

SAFETY DATA SHEET

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

SDS Number: 427 Date of first issue: 07 February 2013 Date of last revision: 21 February 2022

1 - Identification of product

1.1 - Identification of Product

Tradenames: FireMaster Paper IMG20,

The above-mentioned product contains mineral wool.

1.2 - Use of Product

Fire protection applications including door seals and linear gap seals

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 Not classified as hazardous according to Classification, Labelling and Packaging regulations (CLP) 1272/2008 EEC

2.2 - Labelling Elements

Not applicable

2.3 - 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

This product is an expanding intumescent paper

| COMPONENT | % by weight | CAS No. | REACH Registration Number | Hazard Classification according to CLP |
|-------------------------------|----------------|----------------|---------------------------------|---|
| Alkaline-earth silicate wools | 50-98 | 436083-99-7 | 01-2119457644-32 | Note Q exonerated |
| Acrylic binder | 2-15 | Not Applicable | Not yet available | Not classified as hazardous |

Man-made vitreous silicate fibres of random orientation with alkaline oxide and alkali earth oxides (Na₂O + K₂O + CaO + MgO + BaO) content greater than or equal to 18% by weight and fulfilling one of the Note Q critieria for exoneration from carcinogen classification

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.

Eyes

In case of eye contact flush abundantly with water; have eye bath available. Do not rub eyes. Seek medical attention is 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. However, virgin product binder may burn and produce gases and/or fumes.

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

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

Restore the situation to normal as quickly as possible.

6.2 - 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

6.3 - Methods and materials for containment and clean up

Pick up large pieces and use a vacuum cleaner. If brushes are used, ensure that the area is wetted down first. Do not use compressed air for clean up. Do not allow to become windblown.

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 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. Always use sealed and clearly labelled containers. Avoid damaging containers. Reduce dust emission during unpacking.

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) | MMVF (f/ml) | Fine Carbon Dust^ (mg/m3) | Source |
|-------------|-----------------------|-------------------------|----------------|---------------------------------|---|
| Austria | 10 | 6 | 1 | No limit | Grenzwerteverordnung |
| Belgium | 10 | 3 | 1 | 3.5 | Valeurs limites d'exposition professionnelle – VLEP/ Grenswaarden voor beroepsmatige blootstelling – GWBB |
| Denmark | 10 | 5 | 1 | 3.5 | Grænseværdier for stoffer og materialer |
| Finland | No limit | No limit | 1 | 3.5 | Finnish Ministry of Social Affairs and Health |
| France | 10 | 5 | 1 | 3.5 | Institut National de Recherche et de Sécurité |
| Germany* | 10 | 1,25 | 1 | No limit | TRGS 900 |
| Hungary | No limit | No limit | 1 | No limit | EüM-SZCSM rendelet |
| Ireland | 10 | 4 | 1 | 3.5 | HAS – Ireland |
| Italy | 10 | 3 | 1 | No limit | Uses EU values |
| Luxembourg | 10 | 6 | 1 | No limit | Agents Chimiques, Cancérigènes Ou Mutagènes Au Travail |
| Netherlands | 10 | 5 | 1 | No limit | SER |
| Norway | 10 | 5 | 0.5 | 3.5 | Veiledning om administrative normer for forurensning i arbeidsatmosfære |
| Poland | No limit | No limit | 2 | No limit | Dziennik Ustaw 2010 |
| Spain | 10 | 3 | 1 | 3.5 | INSHT |
| Sweden | 10 | 5 | 1 | 3 | AFS 2005:17 |
| Switzerland | 10 | 6 | 1 | No limit | SUVA - Valeurs limites d'exposition aux postes de travail |
| UK | 10 | 4 | 2 | 3.5 | EH40/2005 |

^ ^Where "No limit" is displayed, use the dust limits

Information on monitoring procedures

United Kingdom

MDHS 59 specific for MMVF: "Man-made mineral fibre - Airborne number concentration by phase-contrast light microscopy" and MDHS 14/4 "General methods for sampling and gravimetric analysis of respirable and inhalable dust"

NIOSH

NIOSH 0500 "Particulates not otherwise regulate, total" NIOSH 0600 "Particulates not otherwise regulate, respirable" NIOSH 7400 "Asbestos and other fibres by PCM"

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 pretreated or packaged to minimise or avoid dust release during handling. Consult your supplier for further details

8.2.2 - Personal Protective Equipment

Skin protection:

Wear gloves and work clothes, which are loose fitting at the neck and wrists. Soiled clothes should be cleaned to remove excess fibres before being taken off (e.g. use vacuum cleaner, not compressed air). Wash work clothes seperately from other clothing.

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 | Not Applicable |
|---|--|
| State | Grey or black paper or board with black speckle |
| Colour | Not appicable |
| Odour | None |
| Odour threshold | Not Applicable |
| pH | Not applicable |
| Melting point/freezing point | Not determined |
| Initial boiling point and boiling point range | Not applicable |
| Flash point | Not applicable |
| Evaporation rate | Not Applicable |
| Flammability (solid, gas) | The material will burn for a short period only until the polymeric binder is burnt out or the resulting expansion self-extinguishes |
| Upper/lower flammability or explosive limits | Not applicable |
| Vapour pressure | Not applicable |
| Vapour density | Not Applicable |
| Relative density | Not applicable |
| 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 | No further relevant information available. |
| Particle Characteristics | Not appicable |
| Explosive properties | Not applicable |
| Oxidising properties | Not applicable |
| 10 - Stability and Reactivity | |
| | |

10.1 - Reactivity

The product is stable

10.2 - Chemical Stability

The product is inorganic, stable and inert

10.3 - Possibility of Hazardous Reactions

None

10.4 - Conditions to Avoid

Please refer to handling and storage advice in Section 7

10.5 - Incompatible Materials

Strong oxidising agents, strong alkalis and hydroflouric acid

10.6 - Hazardous decomposition products

Decomposition of the polymeric binder will occur at tempatures above 200° C releasing smoke, H₂O, CO, CO₂ and hydrocarbons. When heated above 250° C the graphite will expand resulting in a thermally insulating char.

Hazardous Polymerisation: Will not occur.

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

RESPIRATORY TOXICITY FOR MINERAL WOOLS

Epidemiological studies of lung cancers reported in 1982 have been the subject of additional investigations and the examination of the confounding factors showed that the excess were not attributed to fibres. Smoking has been identified as the most important of these confounding factors.

RESPIRATORY TOXICITY FOR GRAPHITE

Cases of pneumoconiosis, pulmonary fibrosis and emphysema have been reported in workers following prolonged exposures to high levels of airborne graphite dust

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

Experimental Studies for Mineral Wools

Animal inhalation studies on mineral wools showed neither pulmonary fibrosis nor lung cancer nor mesothelioma. Intratracheal and intraperitoneal injection studies did not show any disease except those involving selected fine glass fibres for special uses or experimental rock wools.

Negative results have been obtained in animal studies (EU method B 4) for skin irritation. Inhalation exposures using the nose only route produce simultaneous heavy exposures to the eyes, but no reports of excess eye irritation exist. Animals exposed by inhalation similarly show no evidence of respiratory tract irritation. Human data confirms that only mechanical irritation, resulting in itching, occurs in humans following exposure to mineral wools

Skin contact with graphite dusts may cause temporary irritation due to mechanical effects: Repeated prolonged exposures may lead to dermatitis.

12 - Ecological information

12.1 - Toxicity

These products are inert materials that remain stable overtime.

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

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

To prevent waste materials from becoming airborne during waste storage, transportation and disposal, a covered container or plastic bagging is recommended.

For Australia, waste from these materials should be considered as hazardous waste and local waste authorities should be contacted for correct disposal methods.

For other countries, waste from these materials (even after use above 900°C) is not classified as hazardous waste and may generally be disposed of at a normal tipping site which has been licensed for the disposal of industrial waste. Taking into account any possible contamination during use, which may be classified as hazardous, expert guidance should be sought.

Such a waste is normally dusty (unless wetted) and so should be properly bagged and clearly labelled for disposal. At some tip sites dusty waste may be treated differently in order to ensure they are dealt with promptly and to avoid them being windblown. Check for national and /or regional regulations to identify all applicable disposal requirements.

14 - Transport information

14.1 - Transport information

14.1. UN number Not Applicable

14.2. UN proper shipping name Not Applicable

14.3. Transport hazard class(es) Not Applicable

14.4. Packing group Not Applicable

14.5. Environmental hazards Not Applicable

14.6. Special precautions for user Not Applicable

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not Applicable

15 - Regulatory information

15.1 - Regulatory information

The fibres contained in this product have been tested for bio persistance according to Note Q requirements under European Classification, Labelling and Packaging Regulations (EC/1272/2008) and it's subsequent amendments.

Based on these results they are exonerated from classification as carcinogens in Europe and Australia.

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

16.5 - Technical Datasheets

TECHNICAL DATA SHEETS

For more information on individual products please see the technical data sheet section at www.morganthermalceramics.com

16.6 - Revision Summary

Update to section 3

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.