

# Ardex K80 Ardex (Ardex Australia)

Chemwatch: 5541-70 Version No: 2.1

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

#### Chemwatch Hazard Alert Code:

Issue Date: **06/05/2022** Print Date: **08/05/2022** S.GHS.AUS.EN

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

## **Product Identifier**

1 Todas Taonimo	
Product name	Ardex K80
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

Cementitious floor leveller for internal use.
Use according to manufacturer's directions.

## Details of the supplier of the safety data sheet

Registered company name	Ardex (Ardex Australia)	
Address	0 Powers Road Seven Hills NSW 2147 Australia	
Telephone	0 224 070	
Fax	1300 780 102	
Website	www.ardexaustralia.com	
Email	technicalservices@ardexaustralia.com	

## **Emergency telephone number**

Association / Organisation	Ardex (Ardex Australia)	CHEMWATCH EMERGENCY RESPONSE
Emergency telephone numbers	1800 224 070 (Mon-Fri, 9am-5pm)	+61 1800 951 288
Other emergency telephone numbers	Not Available	+61 2 9186 1132

Once connected and if the message is not in your prefered language then please dial  ${\bf 01}$ 

## **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



Poisons Schedule	Not Applicable
Classification [1]	Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 1, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Reproductive Toxicity Category 1B
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

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## Hazard pictogram(s)







Signa	l word

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#### Hazard statement(s)

H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H360Fd	May damage fertility. Suspected of damaging the unborn child.

## Precautionary statement(s) Prevention

P201	Obtain special instructions before use.	
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.	

## 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.	
P308+P313	F exposed or concerned: Get medical advice/ attention.	
P310	Immediately call a POISON CENTER/doctor/physician/first aider.	
P302+P352 IF ON SKIN: Wash with plenty of water and soap.		

#### 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.

Not Applicable

## **SECTION 3 Composition / information on ingredients**

## Substances

See section below for composition of Mixtures

## Mixtures

mixtures		
CAS No	%[weight]	Name
14808-60-7.	30-60	graded sand
1317-65-3	10-30	<u>calcium carbonate</u>
65997-16-2	10-30	calcium aluminate cement
7778-18-9	1-10	calcium sulfate
65997-15-1	<1	portland cement
1305-62-0	<1	calcium hydroxide
554-13-2	<1	lithium carbonate
14808-60-7	<1	silica crystalline - quartz
Not Available	balance	Ingredients determined not to be hazardous
Legend:	Classified by Chemwatch; 2. Classification drawn from C&L *	Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. EU IOELVs available

## **SECTION 4 First aid measures**

## Description of first aid measures

If this product comes in contact with the eyes:

Immediately hold eyelids apart and flush the eye continuously with running water.

## Eye Contact

- 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.
- ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

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Skin Contact	If skin contact occurs:  Immediately remove all contaminated clothing, including footwear.  Flush skin and hair with running water (and soap if available).  Seek medical attention in event of irritation.
Inhalation	<ul> <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. Perform CPR if necessary.</li> <li>Transport to hospital, or doctor, without delay.</li> </ul>
Ingestion	<ul> <li>If swallowed do NOT induce vomiting.</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> </ul>

## 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

- Production and a strong transfer of the str			
Fire Incompatibility	None known.		
dvice for firefighters			
Fire Fighting	<ul> <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>		
Fire/Explosion Hazard	Decomposition may produce toxic fumes of: metal oxides 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.  May emit poisonous fumes.  May emit corrosive fumes.  Non combustible.  Not considered a significant fire risk, however containers may burn.		
HAZCHEM	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

Minor Spills	<ul> <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>
Major Spills	<ul> <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**

#### Precautions for safe handling ► Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Safe handling Use in a well-ventilated area. Prevent concentration in hollows and sumps. ► Store in original containers. ▶ Keep containers securely sealed. Other information ▶ Store in a cool, dry area protected from environmental extremes. ▶ Store away from incompatible materials and foodstuff containers.

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

Suitable container	<ul> <li>Polyethylene or polypropylene container.</li> <li>Check all containers are clearly labelled and free from leaks.</li> </ul>
Storage incompatibility	<ul> <li>Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.</li> <li>Avoid contact with copper, aluminium and their alloys.</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/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	calcium carbonate	Calcium carbonate	10 mg/m3	Not Available	Not Available	(a) This value is for inhalable dust containing no asbestos and < 1% crystalline silica.
Australia Exposure Standards	calcium sulfate	Calcium sulphate	10 mg/m3	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/m3	Not Available	Not Available	(a) This value is for inhalable dust containing no asbestos and < 1% crystalline silica.
Australia Exposure Standards	calcium hydroxide	Calcium hydroxide	5 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	silica crystalline - quartz	Silica - Crystalline: Quartz (respirable dust)	0.05 mg/m3	Not Available	Not Available	Not Available

#### Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
graded sand	0.075 mg/m3	33 mg/m3	200 mg/m3
calcium carbonate	45 mg/m3	210 mg/m3	1,300 mg/m3
calcium hydroxide	15 mg/m3	240 mg/m3	1,500 mg/m3
lithium carbonate	3.1 mg/m3	34 mg/m3	210 mg/m3
silica crystalline - quartz	0.075 mg/m3	33 mg/m3	200 mg/m3

Ingredient	Original IDLH	Revised IDLH
graded sand	25 mg/m3 / 50 mg/m3	Not Available
calcium carbonate	Not Available	Not Available
calcium aluminate cement	Not Available	Not Available
calcium sulfate	Not Available	Not Available
portland cement	5,000 mg/m3	Not Available
calcium hydroxide	Not Available	Not Available
lithium carbonate	Not Available	Not Available
silica crystalline - quartz	25 mg/m3 / 50 mg/m3	Not Available

## Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
calcium aluminate cement	Е	≤ 0.01 mg/m³
lithium carbonate	E	≤ 0.01 mg/m³
Notes:	Occupational exposure banding is a process of assigning chemicals into s	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**

#### Appropriate engineering controls

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:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

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.

## Personal protection













# Eye and face protection

- ▶ Safety glasses with side shields.
- Chemical goggles. 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.
- Skin protection

See Hand protection below

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#### NOTE:

- 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.
- ▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

wear clean, impervious garments, including gloves, boots and continuous-air supplied hood.

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.

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.

Personal hygiene is a key element of effective hand care.

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

- polychloroprene.
- nitrile rubber.
- butyl rubber.

#### **Body protection**

Hands/feet protection

See Other protection below

- 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]
- Figure 2 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]
- Figure 2 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.

## Other protection

- 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
- Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood.
- Overalls.
- P.V.C apron.
- Barrier cream.
- Skin cleansing cream.

## 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 computergenerated selection:

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Material	СРІ
NATURAL RUBBER	Α
NATURAL+NEOPRENE	С
NITRILE	С

- \* 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 Air-line*	-	PAPR-P1 -
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(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)

- · 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.

Where significant concentrations of the material are likely to enter the breathing zone, a Class P3 respirator may be required.

Class P3 particulate filters are used for protection against highly toxic or highly irritant particulates

Filtration rate: Filters at least 99.95% of airborne particles

Suitable for:

- · 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.

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- · Biologically active airborne particles under specified infection control applications e.g. viruses, bacteria, COVID-19, SARS
- $\cdot \ \ \text{Highly toxic particles e.g. Organophosphate Insecticides, Radionuclides, Asbestos}$ Note: P3 Rating can only be achieved when used with a Full Face Respirator or Powered Air-Purifying Respirator (PAPR). If used with any other respirator, it will only provide filtration protection up to a P2 rating.

#### **SECTION 9 Physical and chemical properties**

#### Information on basic physical and chemical properties

Appearance	Grey powder with a characteristic odour; slightly mixe	s with water.	
Physical state	Divided Solid	Relative density (Water = 1)	1.1-1.7
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	~11	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Not Applicable	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (Not Available%)	Not Applicable
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

## **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

Inhalation may result in ulcers or sores of the lining of the nose (nasal mucosa), and lung damage.

## **SECTION 11 Toxicological information**

## Information on toxicological effects

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.

Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual. 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.

#### Inhaled

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.

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.

There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

#### Ingestion

Accidental ingestion of the material may be damaging to the health of the individual.

Not normally a hazard due to the physical form of product. The material is a physical irritant to the gastro-intestinal tract The material may accentuate any pre-existing dermatitis condition

Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Though considered non-harmful, slight irritation may result from contact because of the abrasive nature of the aluminium oxide particles. Thus it

may cause itching and skin reaction and inflammation.

#### Skin Contact

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. 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. 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

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lithium carbonate

Inhalation(Rat) LC50; >3 mg/l4h<sup>[1]</sup>

Oral (Rat) LD50; >2000 mg/kg<sup>[1]</sup>

dermal (rat) LD50: >2000 mg/kg<sup>[1]</sup>

Oral (Rat) LD50; 525 mg/kg<sup>[2]</sup>

 $Inhalation(Rat)\ LC50; > 0.8\ mg/L4h^{\left[2\right]}$ 

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	prior to the use of the material and ensure that any external da	ons or lesions, may produce systemic injury with harmful effects. Examine the skin amage is suitably protected. her following direct contact or after a delay of some time. Repeated exposure can
Eye	If applied to the eyes, this material causes severe eye damage	· ·
Chronic	Based on experience with animal studies, exposure to the man not cause significant toxic effects to the mother.  Substance accumulation, in the human body, may occur and not animal testing shows long term exposure to aluminium oxides smaller the size, the greater the tendencies of causing harm. Red blood cells and rabbit alveolar macrophages exposed to one in another. Both studies showed the substance to be more cythan a small cohort mortality study of workers in a wollastonite quarter were lower than expected. Wollastonite is a calcium inosilicate Cement contact dermatitis (CCD) may occur when contact show the substance to the contact dermatitis (CCD) may occur when contact show the soluble chromates (chromate compounds) present in trace a penetrate intact skin. Cement dermatitis can be characterised highly alkaline mixtures may cause localised necrosis. Pure calcium carbonate does not cause the disease pneumoc particulates can infect the lung and airway to cause inflammat. High blood concentrations of calcium ion may give rise to dilatificating (syncope). Calcium ions enhance the effects of digitalification for tetracyclines. In newborns, giving calcium du. Long term exposure to high dust concentrations may cause characterised micron penetrating and remaining in the lung.  Chromium (III) is an essential trace mineral. Chronic exposure fluid in the lungs, and adverse effects on white blood cells, and There is limited evidence that, skin contact with this product is general population.	evelopmental disorders are directly caused by human exposure to the material. erial may result in toxic effects to the development of the foetus, at levels which do may cause some concern following repeated or long-term occupational exposure. may cause lung disease and cancer, depending on the size of the particle. The calcium silicate insulation materials in vitro showed haemolysis in one study but not otoxic than titanium dioxide but less toxic than asbestos.  Larry, the observed number of deaths from all cancers combined and lung cancer a mineral (CaSiO3).  Lows an allergic response, which may progress to sensitisation. Sensitisation is due amounts in some cements and cement products. Soluble chromates readily by fissures, eczematous rash, dystrophic nails, and dry skin; acute contact with coniosis probably due to its rapid elimination from the body. However, its unsterilised on.  Lion of blood vessels and depress heart function, leading to low blood pressure and so on the heart, and may precipitate digitalis poisoning. Calcium salts also reduce ring treatment has resulted in calcification of soft tissue.  Langes in lung function i.e. pneumoconiosis, caused by particles less than 0.5
Ardex K80	TOXICITY	IRRITATION
Ardex Nou	Not Available	Not Available
graded sand	Not Available  TOXICITY  Oral (Rat) LD50; 500 mg/kg <sup>[2]</sup>	Not Available  IRRITATION  Not Available
	TOXICITY Oral (Rat) LD50; 500 mg/kg <sup>[2]</sup>	IRRITATION  Not Available
	TOXICITY  Oral (Rat) LD50; 500 mg/kg <sup>[2]</sup> TOXICITY	IRRITATION  Not Available  IRRITATION
graded sand	TOXICITY  Oral (Rat) LD50; 500 mg/kg <sup>[2]</sup> TOXICITY  dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	IRRITATION  Not Available  IRRITATION  Eye (rabbit): 0.75 mg/24h - SEVERE
	TOXICITY  Oral (Rat) LD50; 500 mg/kg <sup>[2]</sup> TOXICITY  dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup> Inhalation(Rat) LC50; >3 mg/l4h <sup>[1]</sup>	IRRITATION  Not Available  IRRITATION  Eye (rabbit): 0.75 mg/24h - SEVERE  Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
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graded sand	TOXICITY  Oral (Rat) LD50; 500 mg/kg <sup>[2]</sup> TOXICITY  dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup> Inhalation(Rat) LC50; >3 mg/l4h <sup>[1]</sup> Oral (Rat) LD50; >2000 mg/kg <sup>[1]</sup> TOXICITY	IRRITATION  Not Available  IRRITATION  Eye (rabbit): 0.75 mg/24h - SEVERE  Eye: no adverse effect observed (not irritating) <sup>[1]</sup> Skin (rabbit): 500 mg/24h-moderate  Skin: no adverse effect observed (not irritating) <sup>[1]</sup> IRRITATION
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graded sand calcium carbonate	TOXICITY  Oral (Rat) LD50; 500 mg/kg <sup>[2]</sup> TOXICITY  dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup> Inhalation(Rat) LC50; >3 mg/l4h <sup>[1]</sup> Oral (Rat) LD50; >2000 mg/kg <sup>[1]</sup> TOXICITY	IRRITATION  Not Available  IRRITATION  Eye (rabbit): 0.75 mg/24h - SEVERE  Eye: no adverse effect observed (not irritating) <sup>[1]</sup> Skin (rabbit): 500 mg/24h-moderate  Skin: no adverse effect observed (not irritating) <sup>[1]</sup> IRRITATION
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graded sand  calcium carbonate  calcium aluminate cement  calcium sulfate	TOXICITY  Oral (Rat) LD50; 500 mg/kg <sup>[2]</sup> TOXICITY  dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup> Inhalation(Rat) LC50; >3 mg/l4h <sup>[1]</sup> Oral (Rat) LD50: >2000 mg/kg <sup>[1]</sup> TOXICITY  dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup> Inhalation(Rat) LC50; 1.9 mg/l4h <sup>[1]</sup> Oral (Rat) LD50; >2000 mg/kg <sup>[1]</sup> TOXICITY  Inhalation(Rat) LC50; >3.26 mg/l4h <sup>[1]</sup> Oral (Rat) LD50; >1581 mg/kg <sup>[1]</sup>	IRRITATION  Not Available  IRRITATION  Eye (rabbit): 0.75 mg/24h - SEVERE  Eye: no adverse effect observed (not irritating) <sup>[1]</sup> Skin (rabbit): 500 mg/24h-moderate  Skin: no adverse effect observed (not irritating) <sup>[1]</sup> IRRITATION  Not Available  IRRITATION  Not Available
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Eye: adverse effect observed (irritating)<sup>[1]</sup>

Skin: adverse effect observed (irritating) $^{[1]}$ 

IRRITATION

Eye (rabbit) : Moderate \*

Skin (rabbit) : Mild \*

Version No: 2.1

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CALCIUM CARBONATE  CALCIUM SULFATE  CALC	genic effects. and may produce on contact skin redness, swelling, the production of these, and airways. A series of studies involving Gypsum industry and found restrictive defects on long-function tests in those who were toxicity in animal testing.  be specific to this product.  y as urticaria or Quincke's oedema. The pathogenesis of contact ayed type. Other allergic skin reactions, e.g. contact urticaria,  sychosis, excitement, ataxia, respiratory depression, allergic acific development abnormalities recorded. Non-sensitising guinea interfering with iodine uptake, which can, as a result, cause an inhibition and consequently increase release of TSH from the
CALCIUM CARBONATE  No evidence of carcinogenic properties. No evidence of mutagenic or teratoge The material may cause skin irritation after prolonged or repeated exposure a vesicles, scaling and thickening of the skin.  Gypsum (calcium sulfate dehydrate) irritates the skin, eye, mucous membrane workers in Poland reported chronic, non-specific airways diseases.  Repeat dose toxicity: Examination of workers at a gypsum manufacturing plar chronically exposed to gypsum dust.  Synergistic/antagonistic effects: Gypsum appears to be protective on quartz to Contact allergies quickly manifest themselves as contact eczema, more rarely eczema involves a cell-mediated (T lymphocytes) immune reaction of the dela involve antibody-mediated immune reactions.  Lacrimation, altered sleep times, hallucinations, distorted perception, toxic psy dermatitis (after sytemic administration), foetoxicity and foetolethality and spepig* * FMC SDS Goltrogenic: Goltrogens are substances that suppress the function of the thyroid gland by itenlargement of the thyroid (a goitre). Goltrogens include:  Vitexin, a flavonoid, which inhibits thyroid peroxidase, contributing to goitre  Thiocyanate and perchlorate, which decrease iodide uptake by competitive itelutury gland  Lithium, which inhibits thyroid hormone release  Certain foods, such as soy and millet (containing vitexins) and vegetables in cabbage, cauliflower and horseradish).  Caffeine (found in coffee, tea, cola and chocolate), which acts on thyroid fun The material may trigger oculogyric criss. The term "oculogyric" refers to the Initial symptoms include restlessness, sigiation, malaise, or a fixed stare. The sustained upward deviation of the eyes. In addition, the eyes may converge, c  WARNING: For inhalation exposure QNLY: This substance has been classified The International Agency for Research on Cancer (IARC) has classified occur carcinogenic to humans. This classification is based on what IARC considere the carcinogenic to humans. This classification is based on what IARC considere	genic effects. and may produce on contact skin redness, swelling, the production of these, and airways. A series of studies involving Gypsum industry and found restrictive defects on long-function tests in those who were toxicity in animal testing.  be specific to this product.  y as urticaria or Quincke's oedema. The pathogenesis of contact ayed type. Other allergic skin reactions, e.g. contact urticaria,  sychosis, excitement, ataxia, respiratory depression, allergic acific development abnormalities recorded. Non-sensitising guinea interfering with iodine uptake, which can, as a result, cause an inhibition and consequently increase release of TSH from the
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The International Agency for Research on Cancer (IARC) has classified occup carcinogenic to humans. This classification is based on what IARC considere the carcinogenicity of inhaled silica in the forms of quartz and cristobalite. Cry SILICA CRYSTALLINE -	bilateral elevation of the visual gaze. en comes the more characteristically described extreme and
* Millions of particles per cubic foot (based on impinger samples counted by lip NOTE: the physical nature of quartz in the product determines whether it is lift material must enter the breathing zone as respirable particles.	upational exposures to <b>respirable</b> (<5 um) crystalline silica as being ed sufficient evidence from epidemiological studies of humans for ystalline silica is also known to cause silicosis, a non-cancerous lung pnoea, liver tumours.  ight field techniques).
GRADED SAND & CALCIUM  ALUMINATE CEMENT &  PORTLAND CEMENT  No significant acute toxicological data identified in literature search.	
CALCIUM CARBONATE & CALCIUM ALUMINATE CEMENT & CALCIUM SULFATE & PORTLAND CEMENT & CALCIUM HYDROXIDE & LITHIUM CARBONATE  Asthma-like symptoms may continue for months or even years after exposure known as reactive airways dysfunction syndrome (RADS) which can occur aft criteria for diagnosing RADS include the absence of previous airways disease asthma-like symptoms within minutes to hours of a documented exposure to tairflow pattern on lung function tests, moderate to severe bronchial hyperreact lymphocytic inflammation, without eosinophilia.	fter exposure to high levels of highly irritating compound. Main e in a non-atopic individual, with sudden onset of persistent the irritant. Other criteria for diagnosis of RADS include a reversible
CALCIUM CARBONATE & CALCIUM HYDROXIDE The material may produce severe irritation to the eye causing pronounced influence conjunctivitis.	flammation. Repeated or prolonged exposure to irritants may
Acute Toxicity X Carc	cinogenicity X
Skin Irritation/Corrosion	productivity
Serious Eye Damage/Irritation   STOT - Single	le Exposure
Respiratory or Skin sensitisation STOT - Repeated	d Exposure X
Mutagenicity X Aspirat	

X − Data either not available or does not fill the criteria for classification
 ✓ − Data available to make classification

# **SECTION 12 Ecological information**

## Toxicity

Ardex K80	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available

Ardex K80

**Endpoint** Test Duration (hr) Value Source **Species** graded sand Not Not Not Not Available Not Available Available Available Available **Endpoint** Test Duration (hr) Species Value Source NOEC(ECx) Fish 4-320mg/l 4 1h calcium carbonate LC50 96h Fish >165200mg/L 4 Algae or other aquatic plants 2 EC50 72h >14mg/l **Endpoint** Test Duration (hr) **Species** Value Source NOEC(ECx) 2 72h Algae or other aquatic plants 2.6mg/l 2 calcium aluminate cement LC50 96h >100mg/l 72h 2 Algae or other aquatic plants 3.6mg/l 2 EC50 48h Crustacea 5.4mg/l Test Duration (hr) **Endpoint** Value Species Source NOEC(ECx) 0.25h Fish 4 75mg/l calcium sulfate LC50 96h Fish >79mg/l EC50 72h 2 Algae or other aquatic plants >79mg/l **Endpoint** Test Duration (hr) Species Value Source portland cement Not Not Not Not Available Not Available Available Available Available **Endpoint** Test Duration (hr) Species Value Source EC10(ECx) 72h Algae or other aquatic plants >14mg/l 2 LC50 96h Fish 33.9mg/l 2 calcium hydroxide EC50 72h 2 >14mg/l Algae or other aquatic plants EC50 48h Crustacea 49.1mg/l 2 Endpoint Test Duration (hr) Species Value Source EC50(ECx) 504h Crustacea >1.7mg/l 2 30.3mg/l 2 LC50 96h Fish lithium carbonate EC50 72h Algae or other aquatic plants >400mg/l 2 48h 33.2mg/l 2 EC50 Crustacea **Endpoint** Test Duration (hr) Species Value Source silica crystalline - quartz Not Not Not Not Available Not Available Available Available Available

DO NOT discharge into sewer or waterways.

Leaend:

- Bioconcentration Data 8. Vendor Data

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
calcium sulfate	HIGH	HIGH
lithium carbonate	LOW	LOW

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)

## Bioaccumulative potential

Ingredient	Bioaccumulation	
calcium sulfate	LOW (LogKOW = -2.2002)	
lithium carbonate	LOW (LogKOW = -0.4605)	

#### Mobility in soil

•		
Ingredient Mobility		
calcium sulfate	LOW (KOC = 6.124)	
lithium carbonate	HIGH (KOC = 1)	

## **SECTION 13 Disposal considerations**

#### Waste treatment methods

Issue Date: 06/05/2022

Print Date: 08/05/2022

Ardex K80

Issue Date: **06/05/2022**Print Date: **08/05/2022** 

## Product / Packaging disposal

- ▶ DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first
- Where in doubt contact the responsible authority.
- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- ▶ Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

### **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
graded sand	Not Available
calcium carbonate	Not Available
calcium aluminate cement	Not Available
calcium sulfate	Not Available
portland cement	Not Available
calcium hydroxide	Not Available
lithium carbonate	Not Available
silica crystalline - quartz	Not Available

### Transport in bulk in accordance with the ICG Code

Product name	Ship Type
graded sand	Not Available
calcium carbonate	Not Available
calcium aluminate cement	Not Available
calcium sulfate	Not Available
portland cement	Not Available
calcium hydroxide	Not Available
lithium carbonate	Not Available
silica crystalline - quartz	Not Available

## **SECTION 15 Regulatory information**

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

#### 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 carbonate is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

## calcium aluminate cement is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

## 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 hydroxide is found on the following regulatory lists

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Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australian Inventory of Industrial Chemicals (AIIC)

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

lithium carbonate is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

silica crystalline - quartz 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

#### **National Inventory Status**

National Inventory	Status	
Australia - AIIC / Australia Non-Industrial Use	Yes	
Canada - DSL	Yes	
Canada - NDSL	No (graded sand; calcium aluminate cement; calcium sulfate; portland cement; calcium hydroxide; lithium carbonate; silica crystalline - quartz)	
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. These ingredients may be exempt or will require registration.	

#### **SECTION 16 Other information**

Revision Date	06/05/2022
Initial Date	06/05/2022

#### **SDS Version Summary**

Version	Date of Update	Sections Updated
2.1	06/05/2022	Classification, Ingredients

### 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

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

NLP: No-Longer Polymers

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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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