LD50 Oral > 2000.00000 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 |
|-----------|--------------|-------------|
|-----------|--------------|-------------|

aluminous cement (Cr VI < 0,0002%)

CAS: 65997-16-2 - EINECS: 266-045-5

a) Aquatic acute toxicity : LC50 Fish freshwater fish = 100.00 mg/L

a) Aquatic acute toxicity : LC50 freshwater invertebrates = 8.50 mg/L

a) Aquatic acute toxicity : LC50 Algae freshwater algae = 5.84 mg/L

a) Aquatic acute toxicity : EC50 microorganisms = 1000.00 mg/L

Flue dust, portland cement

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

a) Aquatic acute toxicity : NOEC Fish zebrafish = 11.10000 mg/L 96h ECHA

a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 100.00000 mg/L 48h OECD 202

b) Aquatic chronic toxicity : NOELR Daphnia Daphnia magna = 50.00000 mg/L 48h OECD 211

b) Aquatic chronic toxicity : EL10 Daphnia Daphnia magna = 68.20000 mg/L 48h OECD 211 - 21 days

a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 28.20000 mg/L 72h OECD 20

a) Aquatic acute toxicity : EC50 Sludge activated sludge = 596.00000 mg/L OECD Guideline No. 209

b) Aquatic chronic toxicity : EC50 = 9931.00000 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 = 1000.00000 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/vPvB Ingredients are present

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 5: Specific Target Organ Toxicity (STOT)/Aspiration Toxicity; HP 13: Sensitising

SECTION 14: Transport information

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 Provisioning: N/A

Sea (IMDG) :

IMDG-Stowage Code: N/A

IMDG-Stowage Note: N/A

IMDG-Subsidiary hazards: N/A

IMDG-Special Provisioning: 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. 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) 649/2012 (PIC regulation):

No Substance Listed

German Water Hazard Class.

Class 1: slightly hazardous for water.

SVHC Substances:

No data available

15.2. Chemical safety assessment

No 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. |
|------|-----------------------------------|

| | |
|------|---|
| 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 |
|--|---------------------------------|
|--|---------------------------------|

| | |
|-------|--------------------|
| 3.2/2 | Calculation method |
|-------|--------------------|

| | |
|-------|--------------------|
| 3.3/1 | Calculation method |
|-------|--------------------|

| | |
|----------|--------------------|
| 3.4.2/1B | Calculation method |
|----------|--------------------|

| | |
|-------|--------------------|
| 3.8/3 | 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

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.