

# Moisture Panel

## Knauf UK & Ireland GmbH

Version No: 3.1

Safety data sheet according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

Issue Date: **08/02/2024**

Print Date: **26/04/2024**

L.REACH.GB.EN.E

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

#### 1.1. Product Identifier

|                                      |                |
|--------------------------------------|----------------|
| <b>Product name</b>                  | Moisture Panel |
| <b>Chemical Name</b>                 | Not Applicable |
| <b>Synonyms</b>                      | Not Available  |
| <b>Chemical formula</b>              | Not Applicable |
| <b>Other means of identification</b> | Not Available  |

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

|                                 |  |
|---------------------------------|--|
| <b>Relevant identified uses</b> | For use as cladding component used in internal building areas of high humidity.<br>Use according to manufacturer's directions. |
| <b>Uses advised against</b>     | No specific uses advised against are identified.   |

#### 1.3. Details of the manufacturer or supplier of the safety data sheet

|                                |   |
|--------------------------------|---|
| <b>Registered company name</b> | Knauf UK & Ireland GmbH                                 |
| <b>Address</b>                 | Kemsley Fields Business Park Kent ME9 8SR Great Britain |
| <b>Telephone</b>               | 0800 521 050  |
| <b>Fax</b>                     | Not Available   |
| <b>Website</b>                 | <a href="http://www.knauf.com">www.knauf.com</a>        |
| <b>Email</b>                   | cservice@knauf.com                                      |

#### 1.4. Emergency telephone number

|  |                          |
|--|--------------------------|
| <b>Association / Organisation</b>        | Knauf UK & Ireland       |
| <b>Emergency telephone numbers</b>       | 0800 521 050 - 9am - 5pm |
| <b>Other emergency telephone numbers</b> | 111 - NHS Emergency      |

### SECTION 2 Hazards identification

#### 2.1. Classification of the substance or mixture

|   |                |
|---|----------------|
| <b>Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 <sup>[1]</sup></b> | Not Applicable |
|---|----------------|

#### 2.2. Label elements

|                            |                       |
|----------------------------|-----------------------|
| <b>Hazard pictogram(s)</b> | Not Applicable        |
| <b>Signal word</b>         | <b>Not Applicable</b> |

#### Hazard statement(s)

Not Applicable

## Moisture Panel

## Supplementary statement(s)

|        |   |
|--------|---|
| EUH210 | Safety data sheet available on request. |
|--------|---|

## Precautionary statement(s) Prevention

Not Applicable

## Precautionary statement(s) Response

Not Applicable

## Precautionary statement(s) Storage

Not Applicable

## Precautionary statement(s) Disposal

Not Applicable

Material contains gypsum.

## 2.3. Other hazards

REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

## SECTION 3 Composition / information on ingredients

## 3.1.Substances

See 'Composition on ingredients' in Section 3.2

## 3.2.Mixtures

| 1. CAS No<br>2. EC No<br>3. Index No<br>4. REACH No                       | %<br>[weight]  | Name   | Classified according to GB-CLP Regulation,<br>UK SI 2019/720 and UK SI 2020/1567  | SCL / M-<br>Factor | Nanoform Particle<br>Characteristics |
|---|--|--|---|--------------------|--------------------------------------|
| 1. 13397-24-5<br>2. Not Available<br>3. Not Available<br>4. Not Available | >60  | <u>gypsum</u>                                    | Serious Eye Damage/Eye Irritation Category 2,<br>Specific Target Organ Toxicity - Single Exposure<br>(Respiratory Tract Irritation) Category 3; H319,<br>H335 [1] | Not<br>Available   | Not Available                        |
| 1. 9005-25-8<br>2. 232-679-6<br>3. Not Available<br>4. Not Available      | <1   | <u>starch</u>                                    | Not Classified [1]  | Not<br>Available   | Not Available                        |
| Not Available   | balance  | Ingredients<br>determined not to<br>be hazardous | Not Applicable  | Not<br>Applicable  | Not Available                        |
| <b>Legend:</b>  | 1. Classification by vendor; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567; 3. Classification drawn from C&L; * EU IOELVs available; [e] Substance identified as having endocrine disrupting properties |  |   |                    |                                      |

## SECTION 4 First aid measures

## 4.1. Description of first aid measures

|                     |   |
|---------------------|---|
| <b>Eye Contact</b>  | <p>If dust from product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> <li>▶ Generally not applicable.</li> </ul>                                 |
| <b>Skin Contact</b> | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> <li>▶ Generally not applicable.</li> </ul>  |
| <b>Inhalation</b>   | <ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prosthesis such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor, without delay.</li> <li>▶ Generally not applicable.</li> </ul> |

Continued...

## Moisture Panel

|                  |   |
|------------------|---|
| <b>Ingestion</b> | <ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> <li>▶ Generally not applicable.</li> </ul> |
|------------------|---|

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

See Section 11

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

Treat symptomatically.

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

- ▶ There is no restriction on the type of extinguisher which may be used.
- ▶ Use extinguishing media suitable for surrounding area.

**5.2. Special hazards arising from the substrate or mixture**

|                             |             |
|-----------------------------|-------------|
| <b>Fire Incompatibility</b> | None known. |
|-----------------------------|-------------|

**5.3. Advice for firefighters**

|                              |   |
|------------------------------|---|
| <b>Fire Fighting</b>         | <ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Use fire fighting procedures suitable for surrounding area.</li> <li>▶ <b>DO NOT</b> approach containers suspected to be hot.</li> <li>▶ Cool fire exposed containers with water spray from a protected location.</li> <li>▶ If safe to do so, remove containers from path of fire.</li> <li>▶ Equipment should be thoroughly decontaminated after use.</li> </ul> <p>Slight hazard when exposed to heat, flame and oxidisers.</p>       |
| <b>Fire/Explosion Hazard</b> | <p>Articles and manufactured articles may constitute a fire hazard where polymers form their outer layers or where combustible packaging remains in place.</p> <p>Certain substances, found throughout their construction, may degrade or become volatile when heated to high temperatures. This may create a secondary hazard.</p> <ul style="list-style-type: none"> <li>▶ Non combustible.</li> <li>▶ Not considered a significant fire risk, however containers may burn.</li> </ul> <p>Decomposes on heating and produces:<br/>carbon dioxide (CO<sub>2</sub>)<br/>sulfur oxides (SO<sub>x</sub>)<br/>other pyrolysis products typical of burning organic material.</p> <p>May emit poisonous fumes.<br/>May emit corrosive fumes.</p> |

**SECTION 6 Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

See section 8

**6.2. Environmental precautions**

See section 12

**6.3. Methods and material for containment and cleaning up**

|                     |   |
|---------------------|---|
| <b>Minor Spills</b> | <ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Secure load if safe to do so.</li> <li>▶ Bundle/collect recoverable product.</li> <li>▶ Collect remaining material in containers with covers for disposal.</li> </ul>  |
| <b>Major Spills</b> | <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Stop leak if safe to do so.</li> <li>▶ Contain spill with sand, earth or vermiculite.</li> <li>▶ Collect recoverable product into labelled containers for recycling.</li> <li>▶ Neutralise/decontaminate residue (see Section 13 for specific agent).</li> </ul> |

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## Moisture Panel

- ▶ Collect solid residues and seal in labelled drums for disposal.
- ▶ Wash area and prevent runoff into drains.
- ▶ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- ▶ If contamination of drains or waterways occurs, advise emergency services.

Minor hazard.

- ▶ Clear area of personnel.
- ▶ Alert Fire Brigade and tell them location and nature of hazard.
- ▶ Control personal contact with the substance, by using protective equipment as required.
- ▶ Prevent spillage from entering drains or water ways.
- ▶ Contain spill with sand, earth or vermiculite.
- ▶ Collect recoverable product into labelled containers for recycling.
- ▶ Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
- ▶ Wash area and prevent runoff into drains or waterways.
- ▶ If contamination of drains or waterways occurs, advise emergency services.

### 6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 Handling and storage

### 7.1. Precautions for safe handling

|                                      |  |
|--------------------------------------|--|
| <b>Safe handling</b>                 | <ul style="list-style-type: none"> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> <li>▶ <b>DO NOT enter confined spaces until atmosphere has been checked.</b></li> <li>▶ <b>DO NOT allow material to contact humans, exposed food or food utensils.</b></li> <li>▶ Avoid contact with incompatible materials.</li> <li>▶ <b>When handling, DO NOT eat, drink or smoke.</b></li> <li>▶ Keep containers securely sealed when not in use.</li> <li>▶ Avoid physical damage to containers.</li> <li>▶ Always wash hands with soap and water after handling.</li> <li>▶ Work clothes should be laundered separately. Launder contaminated clothing before re-use.</li> <li>▶ Use good occupational work practice.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li> </ul> |
| <b>Fire and explosion protection</b> | See section 5  |
| <b>Other information</b>             | ▶ Store away from incompatible materials.  |

### 7.2. Conditions for safe storage, including any incompatibilities

|  |   |
|--|---|
| <b>Suitable container</b>  | <p>Generally packaging as originally supplied with the article or manufactured item is sufficient to protect against physical hazards. If repackaging is required ensure the article is intact and does not show signs of wear. As far as is practicably possible, reuse the original packaging or something providing a similar level of protection to both the article and the handler.</p> <ul style="list-style-type: none"> <li>▶ Glass container is suitable for laboratory quantities</li> </ul> |
| <b>Storage incompatibility</b>   | <ul style="list-style-type: none"> <li>▶ Avoid strong acids, bases.</li> <li>▶ Avoid reaction with oxidising agents</li> </ul>  |
| <b>Hazard categories in accordance with Regulation (EC) No 2012/18/EU (Seveso III)</b>                             | Not Available   |
| <b>Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of</b> | Not Available   |

### 7.3. Specific end use(s)

See section 1.2

## SECTION 8 Exposure controls / personal protection

### 8.1. Control parameters

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| Ingredient | DNELs<br>Exposure Pattern Worker  | PNECs<br>Compartment |
|------------|---|----------------------|
| gypsum     | Inhalation 21.17 mg/m <sup>3</sup> (Systemic, Chronic)<br>Inhalation 5 082 mg/m <sup>3</sup> (Systemic, Acute)<br><i>Inhalation 5.29 mg/m<sup>3</sup> (Systemic, Chronic) *</i><br><i>Oral 1.52 mg/kg bw/day (Systemic, Chronic) *</i><br><i>Inhalation 3 811 mg/m<sup>3</sup> (Systemic, Acute) *</i><br><i>Oral 11.4 mg/kg bw/day (Systemic, Acute) *</i> | 100 mg/L (STP)       |

\* Values for General Population

## Occupational Exposure Limits (OEL)

## INGREDIENT DATA

| Source                               | Ingredient | Material name           | TWA                  | STEL          | Peak          | Notes         |
|--------------------------------------|------------|-------------------------|----------------------|---------------|---------------|---------------|
| UK Workplace Exposure Limits (WELs). | gypsum     | Gypsum: inhalable dust  | 10 mg/m <sup>3</sup> | Not Available | Not Available | Not Available |
| UK Workplace Exposure Limits (WELs). | gypsum     | Gypsum: respirable      | 4 mg/m <sup>3</sup>  | Not Available | Not Available | Not Available |
| UK Workplace Exposure Limits (WELs). | starch     | Starch: total inhalable | 10 mg/m <sup>3</sup> | Not Available | Not Available | Not Available |
| UK Workplace Exposure Limits (WELs). | starch     | Starch: respirable      | 4 mg/m <sup>3</sup>  | Not Available | Not Available | Not Available |

## Emergency Limits

| Ingredient | TEEL-1               | TEEL-2                | TEEL-3                  |
|------------|----------------------|-----------------------|-------------------------|
| starch     | 30 mg/m <sup>3</sup> | 330 mg/m <sup>3</sup> | 2,000 mg/m <sup>3</sup> |

| Ingredient | Original IDLH | Revised IDLH  |
|------------|---------------|---------------|
| gypsum     | Not Available | Not Available |
| starch     | Not Available | Not Available |


## MATERIAL DATA

## 8.2. Exposure controls

| 8.2.1. Appropriate engineering controls   | Articles or manufactured items, in their original condition, generally don't require engineering controls during handling or in normal use.<br>Exceptions may arise following extensive use and subsequent wear, during recycling or disposal operations where substances, found in the article, may be released to the environment.<br>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.<br>The basic types of engineering controls are:<br>Process controls which involve changing the way a job activity or process is done to reduce the risk.<br>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.<br><br>Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.<br>An approved self contained breathing apparatus (SCBA) may be required in some situations.<br>Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant. |                        |                        |  |                                 |   |                            |  |                            |  |                              |
|---|---|------------------------|------------------------|--|---------------------------------|---|----------------------------|--|----------------------------|--|------------------------------|
|   | <table border="1"> <thead> <tr> <th>Type of Contaminant:</th> <th>Air Speed:</th> </tr> </thead> <tbody> <tr> <td>solvent, vapours, degreasing etc., evaporating from tank (in still air).</td> <td>0.25-0.5 m/s (50-100 f/min.)</td> </tr> <tr> <td>aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)</td> <td>0.5-1 m/s (100-200 f/min.)</td> </tr> <tr> <td>direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)</td> <td>1-2.5 m/s (200-500 f/min.)</td> </tr> <tr> <td>grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).</td> <td>2.5-10 m/s (500-2000 f/min.)</td> </tr> </tbody> </table>   | Type of Contaminant:   | Air Speed:             | solvent, vapours, degreasing etc., evaporating from tank (in still air). | 0.25-0.5 m/s (50-100 f/min.)    | aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s (100-200 f/min.) | direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1-2.5 m/s (200-500 f/min.) | grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion). | 2.5-10 m/s (500-2000 f/min.) |
| Type of Contaminant:  | Air Speed:  |                        |                        |  |                                 |   |                            |  |                            |  |                              |
| solvent, vapours, degreasing etc., evaporating from tank (in still air).  | 0.25-0.5 m/s (50-100 f/min.)  |                        |                        |  |                                 |   |                            |  |                            |  |                              |
| aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s (100-200 f/min.)  |                        |                        |  |                                 |   |                            |  |                            |  |                              |
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)  | 1-2.5 m/s (200-500 f/min.)  |                        |                        |  |                                 |   |                            |  |                            |  |                              |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).  | 2.5-10 m/s (500-2000 f/min.)  |                        |                        |  |                                 |   |                            |  |                            |  |                              |
|   | <p>Within each range the appropriate value depends on:</p> <table border="1"> <thead> <tr> <th>Lower end of the range</th> <th>Upper end of the range</th> </tr> </thead> <tbody> <tr> <td>1: Room air currents minimal or favourable to capture</td> <td>1: Disturbing room air currents</td> </tr> </tbody> </table>  | Lower end of the range | Upper end of the range | 1: Room air currents minimal or favourable to capture                    | 1: Disturbing room air currents |   |                            |  |                            |  |                              |
| Lower end of the range  | Upper end of the range  |                        |                        |  |                                 |   |                            |  |                            |  |                              |
| 1: Room air currents minimal or favourable to capture   | 1: Disturbing room air currents   |                        |                        |  |                                 |   |                            |  |                            |  |                              |

Continued...

## Moisture Panel

|   |   |                                  |
|---|---|----------------------------------|
|   | 2: Contaminants of low toxicity or of nuisance value only.  | 2: Contaminants of high toxicity |
|   | 3: Intermittent, low production.  | 3: High production, heavy use    |
|   | 4: Large hood or large air mass in motion   | 4: Small hood-local control only |
|   | Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.   |                                  |
| <b>8.2.2. Individual protection measures, such as personal protective equipment</b> |    |                                  |
| <b>Eye and face protection</b>  | <ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].</li> </ul> <p>Eye protection not normally required due to the physical form of the product.</p> |                                  |
| <b>Skin protection</b>  | See Hand protection below   |                                  |
| <b>Hands/feet protection</b>  | <ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.</li> <li>▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.</li> </ul>  |                                  |
| <b>Body protection</b>  | See Other protection below  |                                  |
| <b>Other protection</b>   | <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ P.V.C apron.</li> <li>▶ Barrier cream.</li> <li>▶ Skin cleansing cream.</li> <li>▶ Eye wash unit.</li> </ul>  |                                  |

## Ansell Glove Selection

| Glove — In order of recommendation |
|------------------------------------|
| AlphaTec® 15-554                   |
| AlphaTec® Solvex® 37-185           |
| AlphaTec® 38-612                   |
| AlphaTec® 58-008                   |
| AlphaTec® 58-530B                  |
| AlphaTec® 58-530W                  |
| AlphaTec® 58-735                   |
| AlphaTec® 79-700                   |
| AlphaTec® Solvex® 37-675           |
| DermaShield™ 73-711                |

The suggested gloves for use should be confirmed with the glove supplier.

## Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator  |
|------------------------------------|----------------------|----------------------|-------------------------|
| up to 10 x ES                      | A-AUS P2             | -                    | A-PAPR-AUS / Class 1 P2 |
| up to 50 x ES                      | -                    | A-AUS / Class 1 P2   | -                       |
| up to 100 x ES                     | -                    | A-2 P2               | A-PAPR-2 P2 ^           |

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Respiratory protection not normally required due to the physical form of the product.

Class P2 particulate filters are used for protection against mechanically and thermally generated particulates or both.

P2 is a respiratory filter rating under various international standards, Filters at least 94% of airborne particles

Suitable for:

## Moisture Panel

- Relatively small particles generated by mechanical processes eg. grinding, cutting, sanding, drilling, sawing.
- Sub-micron thermally generated particles e.g. welding fumes, fertilizer and bushfire smoke.
- Biologically active airborne particles under specified infection control applications e.g. viruses, bacteria, COVID-19, SARS

**8.2.3. Environmental exposure controls**

See section 12

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

|   |  |  |                |
|---|--|--|----------------|
| <b>Appearance</b>                                   | A moisture resistant plasterboard with a green paper face. |  |                |
| <b>Physical state</b>                               | Manufactured   | <b>Relative density (Water = 1)</b>            | Not Available  |
| <b>Odour</b>  | Not Available  | <b>Partition coefficient n-octanol / water</b> | Not Available  |
| <b>Odour threshold</b>                              | Not Available  | <b>Auto-ignition temperature (°C)</b>          | Not Applicable |
| <b>pH (as supplied)</b>                             | Not Applicable   | <b>Decomposition temperature (°C)</b>          | Not Available  |
| <b>Melting point / freezing point (°C)</b>          | Not Available  | <b>Viscosity (cSt)</b>                         | Not Applicable |
| <b>Initial boiling point and boiling range (°C)</b> | Not Available  | <b>Molecular weight (g/mol)</b>                | Not Applicable |
| <b>Flash point (°C)</b>                             | Not Applicable   | <b>Taste</b>                                   | Not Available  |
| <b>Evaporation rate</b>                             | Not Available  | <b>Explosive properties</b>                    | Not Available  |
| <b>Flammability</b>                                 | Not Applicable   | <b>Oxidising properties</b>                    | Not Available  |
| <b>Upper Explosive Limit (%)</b>                    | Not Applicable   | <b>Surface Tension (dyn/cm or mN/m)</b>        | Not Applicable |
| <b>Lower Explosive Limit (%)</b>                    | Not Applicable   | <b>Volatile Component (%vol)</b>               | Not Available  |
| <b>Vapour pressure (kPa)</b>                        | Not Applicable   | <b>Gas group</b>                               | Not Available  |
| <b>Solubility in water</b>                          | Not Available  | <b>pH as a solution (1%)</b>                   | Not Available  |
| <b>Vapour density (Air = 1)</b>                     | Not Available  | <b>VOC g/L</b>                                 | Not Available  |
| <b>Nanoform Solubility</b>                          | Not Available  | <b>Nanoform Particle Characteristics</b>       | Not Available  |
| <b>Particle Size</b>                                | Not Available  |  |                |

**9.2. Other information**

Not Available

**SECTION 10 Stability and reactivity**

|   |   |
|---|---|
| <b>10.1.Reactivity</b>                          | See section 7.2   |
| <b>10.2. Chemical stability</b>                 | Product is considered stable and hazardous polymerisation will not occur. |
| <b>10.3. Possibility of hazardous reactions</b> | See section 7.2   |
| <b>10.4. Conditions to avoid</b>                | See section 7.2   |
| <b>10.5. Incompatible materials</b>             | See section 7.2   |
| <b>10.6. Hazardous decomposition products</b>   | See section 5.3   |

**SECTION 11 Toxicological information****11.1. Information on toxicological effects**

|                |   |
|----------------|---|
| <b>Inhaled</b> | Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of |
|----------------|---|

Continued...

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|                     |  |
|---------------------|--|
|                     | gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.  |
| <b>Ingestion</b>    | <p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Sulfate salts are poorly absorbed from the gastro-intestinal tract but because of osmotic activity are able to draw water from the lumen to produce diarrhoea (purging). Sulfate ion usually has little toxicological potential.</p>   |
| <b>Skin Contact</b> | <p>Four students received severe hand burns whilst making moulds of their hands with dental plaster substituted for Plaster of Paris. The dental plaster known as "Stone" was a special form of calcium sulfate hemihydrate containing alpha-hemihydrate crystals that provide high compression strength to the moulds. Beta-hemihydrate (normal Plaster of Paris) does not cause skin burns in similar circumstances.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Solution of material in moisture on the skin, or perspiration, may increase irritant effects</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>   |
| <b>Eye</b>          | <p>Limited evidence or practical experience suggests, that the material may cause severe eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Eye contact may cause significant inflammation with pain. Corneal injury may occur; permanent impairment of vision may result unless treatment is prompt and adequate.</p> <p>Repeated or prolonged exposure may cause severe inflammation (similar to windburn) characterised by a temporary redness of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.</p>   |
| <b>Chronic</b>      | <p>► Hazard relates to dust released by sawing, cutting, sanding, trimming or other finishing operations.</p> <p>Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.</p> <p>Limited evidence shows that inhalation of the material is capable of inducing a sensitisation reaction in a significant number of individuals at a greater frequency than would be expected from the response of a normal population.</p> <p>Pulmonary sensitisation, resulting in hyperactive airway dysfunction and pulmonary allergy may be accompanied by fatigue, malaise and aching. Significant symptoms of exposure may persist for extended periods, even after exposure ceases. Symptoms can be activated by a variety of nonspecific environmental stimuli such as automobile exhaust, perfumes and passive smoking.</p> <p>There exists limited evidence that shows that skin contact with the material is capable either of inducing a sensitisation reaction in a significant number of individuals, and/or of producing positive response in experimental animals.</p> <p>Chronic boric acid poisoning is characterized by mild gastrointestinal irritation, loss of appetite, disturbed digestion, nausea, possibly vomiting and a hard blotchy rash. Dryness of skin, reddening of tongue, loss of hair, conjunctivitis, and kidney injury have also been reported.</p> <p>[Occupational Diseases]</p> <p>Long term exposure to boric acid may be of more concern, causes kidney damage and eventually kidney failure. Although it does not appear to be carcinogenic, studies in dogs have reported testicular atrophy after exposure to 32 mg/kg bw/day for 90 days. This level is far lower than the LD50.</p> <p>Boric acid in high doses shows significant developmental toxicity and teratogenicity in rabbit, rat, and mouse foetuses as well as cardiovascular defects, skeletal variations, mild kidney lesions.</p> <p>The mechanism of action by which boric acid causes testicular toxicity has been investigated and it has been proposed that decreased testosterone production arises via a CNS mediated mechanism. It is not likely that hormone changes can explain the testicular atrophy observed at high dose levels since it has been shown that spermatogenesis can be maintained in the presence of significantly decreased intra-testicular testosterone levels. The fact that testicular damage was reversible and less extensive in younger sexually immature males than in mature animals also argues against an endocrine disruptor mechanism because younger animals still in development may be expected to be more sensitive to anti-androgenic effects than adults.</p> <p>Inhibition of spermiation has been investigated and the involvement of Sertoli cells is suggested, as effects on these cells can lead to testicular atrophy. The changes in serum hormone levels may reflect an indirect effect on the CNS mediated by paracrine and/or autocrine influences.</p> <p>Chronic poisoning by borates may be characterised gastrointestinal disturbances and skin rash. Chronic absorption of small amounts of borax causes mild gastroenteritis and dermatitis.</p> <p>Chronic feeding studies involving borate administration to rats and dogs leads to accumulation in the testes, germ cell depletion and testicular atrophy. Hair loss in a young woman was traced to chronic ingestion of boric acid-containing mouthwashes whilst hair loss, dermatitis, gastric ulcer and hypoplastic anaemia in an adult male was attributed to the consumption of an uncharacterised "boric tartrate" for 20 years (symptoms disappeared following withdrawal). Repeated ingestion or inhalation of sub-acute doses of boric acid produces gastrointestinal irritation and disturbance, loss of appetite, disturbed digestion, nausea and vomiting, erythematous rash which may become hard and purpuric, dryness of the skin and mucous membranes, reddening of the tongue, cracking of the lips, conjunctivitis, palpebral oedema and kidney injury. Workers exposed to dust levels containing in excess of 31 mg/m<sup>3</sup> boric acid, showed atrophic and subatrophic changes of the respiratory mucous membranes. Prolonged ingestion by animals produces a variety of reproductive effects including changes to the ovaries, fallopian tubes, the testes, epididymis and sperm ducts.</p> <p>Inorganic borates convert to boric acid at physiological pH in the aqueous layer overlying the mucosal surfaces prior to absorption. Boric acid is known to be readily taken up from the gastrointestinal tract in rats and humans, as demonstrated by experimental evidence in both human and animal studies, where more than 90% of the administered dose of borate was excreted as boric acid</p> <p>Boric acid is not metabolized in either animals or humans, owing to the high energy level required (523 kJ/mol) to break the B-O bond. Because of the high pKa, regardless of the form of inorganic borate ingested (e.g., boric acid, disodium tetraborate decahydrate or boron associated with animal or plant tissues), uptake is almost exclusively (&gt;98%) as undissociated boric acid. Levels above 10 ug/m<sup>3</sup> of suspended inorganic sulfates in the air may cause an excess risk of asthmatic attacks in susceptible persons</p> |

|                       |                 |                   |
|-----------------------|-----------------|-------------------|
| <b>Moisture Panel</b> | <b>TOXICITY</b> | <b>IRRITATION</b> |
|                       | Not Available   | Not Available     |
| <b>gypsum</b>         | <b>TOXICITY</b> | <b>IRRITATION</b> |

## Moisture Panel

|                |   |                                |
|----------------|---|--------------------------------|
|                | Inhalation (Rat) LC50: >3.26 mg/4h <sup>[1]</sup>   | Not Available                  |
|                | Oral (Rat) LD50: >1581 mg/kg <sup>[1]</sup>   |                                |
| starch         | <b>TOXICITY</b>   | <b>IRRITATION</b>              |
|                | Not Available   | Skin (human): 0.3 mg/3d-I mild |
| <b>Legend:</b> | 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances |                                |

|               |  |
|---------------|--|
| <b>GYPSUM</b> | <p>Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.</p> <p>No significant acute toxicological data identified in literature search.</p> <p>Gypsum (calcium sulfate dihydrate) is a skin, eye, mucous membrane, and respiratory system irritant. Early studies of gypsum miners did not relate pneumoconiosis with chronic exposure to gypsum. Other studies in humans (as well as animals) showed no lung fibrosis produced by natural dusts of calcium sulfate except in the presence of silica. However, a series of studies reported chronic nonspecific respiratory diseases in gypsum industry workers in Gacki, Poland.</p> <p>Unlike other fibers, gypsum is very soluble in the body; its half-life in the lungs has been estimated as minutes. In four healthy men receiving calcium supplementation with calcium sulfate (CaSO<sub>4</sub>·1/2H<sub>2</sub>O) (200 or 220 mg) for 22 days, an average absorption of 28.3% was reported.</p> <p>Several feeding studies in pigs on the bioavailability of calcium in calcium supplements, including gypsum, have been conducted. The bioavailability of calcium in gypsum was similar to that for calcitic limestone, oyster shell flour, marble dust, and aragonite, ranging from 85 to 102%. In mice, the i.p. and intragastric LD50 values were 6200 and 4704 mg/kg, respectively, for phosphogypsum (98% CaSO<sub>4</sub>·H<sub>2</sub>O). For Plaster of Paris, the values were 4415 and 5824, respectively. In rats, an intragastric LD50 of 9934 mg/kg was reported for phosphogypsum</p> <p><b>Repeat dose toxicity:</b> In a study of 241 underground male workers employed in four gypsum mines in Nottinghamshire and Sussex for a year (November 1976-December 1977), results of chest X-rays, lung function tests, and respiratory systems suggested an association of the observed lung shadows with the higher quartz content in dust rather than to gypsum; the small round opacities in the lungs were characteristic of silica exposure.</p> <p>Prophylactic examinations of workers in a gypsum extraction and production plant (dust concentration exceeded TLV 2.5- to 10-fold) reported no risk of pneumoconiosis due to gypsum exposure, while another study of gypsum manufacturing plant workers reported that chronic occupational exposure to gypsum dust had resulted in pulmonary ventilatory defect of the restrictive form. Three cases of idiopathic interstitial pneumonia with multiple bullae throughout the lungs were seen in Japanese schoolteachers (lifetime occupation) exposed to chalk; 2/3 of the chalk was made from gypsum and small amounts of silica and other minerals. In rats exposed to an aerosol of anhydrous calcium sulfate fibers (15 mg/m<sup>3</sup>) or a combination of milled and fibrous calcium sulfate (60 mg/m<sup>3</sup>) six hours per day, five days per week for three weeks, gypsum dust was quickly cleared from the lungs of via dissolution and mechanisms of particle clearance.</p> <p>In guinea pigs given intraperitoneal (i.p.) injections of gypsum (doses not provided), gypsum was absorbed followed by the dissolution of gypsum in surrounding tissues. In another study, after i.p. injection of gypsum (2 cm<sup>3</sup> of a 5 or 10% suspension in saline) into guinea pigs, which were sacrificed at intervals up to 180 days, most of the dust was found distributed in the peritoneum of the anterior abdominal wall. Gypsum dust produced irregular and clustered nodules, which decreased in size over time.</p> <p>Direct administration of WTC PM2.5 [mostly composed of calcium-based compounds, including calcium sulfate (gypsum) and calcium carbonate (calcite)] (10, 32, or 100 µg) into the airways of mice produced mild to moderate lung inflammation and airway hyperresponsiveness at the high dose. [It was noted that WTC PM2.5 is composed of many chemical species and that their interactions may be related with development of airway hyperresponsiveness.] In female SPF Wistar rats intratracheally (i.t.) instilled with anhydrite dust (35 mg) and sacrificed three months later, an increase in total lipid or hydroxyproline content in the lungs was not observed compared to controls.</p> <p>In inhalation (nose-only) experiments in which male F344 rats were exposed to calcium sulfate fiber aerosols (100 mg/m<sup>3</sup>) for six hours per day, five days per week for three weeks, there were no effects on the number of macrophages per alveolus, bronchoalveolar lavage fluid (BALF) protein concentration, or BALF g-glutamyl transpeptidase activity (g-GT). Following three weeks of recovery, nonprotein thiol levels (NPSH), mainly glutathione, were increased in animals. In follow-up experiments, rats were exposed to an aerosol of anhydrous calcium sulfate fibers (15 mg/m<sup>3</sup>) or a combination of milled and fibrous calcium sulfate (60 mg/m<sup>3</sup>) for the same duration. Calcium levels in the lungs were similar to those of controls; however, gypsum fibers were detected in the lungs of treated animals. Significant increases in NSPH levels in BALF were observed in rats killed immediately after exposure at both doses and in recovery group animals at the higher dose. At 15 mg/m<sup>3</sup>, almost all NPSH was lost in macrophages from all treated animals (including those in recovery), but a significant decrease in extracellular g-GT activity was seen only in recovery group animals. Overall, the findings were "considered to be non-pathological local effects due to physical factors related to the shape of the gypsum fibers and not to calcium sulphate per se."</p> <p>Intratracheal administration of man-made calcium sulfate fiber (2.0 mg) once per week for five weeks resulted in no deaths or significant body weight changes in female Syrian hamsters compared to controls.</p> <p>Inflammation (specifically, chronic alveolitis with macrophage and neutrophil aggregation) was observed in the lung. In guinea pigs, inhalation of calcined gypsum dust (1.6 x 10<sup>4</sup> particles/mL) for 44 hours per week in 5.5 days for two years, followed with or without a recovery period of up to 22 months, produced only minor effects in the lungs. There were 12 of 21 deaths over the entire experimental period. These were due to pneumonia or other pulmonary lesions; however, no significant gross signs of pulmonary disease or nodular or diffuse pneumoconiosis became significant. Beginning near 11 months, pigmentation and atelectasis were seen. During the recovery period, four of ten guinea pigs died; two died of pneumonia.</p> |
|---------------|--|

## Moisture Panel

|               |  |
|---------------|--|
|               | <p>Pigmentation continued in most animals but not atelectasis. Low-grade chronic inflammation, occurring in the first two months, also disappeared.</p> <p>Mercury emissions controls on coal-fired power plants have increased the likelihood of the presence of mercury in synthetic gypsum formed in wet flue gas desulfurisation (FGD) systems and the finished wallboard produced from the FGD gypsum. In a study at a commercial wallboard plant, the raw FGD gypsum, the product stucco (beta form of CaSO<sub>4</sub>·1/2H<sub>2</sub>O), and the finished dry wallboard each contained about 1 ug Hg/g dry weight. Total mercury loss from the original FGD gypsum content was about 0.045 g Hg/ton dry gypsum processed</p> <p><b>Synergistic/Antagonistic Effects:</b> In rats, i.t. administration of anhydrite (5-35 mg) successively and simultaneously with quartz reduced the toxic effect of quartz in lung tissue. This protective effect on quartz toxicity was also seen in guinea pigs; calcined gypsum dust prevented or hindered the development of fibrosis. Natural anhydrite, however, increased the fibrogenic effect of cadmium sulfide in rats. Additionally, calcined gypsum dust had a stimulatory effect on experimental tuberculosis in guinea pigs.</p> <p><b>Cytotoxicity:</b> In Syrian hamster embryo cells, gypsum (up to 10 ug/cm<sup>2</sup>) did not induce apoptosis. Negative results were also found in mouse peritoneal macrophages (tested at 150 ug/mL gypsum dust) and in Chinese hamster lung V79-4 cells (tested up to 100 ug/mL).</p> <p><b>Carcinogenicity:</b> In female Sprague-Dawley rats, i.p. injection of natural anhydrite dusts from German coal mines (doses not provided) induced granulomas; whether gypsum was the causal factor was not established. In Wistar rats, four i.p. injections of gypsum (25 mg each) induced abdominal cavity tumours, mostly sarcomatous mesothelioma, in 5% of animals; first tumour was seen at 546 days. In a subsequent experiment using the same procedure, female Wistar rats exhibited the first tumour at 579 days after the last injection. Mean survival of the tumour-bearing rats (5.7% of test group) was 583 days, while mean survival of the test group was 587 days. Tumour types seen were a sarcoma having cellular polymorphism, a carcinoma, and a reticulosarcoma.</p> <p>Intratracheal administration of man-made calcium sulfate fiber (2.0 mg) once per week for five weeks produced tumours in three of 20 female Syrian hamsters observed two years later. An anaplastic carcinoma was found in the heart, and one dark cell carcinoma was seen in the kidney. Two tumours of unspecified types were observed in the rib.</p> <p>In guinea pigs, inhalation of gypsum (doses not provided) for 24 months produced no lung tumours.</p> <p>In rats, i.t. administration of gypsum (doses not provided in abstract) from FGD for up to 18 months produced no arterial blood gas changes or indications of secondary heart damage as compared to controls.</p> <p>In another study, a single i.t. dose (25 mg) of flue gas gypsum dust did not produce a pathological reaction when observed for up to 18 months. There were also no signs of developing granuloma of fibrosis of the lungs. Lead quickly accumulated in the femur after injection but was eliminated during the observation period. In the Ames test, the flue gas gypsum dust was negative.</p> <p><b>Genotoxicity:</b> Calcium sulfate (up to 2.5%) was negative in Salmonella typhimurium strains TA1535, TA1537, and TA1538 and in Saccharomyces cerevisiae strain D4 with and without metabolic activation.</p> <p><b>Developmental toxicity:</b> In pregnant mice, rats, and rabbits, daily oral administration of calcium sulfate (16-1600 mg/kg bw) beginning on gestation day 6 up to 18 produced no effects on maternal body weights, maternal or foetal survival, or nidation (embryo implantation); developmental effects were also not seen.</p> |
| <b>STARCH</b> | <p>The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.</p>  |

|  |   |                                 |   |
|--|---|---------------------------------|---|
| <b>Acute Toxicity</b>                    | ✗ | <b>Carcinogenicity</b>          | ✗ |
| <b>Skin Irritation/Corrosion</b>         | ✗ | <b>Reproductivity</b>           | ✗ |
| <b>Serious Eye Damage/Irritation</b>     | ✗ | <b>STOT - Single Exposure</b>   | ✗ |
| <b>Respiratory or Skin sensitisation</b> | ✗ | <b>STOT - Repeated Exposure</b> | ✗ |
| <b>Mutagenicity</b>                      | ✗ | <b>Aspiration Hazard</b>        | ✗ |

**Legend:** ✗ – Data either not available or does not fill the criteria for classification  
 ✓ – Data available to make classification

## 11.2 Information on other hazards

### 11.2.1. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

### 11.2.2. Other information

See Section 11.1

## SECTION 12 Ecological information

### 12.1. Toxicity

| Moisture Panel | Endpoint      | Test Duration (hr) | Species                       | Value         | Source        |
|----------------|---------------|--------------------|-------------------------------|---------------|---------------|
|                | Not Available | Not Available      | Not Available                 | Not Available | Not Available |
| gypsum         | Endpoint      | Test Duration (hr) | Species                       | Value         | Source        |
|                | NOEC(ECx)     | 0.25h              | Fish                          | 75mg/l        | 4             |
|                | EC50          | 72h                | Algae or other aquatic plants | >79mg/l       | 2             |
|                | EC50          | 96h                | Algae or other aquatic plants | 3200mg/L      | 4             |
|                | LC50          | 96h                | Fish                          | >79mg/l       | 2             |

Continued...

## Moisture Panel

| starch         | Endpoint   | Test Duration (hr) | Species       | Value         | Source        |
|----------------|--|--------------------|---------------|---------------|---------------|
|                | Not Available  | Not Available      | Not Available | Not Available | Not Available |
| <b>Legend:</b> | Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data |                    |               |               |               |

for inorganic sulfates:

**Environmental fate:**

Data from tap water studies with human volunteers indicate that sulfates produce a laxative effect at concentrations of 1000 - 1200 mg/litre, but no increase in diarrhoea, dehydration or weight loss. The presence of sulfate in drinking-water can also result in a noticeable taste; the lowest taste threshold concentration for sulfate is approximately 250 mg/litre as the sodium salt. Sulfate may also contribute to the corrosion of distribution systems. No health-based guideline value for sulfate in drinking water is proposed. However, there is an increasing likelihood of complaints arising from a noticeable taste as concentrations in water increase above 500 mg/litre.

Sulfates are removed from the air by both dry and wet deposition processes. Wet deposition processes including rain-out (a process that occurs within the clouds) and washout (removal by precipitation below the clouds) contribute to the removal of sulfate from the atmosphere.

In soil, the inorganic sulfates can adsorb to soil particles or leach into surface water and groundwater. Sulfates can be taken up by plants and be incorporated into the parenchyma of the plant.

Sulfate in water can also be reduced by sulfate bacteria (*Thiobacilli*) which use them as a source of energy.

In anaerobic environments sulfate is biologically reduced to (hydrogen) sulfide by sulfate reducing bacteria, or incorporated into living organisms as source of sulfur, and thereby included in the sulfur cycle. Sodium sulfate is not reactive in aqueous solution at room temperature. Sodium sulfate will completely dissolve, ionise and distribute across the entire planetary "aquasphere". Some sulfates may eventually be deposited, the majority of sulfates participate in the sulfur cycle in which natural and industrial sodium sulfate are not distinguishable

The BCF of sodium sulfate is very low and therefore significant bioconcentration is not expected. Sodium and sulfate ions are essential to all living organisms and their intracellular and extracellular concentrations are actively regulated. However some plants (e.g. corn and *Kochia Scoparia*), are capable of accumulating sulfate to concentrations that are potentially toxic to ruminants.

**Ecotoxicity:**

For sulfate in general:

Fish LC50: toxic from 7000 mg/l

Bacteria: toxic from 2500 mg/l

Algae were shown to be the most sensitive to sodium sulfate; EC50 120 h = 1,900 mg/l. For invertebrates (*Daphnia magna*) the EC50 48 h = 4,580 mg/l and fish appeared to be the least sensitive with a LC50 96h = 7,960 mg/l for *Pimephales promelas*. Activated sludge showed a very low sensitivity to sodium sulfate. There was no effect up to 8 g/l. Sodium sulfate is not very toxic to terrestrial plants. *Picea banksiana* was the most sensitive species, an effect was seen at 1.4 g/l.

Sediment dwelling organisms were not very sensitive either, with an LC50 96h = 660 mg/l for *Trycorythus sp.* Overall it can be concluded that sodium sulfate has no acute adverse effect on aquatic and sediment dwelling organisms. Toxicity to terrestrial plants is also low.

No data were found for long term toxicity. The acute studies all show a toxicity of sodium sulfate higher than 100 mg/l, no bioaccumulation is expected,

**DO NOT discharge into sewer or waterways.**

**12.2. Persistence and degradability**

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|------------|-------------------------|------------------|
| gypsum     | HIGH                    | HIGH             |

**12.3. Bioaccumulative potential**

| Ingredient | Bioaccumulation        |
|------------|------------------------|
| gypsum     | LOW (LogKOW = -2.2002) |

**12.4. Mobility in soil**

| Ingredient | Mobility              |
|------------|-----------------------|
| gypsum     | LOW (Log KOC = 6.124) |

**12.5. Results of PBT and vPvB assessment**

|                         | P             | B             | T             |
|-------------------------|---------------|---------------|---------------|
| Relevant available data | Not Available | Not Available | Not Available |
| PBT                     | ✗             | ✗             | ✗             |
| vPvB                    | ✗             | ✗             | ✗             |

|                         |    |
|-------------------------|----|
| PBT Criteria fulfilled? | No |
| vPvB                    | No |

**12.6. Endocrine disrupting properties**

No evidence of endocrine disrupting properties were found in the current literature.

**12.7. Other adverse effects**

Continued...

## Moisture Panel

No evidence of ozone depleting properties were found in the current literature.

## SECTION 13 Disposal considerations

### 13.1. Waste treatment methods

|                                     |  |
|-------------------------------------|--|
| <b>Product / Packaging disposal</b> | <ul style="list-style-type: none"> <li>▶ Recycle wherever possible or consult manufacturer for recycling options.</li> <li>▶ Consult State Land Waste Management Authority for disposal.</li> <li>▶ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>▶ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▶ Where in doubt contact the responsible authority.</li> <li>▶ Recycle wherever possible or consult manufacturer for recycling options.</li> <li>▶ Consult State Land Waste Authority for disposal.</li> <li>▶ Bury or incinerate residue at an approved site.</li> <li>▶ Recycle containers if possible, or dispose of in an authorised landfill.</li> </ul> |
| <b>Waste treatment options</b>      | Not Available  |
| <b>Sewage disposal options</b>      | Not Available  |

## SECTION 14 Transport information

### Labels Required

|                         |    |
|-------------------------|----|
| <b>Marine Pollutant</b> | NO |
|-------------------------|----|

### Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

|   |                                |                |
|---|--------------------------------|----------------|
| <b>14.1. UN number or ID number</b>       | Not Applicable                 |                |
| <b>14.2. UN proper shipping name</b>      | Not Applicable                 |                |
| <b>14.3. Transport hazard class(es)</b>   | Class                          | Not Applicable |
|   | Subsidiary Hazard              | Not Applicable |
| <b>14.4. Packing group</b>                | Not Applicable                 |                |
| <b>14.5. Environmental hazard</b>         | Not Applicable                 |                |
| <b>14.6. Special precautions for user</b> | Hazard identification (Kemler) | Not Applicable |
|   | Classification code            | Not Applicable |
|   | Hazard Label                   | Not Applicable |
|   | Special provisions             | Not Applicable |
|   | Limited quantity               | Not Applicable |
|   | Tunnel Restriction Code        | Not Applicable |

### Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

|   |   |                |
|---|---|----------------|
| <b>14.1. UN number</b>                    | Not Applicable  |                |
| <b>14.2. UN proper shipping name</b>      | Not Applicable  |                |
| <b>14.3. Transport hazard class(es)</b>   | ICAO/IATA Class   | Not Applicable |
|   | ICAO / IATA Subsidiary Hazard                             | Not Applicable |
|   | ERG Code  | Not Applicable |
| <b>14.4. Packing group</b>                | Not Applicable  |                |
| <b>14.5. Environmental hazard</b>         | Not Applicable  |                |
| <b>14.6. Special precautions for user</b> | Special provisions  | Not Applicable |
|   | Cargo Only Packing Instructions                           | Not Applicable |
|   | Cargo Only Maximum Qty / Pack                             | Not Applicable |
|   | Passenger and Cargo Packing Instructions                  | Not Applicable |
|   | Passenger and Cargo Maximum Qty / Pack                    | Not Applicable |
|   | Passenger and Cargo Limited Quantity Packing Instructions | Not Applicable |

Continued...

## Moisture Panel

Passenger and Cargo Limited Maximum Qty / Pack

Not Applicable

**Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

|                                    |                        |                |
|------------------------------------|------------------------|----------------|
| 14.1. UN number                    | Not Applicable         |                |
| 14.2. UN proper shipping name      | Not Applicable         |                |
| 14.3. Transport hazard class(es)   | IMDG Class             | Not Applicable |
|                                    | IMDG Subsidiary Hazard | Not Applicable |
| 14.4. Packing group                | Not Applicable         |                |
| 14.5. Environmental hazard         | Not Applicable         |                |
| 14.6. Special precautions for user | EMS Number             | Not Applicable |
|                                    | Special provisions     | Not Applicable |
|                                    | Limited Quantities     | Not Applicable |

**Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

|                                    |                     |                |
|------------------------------------|---------------------|----------------|
| 14.1. UN number                    | Not Applicable      |                |
| 14.2. UN proper shipping name      | Not Applicable      |                |
| 14.3. Transport hazard class(es)   | Not Applicable      | Not Applicable |
|                                    |                     |                |
| 14.4. Packing group                | Not Applicable      |                |
| 14.5. Environmental hazard         | Not Applicable      |                |
| 14.6. Special precautions for user | Classification code | Not Applicable |
|                                    | Special provisions  | Not Applicable |
|                                    | Limited quantity    | Not Applicable |
|                                    | Equipment required  | Not Applicable |
|                                    | Fire cones number   | Not Applicable |

**14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code**

Not Applicable

**14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code**

| Product name | Group         |
|--------------|---------------|
| gypsum       | Not Available |
| starch       | Not Available |

**14.7.3. Transport in bulk in accordance with the IGC Code**

| Product name | Ship Type     |
|--------------|---------------|
| gypsum       | Not Available |
| starch       | Not Available |

**SECTION 15 Regulatory information****15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture**

gypsum is found on the following regulatory lists

UK Workplace Exposure Limits (WELs).

starch is found on the following regulatory lists

UK Workplace Exposure Limits (WELs).

**Additional Regulatory Information**

Not Applicable

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

Continued...

## Moisture Panel

## Information according to 2012/18/EU (Seveso III):

|                 |               |
|-----------------|---------------|
| Seveso Category | Not Available |
|-----------------|---------------|

## 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## National Inventory Status

| National Inventory                              | Status  |
|---|---|
| Australia - AIIC / Australia Non-Industrial Use | Yes   |
| Canada - DSL                                    | Yes   |
| Canada - NDSL                                   | No (gypsum)   |
| China - IECSC                                   | Yes   |
| Europe - EINEC / ELINCS / NLP                   | Yes   |
| Japan - ENCS                                    | Yes   |
| Korea - KECI                                    | Yes   |
| New Zealand - NZIoC                             | Yes   |
| Philippines - PICCS                             | Yes   |
| USA - TSCA                                      | Yes   |
| Taiwan - TCSI                                   | Yes   |
| Mexico - INSQ                                   | Yes   |
| Vietnam - NCI                                   | Yes   |
| Russia - FBEPH                                  | Yes   |
| <b>Legend:</b>                                  | Yes = All CAS declared ingredients are on the inventory<br>No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration. |

## SECTION 16 Other information

|               |            |
|---------------|------------|
| Revision Date | 08/02/2024 |
| Initial Date  | 29/01/2024 |

## Full text Risk and Hazard codes

|      |                                   |
|------|-----------------------------------|
| H319 | Causes serious eye irritation.    |
| H335 | May cause respiratory irritation. |

## SDS Version Summary

| Version | Date of Update | Sections Updated   |
|---------|----------------|--|
| 3.1     | 08/02/2024     | Toxicological information - Acute Health (eye), Toxicological information - Acute Health (inhaled), Toxicological information - Chronic Health, Hazards identification - Classification, Firefighting measures - Fire Fighter (fire/explosion hazard), Firefighting measures - Fire Fighter (fire incompatibility), First Aid measures - First Aid (eye), Composition / information on ingredients - Ingredients |

## Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection

EN 340 Protective clothing

EN 374 Protective gloves against chemicals and micro-organisms

EN 13832 Footwear protecting against chemicals

EN 133 Respiratory protective devices

## Definitions and abbreviations

▸ PC - TWA: Permissible Concentration-Time Weighted Average

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## Moisture Panel

- PC - STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit,
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
  
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECl: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]**

| Classification according to regulation (EC) No 1272/2008 [CLP] and amendments | Classification Procedure |
|---|--------------------------|
| , EUH210  | Calculation method       |