

# RAILTECH TUBE CLAY CEMENT

Chemwatch Material Safety Data Sheet

Issue Date: 4-Dec-2008

NC317ECP

CHEMWATCH 4957-61

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## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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### PRODUCT NAME

RAILTECH TUBE CLAY CEMENT

### SYNONYMS

"Product Code: 82662100", "Product Code: 82662100"

### PRODUCT USE

Used as a sealing agent in rail welding.

### SUPPLIER

Company: Railtech Australia Ltd

Address:

52 Lysaght Street

Acacia Ridge

QLD, 4110

AUS

Telephone: +61 7 3344 5444

Emergency Tel: +61 0418 781 377

Fax: +61 7 3344 5377

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## Section 2 - HAZARDS IDENTIFICATION

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### STATEMENT OF HAZARDOUS NATURE

**HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.**

### POISONS SCHEDULE

None

### RISK

None under normal operating conditions.

### SAFETY

» Avoid contact with skin.

» Wear eye/ face protection.

» Use only in well ventilated areas.

» Keep container in a well ventilated place.

» In case of contact with eyes rinse with plenty of water and contact Doctor or Poisons Information Centre.

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## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

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NAME	CAS RN	%
silica amorphous	7631-86-9	50
fireclay	130498-21-4	10-20
bentonite	1302-78-9	5-10
calcium chloride	10043-52-4	5
water	7732-18-5	10-15

continued...

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## Section 4 - FIRST AID MEASURES

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### SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

### EYE

- » If this product comes in contact with the eyes:
  - Wash out immediately with fresh running water.
  - 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.
  - If pain persists or recurs seek medical attention.
  - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

### SKIN

- » If skin or hair contact occurs:
  - Flush skin and hair with running water (and soap if available).
  - Seek medical attention in event of irritation.

### INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- 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.
- Transport to hospital, or doctor.

### NOTES TO PHYSICIAN

- » Treat symptomatically.

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## Section 5 - FIRE FIGHTING MEASURES

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### EXTINGUISHING MEDIA

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

### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

### FIRE/EXPLOSION HAZARD

- Non combustible.
- Not considered a significant fire risk, however containers may burn.

### FIRE INCOMPATIBILITY

- » None known.

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Section 5 - FIRE FIGHTING MEASURES

HAZCHEM: None

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## Section 6 - ACCIDENTAL RELEASE MEASURES

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### EMERGENCY PROCEDURES

#### MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing vapours/ aerosols or dusts and avoid contact with skin and eyes.
- Place in a suitable, labelled container for waste disposal.

#### MAJOR SPILLS

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

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

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## Section 7 - HANDLING AND STORAGE

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### PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- DO NOT allow material to contact humans, exposed food or food utensils.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

### SUITABLE CONTAINER

- Check that containers are clearly labelled.
- Packaging as recommended by manufacturer.

### STORAGE INCOMPATIBILITY

- » None known.

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Section 7 - HANDLING AND STORAGE

### STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

Source	Material	TWA mg/m <sup>3</sup>
Australia Exposure Standards	silica amorphous (Silica - Amorphous Silica gel (a))	10
Australia Exposure Standards	silica amorphous (Silica - Amorphous Precipitated silica (a))	10
Australia Exposure Standards	silica amorphous (Silica - Amorphous Diatomaceous earth (uncalcined)(a))	10
Australia Exposure Standards	silica amorphous (Silica - Amorphous Fumed silica (respirable dust))	2
Australia Exposure Standards	silica amorphous (Silica - Amorphous Fume (thermally generated)(respirable dust) (g))	2

The following materials had no OELs on our records

- fireclay: CAS:130498- 21- 4 CAS:78005- 61- 5
- bentonite: CAS:1302- 78- 9 CAS:11004- 12- 9 CAS:1327- 43- 1
- calcium chloride: CAS:10043- 52- 4
- water: CAS:7732- 18- 5

### EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m <sup>3</sup> )	Revised IDLH Value (ppm)
silica amorphous	3, 000	

### MATERIAL DATA

» Not available. Refer to individual constituents.

### INGREDIENT DATA

BENTONITE:

FIRECLAY:

» It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.

At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

NOTE: The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.

BENTONITE:

SILICA AMORPHOUS:

» The concentration of dust, for application of respirable dust limits, is to be determined from the fraction that penetrates a separator whose size collection efficiency is described by a cumulative log-normal function with a median aerodynamic diameter of 4.0 µm (+-) 0.3 µm and with a geometric standard deviation of 1.5 µm (+-) 0.1 µm,

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

i.e..generally less than 5 µm.

### BENTONITE:

### FIRECLAY:

» Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents
- lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

### SILICA AMORPHOUS:

» Amorphous crystalline silica shows little potential for producing adverse effects on the lung and exposure standards should reflect a particulate of low intrinsic toxicity. Mixtures of amorphous silicas/ diatomaceous earth and crystalline silica should be monitored as if they comprise only the crystalline forms.

The dusts from precipitated silica and silica gel produce little adverse effect on pulmonary functions and are not known to produce significant disease or toxic effect

IARC has classified silica, amorphous as Group 3: NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

### WATER:

» No exposure limits set by NOHSC or ACGIH.

## PERSONAL PROTECTION

### EYE

- 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 lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

### HANDS/FEET

- Wear physical protective gloves, eg. leather.
- Wear safety footwear.

### OTHER

- Overalls.
- Eyewash unit.

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### RESPIRATOR

» Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Breathing Zone Level ppm (volume)	Maximum Protection Factor	Half- face Respirator	Full- Face Respirator
1000	10	- AUS P	-
1000	50	-	- AUS P
5000	50	Airline *	-
5000	100	-	- 2 P
10000	100	-	- 3 P
	100+		Airline**

\* - Continuous Flow

\*\* - Continuous-flow or positive pressure demand.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

### ENGINEERING CONTROLS

» Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.

An approved self contained breathing apparatus (SCBA) may be required in some situations.

Provide adequate ventilation in warehouse or closed storage area.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### APPEARANCE

Odourless brown paste.

Hardens at temperatures above 100 deg. C.

### PHYSICAL PROPERTIES

Molecular Weight: Not Applicable

Melting Range (°C): Not Available

Solubility in water (g/L): Not Available

pH (1% solution): Not Available

Volatile Component (%vol): Not Available

Relative Vapour Density (air=1): Not Available

Lower Explosive Limit (%): Not Available

Autoignition Temp (°C): Not Available

State: Non Slump Paste

Boiling Range (°C): Not Available

Specific Gravity (water= 1): 1.58

pH (as supplied): 11.8

Vapour Pressure (kPa): Not Available

Evaporation Rate: Not Available

Flash Point (°C): Not Available

Upper Explosive Limit (%): Not Available

Decomposition Temp (°C): Not Available

Viscosity: Not Available

## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

### CONDITIONS CONTRIBUTING TO INSTABILITY

» Product is considered stable and hazardous polymerisation will not occur.

*For incompatible materials - refer to Section 7 - Handling and Storage.*

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## Section 11 - TOXICOLOGICAL INFORMATION

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

» The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (eg. liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

##### EYE

» There is some evidence to suggest that this material can cause eye irritation and damage in some persons.

##### SKIN

» The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. 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.

##### INHALED

» The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

#### CHRONIC HEALTH EFFECTS

» As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

#### TOXICITY AND IRRITATION

» Not available. Refer to individual constituents.

##### SILICA AMORPHOUS:

» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

##### TOXICITY

Oral (rat) LD50: 3160 mg/kg

Dermal (rabbit) LD50: >5000 mg/kg \*

Inhalation (rat) LC50: >0.139 mg/l/14h \* \* [Grace]

» For silica amorphous:

When experimental animals inhale synthetic amorphous silica (SAS) dust, it dissolves in the lung fluid and is rapidly eliminated. If swallowed, the vast majority of SAS is excreted in the faeces and there is little accumulation in the body. Following absorption across the gut, SAS is eliminated via urine without modification in animals and humans. SAS is not expected to be broken down (metabolised) in mammals. After ingestion, there is limited accumulation of SAS in body tissues and rapid elimination occurs. Intestinal absorption has not been calculated, but appears to be insignificant in animals and humans. SASs injected subcutaneously are subjected to rapid dissolution and removal. There is no indication of metabolism of SAS in animals or humans based on chemical structure and available data. In contrast to crystalline silica, SAS is soluble in physiological media and the soluble chemical species that are formed are eliminated via the urinary tract without modification.

Both the mammalian and environmental toxicology of SASs are significantly influenced by the physical and chemical properties, particularly those of solubility and particle size. SAS has no acute intrinsic

##### IRRITATION

Skin (rabbit): non- irritating \*

Eye (rabbit): non- irritating \*

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## Section 11 - TOXICOLOGICAL INFORMATION

toxicity by inhalation. Adverse effects, including suffocation, that have been reported were caused by the presence of high numbers of respirable particles generated to meet the required test atmosphere. These results are not representative of exposure to commercial SASs and should not be used for human risk assessment. Though repeated exposure of the skin may cause dryness and cracking, SAS is not a skin or eye irritant, and it is not a sensitiser.

Repeated-dose and chronic toxicity studies confirm the absence of toxicity when SAS is swallowed or upon skin contact.

Long-term inhalation of SAS caused some adverse effects in animals (increases in lung inflammation, cell injury and lung collagen content), all of which subsided after exposure.

Numerous repeated-dose, subchronic and chronic inhalation toxicity studies have been conducted with SAS in a number of species, at airborne concentrations ranging from 0.5 mg/m<sup>3</sup> to 150 mg/m<sup>3</sup>. Lowest-observed adverse effect levels (LOAELs) were typically in the range of 1 to 50 mg/m<sup>3</sup>. When available, the no-observed adverse effect levels (NOAELs) were between 0.5 and 10 mg/m<sup>3</sup>. The difference in values may be explained by different particle size, and therefore the number of particles administered per unit dose. In general, as particle size decreases so does the NOAEL/LOAEL.

Neither inhalation nor oral administration caused neoplasms (tumours). SAS is not mutagenic in vitro. No genotoxicity was detected in in vivo assays. SAS does not impair development of the foetus. Fertility was not specifically studied, but the reproductive organs in long-term studies were not affected.

In humans, SAS is essentially non-toxic by mouth, skin or eyes, and by inhalation. Epidemiology studies show little evidence of adverse health effects due to SAS. Repeated exposure (without personal protection) may cause mechanical irritation of the eye and drying/cracking of the skin.

There is no evidence of cancer or other long-term respiratory health effects (for example, silicosis) in workers employed in the manufacture of SAS. Respiratory symptoms in SAS workers have been shown to correlate with smoking but not with SAS exposure, while serial pulmonary function values and chest radiographs are not adversely affected by long-term exposure to SAS.

The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

Reports indicate high/prolonged exposures to amorphous silicas induced lung fibrosis in experimental animals; in some experiments these effects were reversible. [PATTYS]

### FIRECLAY:

» Not available. Refer to individual constituents.

### BENTONITE:

» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

### TOXICITY

Intravenous (Rat) LD50: 35 mg/kg

Intravenous (Dog) LD: 10 mg/kg

» No significant acute toxicological data identified in literature search.

### IRRITATION

### CALCIUM CHLORIDE:

» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

### TOXICITY

Oral (rat) LD50: 1000 mg/kg

### IRRITATION

Skin (unknown): moderate\*

Eye (unknown): severe\* [ICI]

### WATER:

» No significant acute toxicological data identified in literature search.

### CARCINOGEN

silica amorphous

International Agency for Research on Cancer  
(IARC) Carcinogens

Group

3

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## Section 12 - ECOLOGICAL INFORMATION

No data

## Section 13 - DISPOSAL CONSIDERATIONS

- Containers may still present a chemical hazard/ danger when empty.
  - Return to supplier for reuse/ recycling if possible.
- Otherwise:
- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
  - Where possible retain label warnings and MSDS and observe all notices pertaining to the product.

## Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

## Section 15 - REGULATORY INFORMATION

**POISONS SCHEDULE: None**

### REGULATIONS

Railtech Tube Clay Cement (CAS: None):

No regulations applicable

silica amorphous (CAS: 7631-86-9) is found on the following regulatory lists;

- Australia Exposure Standards
- Australia Hazardous Substances
- Australia High Volume Industrial Chemical List (HVICL)
- Australia Inventory of Chemical Substances (AICS)
- Australia Therapeutic Goods Administration (TGA) Substances that may be used as active ingredients in Listed

medicines

CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless

Otherwise Specified, in Accordance with GMP

- IMO IBC Code Chapter 17: Summary of minimum requirements
- International Agency for Research on Cancer (IARC) Carcinogens
- International Council of Chemical Associations (ICCA) - High Production Volume List
- OECD Representative List of High Production Volume (HPV) Chemicals

silica amorphous (CAS: 112945-52-5) is found on the following regulatory lists;

Australia - Victoria Occupational Health and Safety Regulations - Schedule 5 Hazardous Substances: Substances

Prohibited for Specified Uses

- Australia Exposure Standards
- Australia Hazardous Substances
- Australia High Volume Industrial Chemical List (HVICL)
- Australia Inventory of Chemical Substances (AICS)
- IMO IBC Code Chapter 17: Summary of minimum requirements
- International Council of Chemical Associations (ICCA) - High Production Volume List
- OECD Representative List of High Production Volume (HPV) Chemicals

silica amorphous (CAS: 67762-90-7) is found on the following regulatory lists;

- Australia Inventory of Chemical Substances (AICS)
- Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix C
- Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 4
- IMO IBC Code Chapter 17: Summary of minimum requirements
- OECD Representative List of High Production Volume (HPV) Chemicals

silica amorphous (CAS: 68611-44-9) is found on the following regulatory lists;

- Australia Inventory of Chemical Substances (AICS)
- International Council of Chemical Associations (ICCA) - High Production Volume List
- OECD Representative List of High Production Volume (HPV) Chemicals

silica amorphous (CAS: 68909-20-6) is found on the following regulatory lists;

- Australia Inventory of Chemical Substances (AICS)
- OECD Representative List of High Production Volume (HPV) Chemicals

silica amorphous (CAS: 112926-00-8) is found on the following regulatory lists;

- Australia Exposure Standards
- Australia Hazardous Substances

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## Section 15 - REGULATORY INFORMATION

Australia High Volume Industrial Chemical List (HVICL)  
Australia Inventory of Chemical Substances (AICS)  
International Council of Chemical Associations (ICCA) - High Production Volume List  
OECD Representative List of High Production Volume (HPV) Chemicals  
silica amorphous (CAS: 61790-53-2) is found on the following regulatory lists;  
Australia Exposure Standards  
Australia Hazardous Substances  
Australia High Volume Industrial Chemical List (HVICL)  
Australia Inventory of Chemical Substances (AICS)  
OECD Representative List of High Production Volume (HPV) Chemicals  
silica amorphous (CAS: 60676-86-0) is found on the following regulatory lists;  
Australia Exposure Standards  
Australia Hazardous Substances  
Australia Inventory of Chemical Substances (AICS)  
OECD Representative List of High Production Volume (HPV) Chemicals  
silica amorphous (CAS: 91053-39-3) is found on the following regulatory lists;  
Australia Exposure Standards  
Australia Hazardous Substances  
OECD Representative List of High Production Volume (HPV) Chemicals  
silica amorphous (CAS: 69012-64-2) is found on the following regulatory lists;  
Australia Inventory of Chemical Substances (AICS)  
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships  
IMO Provisional Categorization of Liquid Substances - List 1: Pure or technically pure products  
OECD Representative List of High Production Volume (HPV) Chemicals  
bentonite (CAS: 1302-78-9) is found on the following regulatory lists;  
Australia High Volume Industrial Chemical List (HVICL)  
Australia Inventory of Chemical Substances (AICS)  
International Air Transport Association (IATA) Dangerous Goods Regulations  
OECD Representative List of High Production Volume (HPV) Chemicals  
bentonite (CAS: 11004-12-9) is found on the following regulatory lists;  
Australia Inventory of Chemical Substances (AICS)  
International Air Transport Association (IATA) Dangerous Goods Regulations  
calcium chloride (CAS: 10043-52-4) is found on the following regulatory lists;  
Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards  
(Domestic water supply - inorganic chemicals)  
Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways  
taken to cause environmental harm (IRRIG)  
Australia - Australian Capital Territory Environment Protection Regulation Pollutants entering waterways -  
Agricultural uses (Stock)  
Australia - Australian Capital Territory Environment Protection Regulation Pollutants entering waterways -  
Domestic water quality  
Australia Hazardous Substances  
Australia High Volume Industrial Chemical List (HVICL)  
Australia Inventory of Chemical Substances (AICS)  
CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless  
Otherwise Specified, in Accordance with GMP  
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships  
International Council of Chemical Associations (ICCA) - High Production Volume List  
OECD Representative List of High Production Volume (HPV) Chemicals  
WHO Guidelines for Drinking-water Quality - Chemicals for which guideline values have not been established  
water (CAS: 7732-18-5) is found on the following regulatory lists;  
Australia Inventory of Chemical Substances (AICS)  
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships  
IMO IBC Code Chapter 18: List of products to which the Code does not apply  
OECD Representative List of High Production Volume (HPV) Chemicals

No data available for fireclay as CAS: 130498-21-4, CAS: 78005-61-5.

## Section 16 - OTHER INFORMATION

### INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
silica amorphous	7631- 86- 9, 112945- 52- 5, 67762- 90- 7, 68611- 44- 9, 68909- 20- 6, 112926- 00- 8, 61790- 53- 2, 60676- 86- 0, 91053- 39- 3, 69012- 64- 2
fireclay	130498- 21- 4, 78005- 61- 5
bentonite	1302- 78- 9, 11004- 12- 9

### EXPOSURE STANDARD FOR MIXTURES

» "Worst Case" computer-aided prediction of spray/ mist or fume/ dust components and concentration:

» Composite Exposure Standard for Mixture (TWA) :100 mg/m<sup>3</sup>.

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Section 16 - 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.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net/references](http://www.chemwatch.net/references).

» The (M)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.

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