

SAFETY DATA SHEET

SDS Number: AUS 120 Date of First Issue: 23 June 2014 Date of Last Revision: 27 June 2019

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Superwool Plus Vacuum Formed Boards & Shapes

Recommended Use: Application as thermal insulation, heat shields, heat containment, gaskets and expansion joints in industrial furnaces, ovens, kilns, boilers and other process equipment and in the aerospace, automotive and appliance industries.

Manufacturer's Product Name/Code: Superwool Plus VF products

Supplier Name: Morgan Advanced Materials, Thermal Ceramics
Address: 30-36 Birralee Road, Regency Park, SA, 5010
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Emergency Contact: (08) 8243 5300 (Monday to Friday, 8:30a.m – 4:30p.m.)

2. HAZARDS IDENTIFICATION

Classification of the Substance/ mixture

Not classified as hazardous according to the criteria of Safe Work Australia

Not classified as a dangerous good according to the criteria of the ADG Code

Labelling Elements

Not applicable

Other hazards which do not result in classification

Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure. These effects are usually temporary

3. COMPOSITION / INFORMATION ON INGREDIENTS

Description

These products are boards, shapes or forms, made of AES wool bound with organic and inorganic materials.

Composition

Chemical Name	CAS Number	Proportion
Alkaline earth silicate wool	436083-99-7*	60-90%
Inert inorganic material	Not applicable	0-40%
Starch	Not applicable	0-10%

* CAS definition: Alkaline earth silicate (AES) consisting of silica (50-82 wt%), calcia and magnesia (18-43 wt%), alumina, titania and zirconia (less than 6 wt%), and trace oxides.

4. FIRST AID MEASURES

Skin

Handling of this material may generate mild mechanical temporary skin irritation. If this occurs, rinse affected areas with water and wash gently. Do not rub or scratch exposed skin.

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Eyes

In case of eye contact flush abundantly with water; have eye bath available. Do not rub eyes.

Nose and Throat

If these become irritated move to a dust free area, drink water and blow nose.
If symptoms persist, seek medical advice.

5. FIRE FIGHTING MEASURES

Flammability

Non-combustible products,
Packaging and surrounding materials may be combustible
Use extinguishing agent suitable for surrounding combustible materials.

Hazchem Code

None allocated

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Where abnormally high dust concentrations occur, provide workers with appropriate protective equipment as detailed in section 8.

Restrict access to the area to a minimum number of workers required.
Restore the situation to normal as quickly as possible.

Environmental Precautions

Prevent further dust dispersion for example by damping the materials.
Do not flush spillage to drain and prevent from entering natural watercourses.
Check for local regulations, which may apply

Methods and Materials for Containment and Clean Up

Pick up large pieces and use a vacuum cleaner fitted with high efficiency filter (HEPA).
If brushing is used, ensure that the area is wetted down first.
Do not use compressed air for clean up.
Do not allow to be wind blown. Do not flush spillage to drain and prevent from entering natural watercourses.

For waste disposal see Section 13, Disposal Considerations.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Before use carefully read the product label.
Use of safe work practices is recommended to avoid eye or skin contact and inhalation.
Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.
Handling of dried product can be a source of dust emission. The process or processes should be designed to limit the amount of handling. Regular good housekeeping will minimise secondary dust dispersal.

Storage

Store in sealed container in cool, dry area, removed from foodstuffs. Ensure packages are adequately labelled, protected from physical damage and sealed when not in use.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Handling material may generate respirable dust.

Industrial hygiene standards and occupational exposure limits vary between countries and local jurisdictions. Check which exposure levels apply to your facility and comply with local regulations. If no regulatory dust or other standards apply, a qualified industrial hygienist can assist with a specific workplace evaluation including recommendations for respiratory protection.

NATIONAL EXPOSURE STANDARDS HYGIENE STANDARDS AND EXPOSURE LIMITS

Country	Chemical Name	Exposure Limit*	Sources
Australia	Low Bio-persistent MMVF	2 mg/m ³	Safe Work Australia
Australia	Crystalline silica	0.1mg/m ³	

ENGINEERING CONTROLS

Review your applications in order to identify potential sources of dust exposure. Local exhaust ventilation, which collects dust at source, can be used. For example down draft tables, emission controlling tools and materials handling equipment. Keep the workplace clean. Use a vacuum cleaner fitted with an appropriate filter; avoid brushing and compressed air.

PERSONAL PROTECTIVE EQUIPMENT

Skin protection:

Disposable coveralls or long-sleeve loose-fitting clothing and PVC or rubber gloves are recommended, (launderable clothing should be washed separately from other clothing).

Eye protection:

As necessary wear dust-proof goggles or safety glasses with side shields.

Respiratory protection:

For dust concentrations below the exposure limit value, PPE is not required but FFP2 respirators may be used on a voluntary basis. All respiratory devices should be tested for compliance with AS/NZS 1715 & AS/NZS 1716.

VENTILATION

Use with adequate natural or mechanical ventilation during installation. If cutting dried material with power tools, local extraction ventilation is recommended. Clean area by wet sweeping or clean dried area with vacuum cleaner with an appropriate filter.

INFORMATION AND TRAINING OF WORKERS

Workers should be trained on good working practices and informed on applicable local regulations. This may include:

- the potential risks to health resulting from the exposure to dust;
- the requirements regarding smoking, eating and drinking at the workplace;
- the requirements for protective equipment and clothing;
- the good working practices to limit dust emissions;
- the proper use of protective equipment;

ENVIRONMENTAL EXPOSURE CONTROLS

Refer to local applicable environmental permitted standards for air, water and soil. *For waste, refer to Section 13.*

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White/tan board/shape	Odour	None
Boiling Point	Not applicable	Melting Point	> 1200°C
Flash Point	Not applicable	Flammability	Not applicable
Autoflammability	Not applicable	Explosive Properties	Not applicable
Oxidising Properties	Not applicable	Vapour Pressure	Not applicable
Relative Density	250-400 kg/m ³	pH	Not applicable
Solubility	Less than 1 mg/l	Length Weighted Geometric Mean Diameter	1.4 - 3µm
Partition Coefficient	Not applicable		

10. STABILITY AND REACTIVITY

Reactivity

The material is stable and non-reactive.

Chemical Stability

AES wool is inorganic, stable and inert

Possibility of Hazardous Reactions

During first heating, oxidation products from the organic binder might be emitted in a temperature range from 180°C to 600°C. It is recommended to ventilate the room until gases and fumes have disappeared. Avoid exposure to high concentrations of gas or fumes.

Conditions to Avoid

Please refer to handling and storage advice in Section 7

Incompatible Materials

None

Hazardous decomposition products

Upon heating above 900°C for sustained periods, this amorphous material begins to transform to mixtures of crystalline phases. For further information please refer to Section 11.

11. TOXICOLOGICAL INFORMATION

Toxicology

When fired above 900°C, these products may contain minimal amounts of crystalline silica. Prolonged/repeated inhalation of respirable crystalline silica dust may cause delayed lung injury (silicosis).

IARC (International Agency for Research on Cancer) states that there is "sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite from occupational sources to classify crystalline silica as carcinogenic to humans (Group 1)". (Monograph V 68)

In making the overall evaluation the Working Group noted however that carcinogenicity in humans was not detected in all industrial circumstances studied.

Experimental Study: Animals exposed to very high concentrations of crystalline silica, artificially or by inhalation, have reported fibrosis and tumours (IARC Monographs 42 and 68). Inhalation and intra-tracheal installation of crystalline silica in rats caused lung cancer. However, studies in other species such as mice and hamsters caused no lung cancer. Crystalline silica also caused fibrosis in rats and hamsters in several inhalation and intra-tracheal installation studies.

In evaluating crystalline silica as a cancer risk, the International Agency for Research on Cancer (IARC) reviewed several studies from different industries and concluded that crystalline silica from occupational

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sources inhaled in the form of quartz or cristobalite is carcinogenic to humans (Group 1) [IARC Monograph; vol.68; June 1997]. However, in reaching its conclusion, IARC stated that the carcinogenicity in humans could not be found in all industries reviewed and that carcinogenicity might be dependent on inherent characteristics of crystalline silica or on external factors affecting biological activity (e.g., cigarette smoking) or distribution of its polymorphs.

ROUTES OF EXPOSURE

Swallowed

If ingested in sufficient quantity may cause irritation to the mouth & throat.

Eyes

Irritant, Exposure may result in lacrimation, irritation, pain, and redness.

Skin

Prolonged contact may result in irritation, itching, inflammation and possible skin rash.

Inhalation

Respirable dust from dried material may cause irritation to nose, throat and upper respiratory tract

12. ECOLOGICAL INFORMATION

These products are inert materials, which remain stable over the time. Silica occurs naturally as quartz, flint, diatomite, agate, chalcedony, chert and tridymite. It is not anticipated to have an adverse effect on the environment. Starch is a carbohydrate polymer, composed of 25% amylose, and 75% amyl pectin and occurs naturally in some foods.

No adverse effects of this material on the environment are anticipated.

13. DISPOSAL CONSIDERATIONS

Waste Disposal

Place in sealed, appropriately labelled plastic bags and dispose of in accordance with local authority guidelines.

14. TRANSPORT INFORMATION

Not regulated for transport purposes.

UN Number:	None Allocated
DG Class:	None Allocated
Subsidiary risk(s):	None Allocated
Packing Group:	None Allocated
Hazchem Code:	None Allocated
Tertiary risk(s):	None Allocated
EPG:	None Allocated

15. REGULATORY INFORMATION

Poison Schedule

None Available

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16. OTHER INFORMATION

Date of Revision for this SDS

27 June 2019

Revision Summary

5 year review of previous SDS. Minor formatting changes but no information was required to be updated.

Technical data sheet

For more information, please see the relevant technical data sheets.

Website

For further information connect to Morgan Advanced Materials, Thermal Ceramics' website:

<http://www.morganthermalceramics.com>

Precautionary Measures

Additional information and precautions to be considered upon removal of after service material
Continuous use of these products at temperatures above 900°C may, as with many other refractories, lead to the formation of cristobalite (a type of crystalline silica). Please refer to sections 2, 11 and to national regulation on crystalline silica.

High concentrations of dusts may be generated when after-service products are mechanically disturbed during operations such as wrecking. Therefore Thermal Ceramics recommends:

- a) control measures are taken to reduce dust emissions;
- b) all personnel directly involved wear an appropriate respirator to minimise exposure; and
- c) compliance with local regulatory limits.

NOTICE:

The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet. However safe as provided by law, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorisation given or implied to practice any patented invention without a licence. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product (however, this shall not act to restrict the vendor's potential liability for negligence or under statute).

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