

SAFETY DATA SHEET

(Following Regulations (EC) No 1907/2006 & (EC) No 1272/2008)

SDS Number: AR4 Date of first issue: 14 May 2015 Date of last revision: 21 February 2022

1 - Identification of product

1.1 - Identification of Product

Tradenames: Alcoat,

The above mentioned product is an aluminium resistant coating material.

This product contains Boric Acid in concentrations >5.5% w/w
 CAS number:10043-35-3
 EINECS Number:233-139-2

1.2 - Use of Product

This product is a monolithic refractory used in lining industrial furnaces, high temperature processing, kilns and metal melting applications.

1.3 - Identification of Company

IDENTIFICATION OF THE MANUFACTURER/SUPPLIER

Morgan Advanced Materials
 Thermal Ceramics
 30-36 Birralee Road, Regency Park, SA 5010, Australia
 Telephone: 1800 467 858
 Fax: 1800 467 850

Website

www.morganthermalceramics.com
 sds.tc@morganplc.com

1.4 - Emergency information

EMERGENCY CONTACT NUMBER

Tel 1: +91 (4172) 244 313 extn no. 215 or 201
 Language: English

Opening hours: Only available during office hours

2 - Hazard Identification

2.1 - Classification of the substance/ mixture

2.1.1 CLASSIFICATION ACCORDING TO REGULATION (EC) NO 1272/2008
 Classified as a category 1b reproductive toxin (H360FD)

2.2 - Labelling Elements

Component	Classification	Hazard pictogram & Symbol	H Statement
Boric Acid	(EC)No. 1272/2008.	GHS 08	H360FD

Hazard pictogram GHS 08 

Signal Word Danger
Hazard Statements May damage fertility or the unborn child (H360FD)
 Do not handle until all safety instructions have been read and understood. (P202)
 Use personal protective equipment as required. (P281)

Precautionary statements IF exposed or concerned: Get medical advice/attention (P308 + P313)
 Dispose of contents/container to in accordance with local requirements (P501)

2.3 - Other hazards which do not result in classification

Contains acidic liquid which is irritating to skin and could cause damage to eyes.
 Mild mechanical irritation to skin, eyes and upper respiratory system may result from an exposure to high dust concentrations. These effects are usually temporary.
 No known chronic respiratory health effects.

3 - Composition / Information On Ingredients

This product is applied by painting to surfaces required by thickness of 1-3 mm, which is non-wetted by aluminium and its alloys. Also resists corundum formation.

COMPONENT	% by weight	CAS No.	REACH Registration Number	Hazard Classification according to CLP
Alumina	< 70	1344-28-1	01-2119817795-27	Not classified as hazardous
Boric Acid	< 20	10043-35-3	01-2119486683-25	Repr 1B (H360FD)
Commissioning additives	< 1	Not Applicable	Not yet available	Not classified as hazardous
Water	< 45	7732-18-5	01-2119486683-25	Not classified as hazardous

None of the components are radioactive under the terms of European Directive Euratom 96/29.

4 - First-Aid measures

Skin

In case of skin irritation rinse affected areas with water and wash gently. Do not rub or scratch exposed skin.

Eyes

In case of eye contact flush abundantly with water; have eye bath available. Do not rub eyes. Seek medical attention if irritation persists.

Nose and Throat

If these become irritated move to a dust free area, drink water and blow nose. Seek medical attention if irritation persists.

If symptoms persist, seek medical advice.

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

No symptoms or effects expected either acute or delayed

4.3 - Indication of any immediate medical attention and special treatment required

No special treatment required, if exposure occurs wash exposed areas to avoid irritation.

5 - Fire-fighting measures

5.1 - Extinguishing media

Use extinguishing agent suitable for surrounding combustible materials.

5.2 - Special hazards arising from the substance or mixture

Non-combustible products,

5.3 - Advice for firefighters

Packaging and surrounding materials may be combustible.

6 - Accidental Release Measures

6.1 - Personal precautions, protective equipment and emergency procedures

Wear suitable goggles, gloves and protective clothing.

6.2 - Environmental precautions

Do not flush spillage to drain and prevent from entering natural watercourses.
For waste disposal refer to section 13

6.3 - Methods and materials for containment and clean up

Contain spillage, absorb in earth or sand and shovel into suitable containers

6.4 - Reference to other sections

For further information, please refer to sections 7 and 8

7 - Handling and storage

7.1 - Precautions for safe handling

Handling of dried product can be a source of dust emission and therefore the processes should be designed to limit the amount of handling. Whenever possible, handling should be carried out under controlled conditions (i.e., using dust exhaust system).
Regular good housekeeping will minimise secondary dust dispersal.

7.2 - Conditions for safe storage

Store in original packaging in a dry area.
Avoid freezing conditions and excessive heat, as properties may be impaired.
Avoid damaging the packaging.
Material supplied in plastic bucket.

7.3 - Specific end use

Please refer to your local Morgan Thermal Ceramics' supplier.

8 - Risk Management Measures / Exposures Controls / Personal Protection

8.1 - Control parameters

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. Examples of exposure limits applying (in November 2014) in different countries are given below:

COUNTRY	Total Dust (mg/m3)	Resp Dust (mg/m3)	Quartz (mg/m3)	Cristobalite (mg/m3)	Boric Acid ^a (mg/m3)	Source
EU BOELV			0.10	0.10		Carcinogens and Mutagens Directive (Directive 2004/37/EC)
Austria	10	6	0.10	0.10		Grenzwerteverordnung
Belgium	10	3	0.10	0.05	2	Valeurs limites d'exposition professionnelle – VLEP/ Grenswaarden voor beroepsmatige blootstelling – GWBB
Denmark	10	5	0.10	0.05		Grænseværdier for stoffer og materialer
Finland	10	No limit	0.05	0.05		Finnish Ministry of Social Affairs and Health
France	10	5	0.10	0.05		Institut National de Recherche et de Sécurité
Germany*	10	0.5*	0.05*	0.05*	0.5	TRGS 900
Hungary	10	No limit	0.10	0.10		EÜM-SZCSM rendelet
Ireland	10	4	0.05	0.05		HAS – Ireland
Italy	10	3	0.1	0.1		Uses EU values
Luxembourg	10	6	0.10	0.10		Agents Chimiques, Cancérigènes Ou Mutagènes Au Travail
Netherlands	10	5	0.075	0.075		SER
Norway	10	5	0.10	0.05		Veiledning om administrative normer for forurensning i arbeidsatmosfære
Poland	10	No limit	0.10	0.10		Dziennik Ustaw 2010
Spain	10	3	0.05	0.05		INSHT
Sweden	10	5	0.10	0.05	2	AFS 2005:17
Switzerland	10	6	0.10	0.10	10	SUVA - Valeurs limites d'exposition aux postes de travail
UK	10	4	0.10	0.10		EH40/2005

^a For all other countries, the exposure must be reduced to as low as reasonably practicable

Information on monitoring procedures

United Kingdom

MDHS 14/4 - "General methods for sampling and gravimetric analysis of respirable, thoracic and inhalable aerosols"
MDHS 101 - "Crystalline silica in respirable airborne dusts"

NIOSH

NIOSH 0500 "Particulates not otherwise regulated, total"
NIOSH 0600 "Particulates not otherwise regulated, respirable"
NIOSH 7500 "Silica, Crystalline, by XRD (filter redeposition)"

8.2 - Exposure controls

8.2.1 APPROPRIATE 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. Avoid brushing and compressed air.

If necessary, consult an industrial hygienist to design workplace controls and practices.

The use of products specially tailored to your application(s) will help to control dust. Some products can be delivered ready for use to avoid further cutting or machining. Some could be pre-treated or packaged to minimise or avoid dust release during handling.

Consult your supplier for further details

8.2.2 - Personal Protective Equipment

Skin protection:

Use of gloves and work clothes is recommended.

Soiled clothes should be cleaned before being taken off (e.g. use vacuum cleaning, not compressed air).

Eye protection:

As necessary wear goggles or safety glasses with side shields.

Respiratory protection:

For dust concentrations below the exposure limit value, RPE is not required but FFP2 respirators may be used on a voluntary basis.

For short-term operations where excursions are less than ten times the limit value use FFP2 respirators.

In case of higher concentrations or where the concentration is not known, please seek advice from your company and/or local Thermal Ceramics' supplier.

INFORMATION AND TRAINING OF WORKERS

Workers should be trained on good working practices and informed on applicable local regulations

8.2.3 - Environmental Exposure Controls

Refer to local, national or European applicable environmental standards for release to air water and soil.

For waste, refer to section13

9 - Physical and chemical properties

Information on basic physical and chemical properties

State	Not applicable
Colour	White ready mixed mixture of fine powders
Odour	White
Odour threshold	None
pH	Not Applicable
Melting point/freezing point	< 5
Initial boiling point and boiling point range	> 1400°C
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	<2 T/m ³
Solubility(ies)	Not applicable
Partition co-efficient: n-octanol/water	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Viscosity	Not applicable
Other safety information	Not applicable
Particle Characteristics	Not applicable
Explosive properties	Not applicable
Oxidising properties	Not applicable

10 - Stability and Reactivity

10.1 - Reactivity

The material is stable and non reactive.

10.2 - Chemical Stability

The product is inorganic, stable and inert

10.3 - Possibility of Hazardous Reactions

None

10.4 - Conditions to Avoid

Careful heat up of the product is essential to avoid rapid loss of the chemical combined water during heat up (see section 16).

10.5 - Incompatible Materials

None

10.6 - Hazardous decomposition products

None

11 - Toxicological information

Toxicokinetics, metabolism and distribution

11.1.1 BASIC TOXICOKINETICS

Exposure is predominantly by inhalation or ingestion, available toxicological information is as follows:

11.1.2 Human Toxicological data

No clear evidence of lung problems is attributable to exposure to alumina particles in spite of widespread and, in some cases, substantial exposure in various sectors of industry.

11.1 - Information on hazard classes as defined in Regulation (EC) No 1272/2008

Alumina Toxicity:

ACUTE TOXICITY

Lethal dose 50 % (LD50) / lethal concentration 50% (LC50): N.A.

EXPERIMENTAL STUDIES

In animal studies, no fibrosis or other lung effects was observed following repeated inhalation exposure levels of 20 mg/m³ and above. Although some absorption may occur from inhaled particles, there is no evidence that this is sufficient to cause systemic effects and any link with Alzheimer's disease is considered to be remote.

Boric Acid Toxicity:

Toxic Dose 1 - Lethal Dose 50% (LD50): 2660mg/kg (oral rat)

12 - Ecological information

12.1 - Toxicity

This product has not been tested as a complete mixture, however, ecological effects cannot be excluded in the event of improper handling or disposal

For Boric Acid:

LC50, 96hrs, Fish mg/l 78-155

EC50, 48hrs, Daphnia mg/l 133

12.2 - Persistence and degradability

Not established

12.3 - Bioaccumulative potential

Not established

12.4 - Mobility in soil

No information available

12.5 - Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

This mixture contains no substance considered to be very persistent and very bioaccumulative (vPvB).

12.6 - Endocrine Disrupting Properties

No additional information available

12.7 - Other adverse effects

13 - Disposal Considerations

13.1 - Disposal Considerations

14 - Transport information

14.1 - Transport information

15 - Regulatory information

15.1 - Regulatory information

16 - Other Information

16.1 - ADDITIONAL INFORMATION AND PRECAUTIONS TO BE CONSIDERED UPON REMOVAL OF AFTER SERVICE MATERIAL

16.2 - uses advised against

16.3 - NOTE

This Safety Data Sheet was originally produced in English and has subsequently been translated in to other languages; whilst every effort has been made to make this an accurate translation, please be aware that technical terms do not always translate correctly. The English version should always be considered as the reference version.

16.4 - Further Information

FURTHER INFORMATION

Further information can be found on

<http://www.morganthermalceramics.com/>

<http://www.ecfia.eu/>

<http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/workplace-exposure-standards-airborne-contaminants>

16.5 - Technical Datasheets

16.6 - Revision Summary

Content checked and revision date updated

16.7 - 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, 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 authorization given or implied to practice any patented invention without a license. 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.