



## Dunlop ArditRapidset Repair Mortar Ardex (Ardex Australia)

Chemwatch: 5437-80

Version No: 2.1.10.8

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

Chemwatch Hazard Alert Code: 3

Issue Date: 02/12/2020

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S.GHS.AUS.EN

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

#### Product Identifier

|                               |                                    |
|-------------------------------|------------------------------------|
| Product name                  | Dunlop ArditRapidset Repair Mortar |
| Chemical Name                 | Not Applicable                     |
| Synonyms                      | Not Available                      |
| Chemical formula              | Not Applicable                     |
| Other means of identification | Not Available                      |

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

|                          |  |
|--------------------------|--|
| Relevant identified uses | Rapid drying repair mortar for internal use. |
|--------------------------|--|

#### Details of the supplier of the safety data sheet

|                         |  |
|-------------------------|--|
| Registered company name | Ardex (Ardex Australia)  |
| Address                 | 20 Powers Road Seven Hills NSW 2147 Australia                      |
| Telephone               | 1800 224 070   |
| Fax                     | 1300 780 102   |
| Website                 | <a href="http://www.ardexaustralia.com">www.ardexaustralia.com</a> |
| Email                   | technicalservices@ardexaustralia.com                               |

#### Emergency telephone number

|                                   |                                 |
|-----------------------------------|---------------------------------|
| Association / Organisation        | Ardex (Ardex Australia)         |
| Emergency telephone numbers       | 1800 224 070 (Mon-Fri, 9am-5pm) |
| Other emergency telephone numbers | Not Available                   |

### SECTION 2 Hazards identification

#### Classification of the substance or mixture

**HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.**

#### ChemWatch Hazard Ratings

|              | Min | Max |              |
|--------------|-----|-----|--------------|
| Flammability | 1   | 1   |              |
| Toxicity     | 0   | 0   | 0 = Minimum  |
| Body Contact | 3   | 3   | 1 = Low      |
| Reactivity   | 1   | 1   | 2 = Moderate |
| Chronic      | 3   | 3   | 3 = High     |
|              |     |     | 4 = Extreme  |

|                    |  |
|--------------------|--|
| Poisons Schedule   | Not Applicable   |
| Classification [1] | Skin Sensitizer Category 1, Serious Eye Damage/Eye Irritation Category 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Skin Corrosion/Irritation Category 2 |
| Legend:            | 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI  |

#### Label elements

## Dunlop ArditRapidset Repair Mortar

|                     |  |
|---------------------|--|
| Hazard pictogram(s) |  |
|---------------------|--|

|             |        |
|-------------|--------|
| Signal word | Danger |
|-------------|--------|

## Hazard statement(s)

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

## Precautionary statement(s) Prevention

|      |  |
|------|--|
| P271 | Use only outdoors or in a well-ventilated area.                                  |
| P280 | Wear protective gloves, protective clothing, eye protection and face protection. |
| P261 | Avoid breathing dust/fumes.  |
| P264 | Wash all exposed external body areas thoroughly after handling.                  |

## Precautionary statement(s) Response

|                |  |
|----------------|--|
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310           | Immediately call a POISON CENTER/doctor/physician/first aider.   |
| P302+P352      | IF ON SKIN: Wash with plenty of water and soap.  |
| P333+P313      | If skin irritation or rash occurs: Get medical advice/attention.   |

## Precautionary statement(s) Storage

|           |  |
|-----------|--|
| P405      | Store locked up.   |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |

## Precautionary statement(s) Disposal

|      |  |
|------|--|
| P501 | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |
|------|--|

## SECTION 3 Composition / information on ingredients

## Substances

See section below for composition of Mixtures

## Mixtures

| CAS No        | %[weight] | Name                                       |
|---------------|-----------|--|
| 65997-16-2    | 30-60     | <u>calcium aluminate cement</u>            |
| 14808-60-7.   | 30-60     | <u>graded sand</u>                         |
| 7778-18-9     | 10-30     | <u>calcium sulfate</u>                     |
| 65997-15-1    | 1-10      | <u>portland cement</u>                     |
| 1317-65-3     | 1-10      | <u>calcium carbonate</u>                   |
| Not Available | balance   | Ingredients determined not to be hazardous |

**Legend:** 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; \* EU IOELVs available

## SECTION 4 First aid measures

## Description of first aid measures

|              |  |
|--------------|--|
| Eye Contact  | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with 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>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul> |
| Skin Contact | <p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately flush body and clothes with large amounts of water, using safety shower if available.</li> <li>▶ Quickly remove all contaminated clothing, including footwear.</li> <li>▶ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.</li> <li>▶ Transport to hospital, or doctor.</li> </ul>   |
| Inhalation   | <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>▶ Prostheses 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.</li> </ul>   |

## Dunlop ArditRapidset Repair Mortar

|                  |   |
|------------------|---|
|                  | <p>Perform CPR if necessary.</p> <ul style="list-style-type: none"> <li>▶ Transport to hospital, or doctor, without delay.</li> </ul>   |
| <b>Ingestion</b> | <ul style="list-style-type: none"> <li>▶ <b>IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.</b></li> <li>▶ For advice, contact a Poisons Information Centre or a doctor.</li> <li>▶ Urgent hospital treatment is likely to be needed.</li> <li>▶ In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.</li> <li>▶ If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist.</li> <li>▶ If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.</li> </ul> <p><b>Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</b></p> <ul style="list-style-type: none"> <li>▶ <b>INDUCE</b> vomiting with fingers down the back of the throat, <b>ONLY IF CONSCIOUS</b>. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> </ul> <p><b>NOTE:</b> Wear a protective glove when inducing vomiting by mechanical means.</p> |

### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5 Firefighting measures

### Extinguishing media

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

### Special hazards arising from the substrate or mixture

|                             |  |
|-----------------------------|--|
| <b>Fire Incompatibility</b> | ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |
|-----------------------------|--|

### 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> </ul>  |
| <b>Fire/Explosion Hazard</b> | <ul style="list-style-type: none"> <li>▶ Solid which exhibits difficult combustion or is difficult to ignite.</li> <li>▶ Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion.</li> <li>▶ Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited; once initiated larger particles up to 1400 microns diameter will contribute to the propagation of an explosion.</li> <li>▶ A dust explosion may release large quantities of gaseous products; this in turn creates a subsequent pressure rise of explosive force capable of damaging plant and buildings and injuring people.</li> </ul> <p>Decomposes on heating and produces:<br/>carbon monoxide (CO)<br/>carbon dioxide (CO<sub>2</sub>)<br/>sulfur oxides (SO<sub>x</sub>)<br/>silicon dioxide (SiO<sub>2</sub>)<br/>metal oxides<br/>other pyrolysis products typical of burning organic material.</p> <p>When aluminium oxide dust is dispersed in air, firefighters should wear protection against inhalation of dust particles, which can also contain hazardous substances from the fire absorbed on the alumina particles.</p> <p>May emit poisonous fumes.<br/>May emit corrosive fumes.</p> |
| <b>HAZCHEM</b>               | Not Applicable   |

## SECTION 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

|                     |   |
|---------------------|---|
| <b>Minor Spills</b> | <ul style="list-style-type: none"> <li>▶ Clean up waste regularly and abnormal spills immediately.</li> <li>▶ Avoid breathing dust and contact with skin and eyes.</li> <li>▶ Wear protective clothing, gloves, safety glasses and dust respirator.</li> <li>▶ Use dry clean up procedures and avoid generating dust.</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 full body protective clothing with breathing apparatus.</li> <li>▶ Prevent, by all means available, spillage from entering drains or water courses.</li> </ul> |

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

## SECTION 7 Handling and storage

## Dunlop ArditRapidset Repair Mortar

### 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>▶ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions)</li> <li>▶ Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame.</li> <li>▶ Establish good housekeeping practices.</li> <li>▶ Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds.</li> </ul> |
| <b>Other information</b> | <ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ Store in a cool, dry area protected from environmental extremes.</li> <li>▶ Store away from incompatible materials and foodstuff containers.</li> </ul>  |

### Conditions for safe storage, including any incompatibilities

|                                |  |
|--------------------------------|--|
| <b>Suitable container</b>      | <p>Multi-ply paper bag with sealed plastic liner or heavy gauge plastic bag.</p> <p><b>NOTE:</b> Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse. Check that all containers are clearly labelled and free from leaks. Packing as recommended by manufacturer.</p> |
| <b>Storage incompatibility</b> | <ul style="list-style-type: none"> <li>▶ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.</li> <li>▶ Avoid contact with copper, aluminium and their alloys.</li> <li>▶ Avoid reaction with oxidising agents</li> </ul>  |

## SECTION 8 Exposure controls / personal protection

### Control parameters

#### Occupational Exposure Limits (OEL)

#### INGREDIENT DATA

| Source                       | Ingredient        | Material name                                  | TWA                    | STEL          | Peak          | Notes  |
|------------------------------|-------------------|--|------------------------|---------------|---------------|--|
| Australia Exposure Standards | graded sand       | Silica - Crystalline: Quartz (respirable dust) | 0.05 mg/m <sup>3</sup> | Not Available | Not Available | Not Available  |
| Australia Exposure Standards | calcium sulfate   | Calcium sulphate                               | 10 mg/m <sup>3</sup>   | Not Available | Not Available | (a) This value is for inhalable dust containing no asbestos and < 1% crystalline silica. |
| Australia Exposure Standards | portland cement   | Portland cement                                | 10 mg/m <sup>3</sup>   | Not Available | Not Available | (a) This value is for inhalable dust containing no asbestos and < 1% crystalline silica. |
| Australia Exposure Standards | calcium carbonate | Calcium carbonate                              | 10 mg/m <sup>3</sup>   | Not Available | Not Available | (a) This value is for inhalable dust containing no asbestos and < 1% crystalline silica. |

#### Emergency Limits

| Ingredient        | TEEL-1                  | TEEL-2                | TEEL-3                  |
|-------------------|-------------------------|-----------------------|-------------------------|
| graded sand       | 0.075 mg/m <sup>3</sup> | 33 mg/m <sup>3</sup>  | 200 mg/m <sup>3</sup>   |
| calcium carbonate | 45 mg/m <sup>3</sup>    | 210 mg/m <sup>3</sup> | 1,300 mg/m <sup>3</sup> |


| Ingredient               | Original IDLH                               | Revised IDLH  |
|--------------------------|---|---------------|
| calcium aluminate cement | Not Available                               | Not Available |
| graded sand              | 25 mg/m <sup>3</sup> / 50 mg/m <sup>3</sup> | Not Available |
| calcium sulfate          | Not Available                               | Not Available |
| portland cement          | 5,000 mg/m <sup>3</sup>                     | Not Available |
| calcium carbonate        | Not Available                               | Not Available |

#### Occupational Exposure Banding

| Ingredient               | Occupational Exposure Band Rating | Occupational Exposure Band Limit |
|--------------------------|-----------------------------------|----------------------------------|
| calcium aluminate cement | E                                 | ≤ 0.01 mg/m <sup>3</sup>         |

**Notes:** Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

### Exposure controls

|   |   |
|---|---|
| <b>Appropriate engineering controls</b> | <p>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. The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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.</p> |
| <b>Personal protection</b>              |   |

## Dunlop ArditRapidset Repair Mortar

|                                |  |
|--------------------------------|--|
| <b>Eye and face protection</b> | <ul style="list-style-type: none"> <li>▶ Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure.</li> <li>▶ Chemical goggles whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted.</li> <li>▶ Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford face protection.</li> <li>▶ Alternatively a gas mask may replace splash goggles and face shields.</li> </ul>   |
| <b>Skin protection</b>         | See Hand protection below  |
| <b>Hands/feet protection</b>   | <ul style="list-style-type: none"> <li>▶ Elbow length PVC gloves</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> <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care.</p> <p>Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.</p> <ul style="list-style-type: none"> <li>▶ polychloroprene.</li> <li>▶ nitrile rubber.</li> <li>▶ butyl rubber.</li> </ul>  |
| <b>Body protection</b>         | See Other protection below   |
| <b>Other protection</b>        | <ul style="list-style-type: none"> <li>▶ Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent]</li> <li>▶ Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. A respirator affording higher levels of protection may be substituted. [AS/NZS 1715 or national equivalent]</li> <li>▶ Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely.</li> <li>▶ Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood.</li> <li>▶ Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood.</li> <li>▶ Overalls.</li> <li>▶ P.V.C apron.</li> <li>▶ Barrier cream.</li> <li>▶ Skin cleansing cream.</li> </ul> |

**Recommended material(s)****GLOVE SELECTION INDEX**

Glove selection is based on a modified presentation of the:

**"Forsberg Clothing Performance Index".**

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

Dunlop ArditRapidset Repair Mortar

| Material       | CPI |
|----------------|-----|
| NATURAL RUBBER | A   |
| NITRILE        | A   |

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

**Respiratory protection**

Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:001, ANSI Z88 or national equivalent)

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 10 x ES                      | P1<br>Air-line*      | -<br>-               | PAPR-P1<br>-           |
| up to 50 x ES                      | Air-line**           | P2                   | PAPR-P2                |
| up to 100 x ES                     | -                    | P3                   | -                      |
|                                    |                      | Air-line*            | -                      |
| 100+ x ES                          | -                    | Air-line**           | PAPR-P3                |

\* - Negative pressure demand \*\* - Continuous flow

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(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

## Dunlop ArditRapidset Repair Mortar

- Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.
- Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
- Use approved positive flow mask if significant quantities of dust becomes airborne.
- Try to avoid creating dust conditions.

## SECTION 9 Physical and chemical properties

## Information on basic physical and chemical properties

|   |                                       |  |                |
|---|---------------------------------------|--|----------------|
| <b>Appearance</b>                                   | Dark grey powder; insoluble in water. |  |                |
| <b>Physical state</b>                               | Divided Solid                         | <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</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 Applicable                        | <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 Applicable                        | <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 Applicable |
| <b>Vapour pressure (kPa)</b>                        | Not Applicable                        | <b>Gas group</b>                               | Not Available  |
| <b>Solubility in water</b>                          | Immiscible                            | <b>pH as a solution (%)</b>                    | Not Applicable |
| <b>Vapour density (Air = 1)</b>                     | Not Applicable                        | <b>VOC g/L</b>                                 | Not Available  |

## SECTION 10 Stability and reactivity

|   |  |
|---|--|
| <b>Reactivity</b>                         | See section 7  |
| <b>Chemical stability</b>                 | <ul style="list-style-type: none"> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul> |
| <b>Possibility of hazardous reactions</b> | See section 7  |
| <b>Conditions to avoid</b>                | See section 7  |
| <b>Incompatible materials</b>             | See section 7  |
| <b>Hazardous decomposition products</b>   | See section 5  |

## SECTION 11 Toxicological information

## Information on toxicological effects

|                  |  |
|------------------|--|
| <b>Inhaled</b>   | <p>The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.</p> <p>Inhalation of dusts, generated by the material during the course of normal handling, may produce severe damage to the health of the individual. Relatively small amounts absorbed from the lungs may prove fatal.</p> <p>Inhalation may result in ulcers or sores of the lining of the nose (nasal mucosa), and lung damage.</p> <p>Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.</p> <p>If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.</p> |
| <b>Ingestion</b> | Not normally a hazard due to the physical form of product. The material is a physical irritant to the gastro-intestinal tract  |

## Dunlop ArditRapidset Repair Mortar

|                     |  |
|---------------------|--|
| <b>Skin Contact</b> | <p>This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition</p> <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>Handling wet cement can cause dermatitis. Cement when wet is quite alkaline and this alkali action on the skin contributes strongly to cement contact dermatitis since it may cause drying and defatting of the skin which is followed by hardening, cracking, lesions developing, possible infections of lesions and penetration by soluble salts.</p> <p>Skin contact may result in severe irritation particularly to broken skin. Ulceration known as "chrome ulcers" may develop. Chrome ulcers and skin cancer are significantly related.</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 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> | If applied to the eyes, this material causes severe eye damage. |
|------------|---|

|                |   |
|----------------|---|
| <b>Chronic</b> | <p>Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Animal testing shows long term exposure to aluminium oxides may cause lung disease and cancer, depending on the size of the particle. The smaller the size, the greater the tendencies of causing harm.</p> <p>Red blood cells and rabbit alveolar macrophages exposed to calcium silicate insulation materials in vitro showed haemolysis in one study but not in another. Both studies showed the substance to be more cytotoxic than titanium dioxide but less toxic than asbestos.</p> <p>In a small cohort mortality study of workers in a wollastonite quarry, the observed number of deaths from all cancers combined and lung cancer were lower than expected. Wollastonite is a calcium inosilicate mineral (CaSiO<sub>3</sub>).</p> <p>Cement contact dermatitis (CCD) may occur when contact shows an allergic response, which may progress to sensitisation. Sensitisation is due to soluble chromates (chromate compounds) present in trace amounts in some cements and cement products. Soluble chromates readily penetrate intact skin. Cement dermatitis can be characterised by fissures, eczematous rash, dystrophic nails, and dry skin; acute contact with highly alkaline mixtures may cause localised necrosis.</p> <p>Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis, caused by particles less than 0.5 micron penetrating and remaining in the lung.</p> <p>Chromium (III) is an essential trace mineral. Chronic exposure to chromium (III) irritates the airways, malnourishes the liver and kidneys, causes fluid in the lungs, and adverse effects on white blood cells, and also increases the risk of developing lung cancer.</p> <p>Levels above 10 micrograms per cubic metre of suspended inorganic sulfates in the air may cause an excess risk of asthmatic attacks in susceptible people.</p> |
|----------------|---|

|   |                 |                   |
|---|-----------------|-------------------|
| <b>Dunlop ArditRapidset Repair Mortar</b> | <b>TOXICITY</b> | <b>IRRITATION</b> |
|   | Not Available   | Not Available     |

|                                 |  |                   |
|---------------------------------|--|-------------------|
| <b>calcium aluminate cement</b> | <b>TOXICITY</b>                                | <b>IRRITATION</b> |
|                                 | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>  | Not Available     |
|                                 | Inhalation(Rat) LC50; 1.9 mg/4h <sup>[1]</sup> |                   |
|                                 | Oral(Rat) LD50; >2000 mg/kg <sup>[1]</sup>     |                   |

|                    |  |                   |
|--------------------|--|-------------------|
| <b>graded sand</b> | <b>TOXICITY</b>                          | <b>IRRITATION</b> |
|                    | Oral(Rat) LD50; 500 mg/kg <sup>[2]</sup> | Not Available     |

|                        |  |                   |
|------------------------|--|-------------------|
| <b>calcium sulfate</b> | <b>TOXICITY</b>                                  | <b>IRRITATION</b> |
|                        | Inhalation(Rat) LC50; >3.26 mg/4h <sup>[1]</sup> | Not Available     |
|                        | Oral(Rat) LD50; >1581 mg/kg <sup>[1]</sup>       |                   |

|                        |                 |                   |
|------------------------|-----------------|-------------------|
| <b>portland cement</b> | <b>TOXICITY</b> | <b>IRRITATION</b> |
|                        | Not Available   | Not Available     |

|                          |   |  |
|--------------------------|---|--|
| <b>calcium carbonate</b> | <b>TOXICITY</b>                               | <b>IRRITATION</b>  |
|                          | dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup> | Eye (rabbit): 0.75 mg/24h - SEVERE                               |
|                          | Inhalation(Rat) LC50; >3 mg/4h <sup>[1]</sup> | Eye: no adverse effect observed (not irritating) <sup>[1]</sup>  |
|                          | Oral(Rat) LD50; >2000 mg/kg <sup>[1]</sup>    | Skin (rabbit): 500 mg/24h-moderate                               |
|                          |   | Skin: no adverse effect observed (not irritating) <sup>[1]</sup> |

**Legend:** 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>CALCIUM SULFATE</b> | <p>Gypsum (calcium sulfate dehydrate) irritates the skin, eye, mucous membranes, and airways. A series of studies involving Gypsum industry workers in Poland reported chronic, non-specific airways diseases.</p> <p>Repeat dose toxicity: Examination of workers at a gypsum manufacturing plant found restrictive defects on long-function tests in those who were chronically exposed to gypsum dust.</p> <p>Synergistic/antagonistic effects: Gypsum appears to be protective on quartz toxicity in animal testing.</p> |
|------------------------|--|

|                        |   |
|------------------------|---|
| <b>PORTLAND CEMENT</b> | <p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important.</p> |
|------------------------|---|

Dunlop ArditRapidset Repair Mortar

|   |   |
|---|---|
| <b>CALCIUM CARBONATE</b>  | No evidence of carcinogenic properties. No evidence of mutagenic or teratogenic effects.<br>The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.<br>The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.  |
| <b>CALCIUM ALUMINATE CEMENT &amp; CALCIUM SULFATE &amp; PORTLAND CEMENT &amp; CALCIUM CARBONATE</b> | 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. |
| <b>CALCIUM ALUMINATE CEMENT &amp; GRADED SAND &amp; PORTLAND CEMENT</b>                             | No significant acute toxicological data identified in literature search.  |

|  |   |                                 |   |
|--|---|---------------------------------|---|
| <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

SECTION 12 Ecological information

Toxicity

| Dunlop ArditRapidset Repair Mortar | Endpoint      | Test Duration (hr) | Species       | Value         | Source        |
|------------------------------------|---------------|--------------------|---------------|---------------|---------------|
|                                    | Not Available | Not Available      | Not Available | Not Available | Not Available |

| calcium aluminate cement | Endpoint  | Test Duration (hr) | Species                       | Value    | Source |
|--------------------------|-----------|--------------------|-------------------------------|----------|--------|
|                          | NOEC(ECx) | 72h                | Algae or other aquatic plants | 2.6mg/l  | 2      |
|                          | EC50      | 72h                | Algae or other aquatic plants | 3.6mg/l  | 2      |
|                          | LC50      | 96h                | Fish                          | >100mg/l | 2      |
|                          | EC50      | 48h                | Crustacea                     | 5.4mg/l  | 2      |

| graded sand | Endpoint      | Test Duration (hr) | Species       | Value         | Source        |
|-------------|---------------|--------------------|---------------|---------------|---------------|
|             | Not Available | Not Available      | Not Available | Not Available | Not Available |

| calcium sulfate | 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      |
|                 | LC50      | 96h                | Fish                          | >79mg/l | 2      |

| portland cement | Endpoint      | Test Duration (hr) | Species       | Value         | Source        |
|-----------------|---------------|--------------------|---------------|---------------|---------------|
|                 | Not Available | Not Available      | Not Available | Not Available | Not Available |

| calcium carbonate | Endpoint  | Test Duration (hr) | Species                       | Value       | Source |
|-------------------|-----------|--------------------|-------------------------------|-------------|--------|
|                   | NOEC(ECx) | 6h                 | Fish                          | 4-320mg/l   | 4      |
|                   | EC50      | 72h                | Algae or other aquatic plants | >14mg/l     | 2      |
|                   | LC50      | 96h                | Fish                          | >165200mg/L | 4      |

**Legend:** Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 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

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient      | Persistence: Water/Soil | Persistence: Air |
|-----------------|-------------------------|------------------|
| calcium sulfate | HIGH                    | HIGH             |

Bioaccumulative potential

| Ingredient      | Bioaccumulation        |
|-----------------|------------------------|
| calcium sulfate | LOW (LogKOW = -2.2002) |

Mobility in soil

Continued...



## Dunlop ArditRapidset Repair Mortar

| Ingredient      | Mobility          |
|-----------------|-------------------|
| calcium sulfate | LOW (KOC = 6.124) |

## SECTION 13 Disposal considerations

## Waste treatment methods

| Product / Packaging disposal |  |
|------------------------------|--|
|                              | <ul style="list-style-type: none"> <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> </ul> |

## SECTION 14 Transport information

## Labels Required

|                  |                |
|------------------|----------------|
| Marine Pollutant | NO             |
| HAZCHEM          | Not Applicable |

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

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

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

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

Not Applicable

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

| Product name             | Group         |
|--------------------------|---------------|
| calcium aluminate cement | Not Available |
| graded sand              | Not Available |
| calcium sulfate          | Not Available |
| portland cement          | Not Available |
| calcium carbonate        | Not Available |

Transport in bulk in accordance with the ICG Code

| Product name             | Ship Type     |
|--------------------------|---------------|
| calcium aluminate cement | Not Available |
| graded sand              | Not Available |
| calcium sulfate          | Not Available |
| portland cement          | Not Available |
| calcium carbonate        | Not Available |

## SECTION 15 Regulatory information

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

calcium aluminate cement is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

graded sand is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals  
Australia Model Work Health and Safety Regulations - Hazardous chemicals (other than lead) requiring health monitoring

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans

calcium sulfate is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

portland cement is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

calcium carbonate is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

## National Inventory Status

| National Inventory                              | Status |
|---|--------|
| Australia - AIIC / Australia Non-Industrial Use | Yes    |
| Canada - DSL                                    | Yes    |

Dunlop ArditRapidset Repair Mortar

| National Inventory            | Status   |
|-------------------------------|--|
| Canada - NDSL                 | No (calcium aluminate cement; graded sand; calcium sulfate; portland cement) |
| China - IECSC                 | Yes  |
| Europe - EINEC / ELINCS / NLP | Yes  |
| Japan - ENCS                  | No (portland cement)   |
| Korea - KECI                  | Yes  |
| New Zealand - NZIoC           | Yes  |
| Philippines - PICCS           | No (calcium aluminate cement; portland cement)                               |
| USA - TSCA                    | Yes  |
| Taiwan - TCSI                 | Yes  |
| Mexico - INSQ                 | No (calcium aluminate cement)  |
| Vietnam - NCI                 | Yes  |
| Russia - FBEPH                | No (calcium aluminate cement)  |

**Legend:**  
Yes = All CAS declared ingredients are on the inventory  
No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

**SECTION 16 Other information**

|                      |            |
|----------------------|------------|
| <b>Revision Date</b> | 02/12/2020 |
| <b>Initial Date</b>  | 02/12/2020 |

**SDS Version Summary**

| Version  | Date of Update | Sections Updated  |
|----------|----------------|-------------------|
| 2.1.1.1  | 02/12/2020     | Classification    |
| 2.1.2.1  | 26/04/2021     | Regulation Change |
| 2.1.3.1  | 03/05/2021     | Regulation Change |
| 2.1.4.1  | 06/05/2021     | Regulation Change |
| 2.1.5.1  | 10/05/2021     | Regulation Change |
| 2.1.5.2  | 30/05/2021     | Template Change   |
| 2.1.5.3  | 04/06/2021     | Template Change   |
| 2.1.5.4  | 05/06/2021     | Template Change   |
| 2.1.6.4  | 07/06/2021     | Regulation Change |
| 2.1.6.5  | 09/06/2021     | Template Change   |
| 2.1.6.6  | 11/06/2021     | Template Change   |
| 2.1.6.7  | 15/06/2021     | Template Change   |
| 2.1.7.7  | 17/06/2021     | Regulation Change |
| 2.1.8.7  | 21/06/2021     | Regulation Change |
| 2.1.8.8  | 05/07/2021     | Template Change   |
| 2.1.9.8  | 14/07/2021     | Regulation Change |
| 2.1.10.8 | 19/07/2021     | Regulation Change |

**Other information**

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee 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.

**Definitions and abbreviations**

PC—TWA: Permissible Concentration-Time Weighted Average  
 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  
 AIIC: Australian Inventory of Industrial Chemicals  
 DSL: Domestic Substances List  
 NDSL: Non-Domestic Substances List  
 IECSC: Inventory of Existing Chemical Substance in China

**Dunlop ArditRapidset Repair Mortar**

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

KECI: 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

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