



## **4 - First-Aid measures**

### **4.1 - Description of 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 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. 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**

Provide the workers with appropriate protective equipment until the situation is restored to normal (see section 8).

### **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**

The main application of these products is as thermal insulation. 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 national OELs (November 2014) are given in the table below.

COUNTRY	Total Dust (mg/m <sup>3</sup> )	Resp Dust (mg/m <sup>3</sup> )	MMMF (fibre/ml)	Source
Austria	10	6	1	Grenzwerteverordnung
Belgium	10	3	1	Valeurs limites d'exposition professionnelle – VLEP/ Grenswaarden voor beroepsmatige blootstelling – GWBB
Denmark	10	5	1	Grænseværdier for stoffer og materialer
Finland	No limit	No limit	1	Finnish Ministry of Social Affairs and Health
France	10	5	1	Institut National de Recherche et de Sécurité
Germany	10	1.25	No Limit	TRGS 900
Hungary	No limit	No limit	7	EüM-SZCSM rendelet
Ireland	10	4	1	HAS – Ireland
Italy	10	3	1	Uses EU values
Luxembourg	10	6	1	Agents Chimiques, Cancérigènes Ou Mutagènes Au Travail
Netherlands	10	5	1	SER
Norway	10	5	0.5	Veiledning om administrative normer for forurensning i arbeidsatmosfære
Poland	No limit	No limit	2	Dziennik Ustaw 2010
Spain	10	3	1	INSHT
Sweden	10	5	1	AFS 2005:17
Switzerland	10	6	1	SUVA - Valeurs limites d'exposition aux postes de travail
UK	10	4	2	EH40/2005

#### 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 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:

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 separately 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	White felt
Colour	Not applicable
Odour	None
Odour threshold	Not Applicable
pH	Not applicable
Melting point/freezing point	> 1400°C
Initial boiling point and boiling point range	Not applicable
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	200-400 kg/m3
Solubility(ies)	Less than 1 mg/l
Partition co-efficient: n-octanol/water	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not Applicable
Viscosity	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

Please refer to handling and storage advice in Section 7

### 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. Man made vitreous fibres and AES fibres of a similar size to Superwool *XTRA* have not been shown to migrate from the lung and/or gut and do not become located in other organs of the body. PAS fibres contained in the products listed in the title have been designed to be rapidly cleared from lung tissue. This low biopersistence has been confirmed using EU protocol ECB/TM/27 (rev 7) a short term biopersistence test by intratracheal instillation showing that the fibres longer than 20 µm have a weighted half-life less than 40 days as required for Note Q exoneration under Regulation 1272/2008. When inhaled, even at very high doses, similar fibres do not accumulate to any level capable of producing a serious adverse biological effect.

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

Superwool *XTRA* fibres are negative when tested using approved methods for irritancy (Directive 67/548/EEC, Annex 5, Method B4). Like all man-made mineral fibres and some natural fibres, fibres contained in this product can produce a mild mechanical irritation resulting in temporary itching or rarely, in some sensitive individuals, in a slight temporary reddening. Unlike other irritant reactions this is not the result of allergy or chemical skin damage, but is caused by mechanical effects.

## 12 - Ecological information

### 12.1 - Toxicity

These products are insoluble materials that remain stable overtime and are chemically identical to inorganic compounds found in the soil and sediment; they remain inert in the natural environment.

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

Waste from these materials may be generally disposed off at a landfill, which has been licensed for this purpose. Please refer to the European list (Decision N° 2000/532/CE as modified) to identify your appropriate waste number, and insure national and/or regional regulations are complied with.

Unless wetted, such a waste is normally dusty and so should be properly sealed in containers for disposal. At some authorised disposal sites, dusty waste may be treated differently in order to ensure they are dealt with promptly to avoid them being windblown. Check for any national and/or regional regulations, which may apply.

### 14 - 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 - Safety health and environment regulations/legislation specific for the substances or mixtures

FIBRE TYPE DEFINITION ACCORDING TO REGULATION (EC) No 1272/2008 AMENDING AND REPEALING DIRECTIVES 67/548/EEC AND 1999/45/EC, AND AMENDING REGULATION (EC) No 1907/2006.

According to Regulation 1272/2008 the fibre contained in this product is a mineral wool belonging to the group of "man-made vitreous (silicate) fibres with random orientation with alkaline earth oxide ( $\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$ ) content greater to 18% by weight". (Table 3.2 Index number 650-016-00-2).

Under 1.1.3.1. (Note Q) of Annex VI of regulation (EC) 1272/2008 the classification as a carcinogen 2 needs not apply on the basis of short term biopersistence test by intratracheal installation showing a half life of less than 40 days for fibres longer than 20  $\mu\text{m}$ . Fibres contained in the products listed in the title are exonerated from carcinogen classification as they show a half life of less than 40 days when measured by the methods specified in European Union regulations (EU protocol ECBT/TM/27 (rev 7)).

1<sup>st</sup> Adaptation of Technical Progress of regulation (EC) N°1272/2008 of 10 August 2009 has removed skin irritancy classification for man-made vitreous (silicate) wools.

Fibres contained in this product are therefore free of any classification and do not require labelling under CLP regulation.

#### PROTECTION OF WORKERS

Shall be in accordance with several European Directives as amended and their implementations by the Member States:

- Council Directive 89/391/EEC dated 12 June 1989 "on the introduction of measures to encourage improvements in the safety and health of workers at work" (OJEC (Official Journal of the European Community) L 183 of 29 June 1989, p.1).
- Council Directive 98/24/EC dated 7 April 1998 "on the protection of workers from the risks related to chemical agents at work" (OJEC L 131 of 5 May 1998, p.11).

#### OTHER POSSIBLE REGULATIONS

Member States are in charge of implementing European Directives into their own national regulation within a period of time normally given in the Directive. Member States may impose more stringent requirements. Please always refer to any national regulation.

#### 15.2 - Chemical Safety Assessment

Chemical Safety Reports have been requested from suppliers, as soon as this information is available it will be shared with downstream users.

### 16 - Other Information

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

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

The trade association representing the European high temperature insulation wool industry (ECFIA) has undertaken an extensive hygiene programme for High Temperature Insulation Wool (HTIW). The objectives are twofold: (i) to monitor workplace dust concentrations at both manufacturers' and customers' premises, and (ii) to document manufacturing and use of HTIW products from an industrial hygiene perspective in order to establish appropriate recommendations to reduce exposures. The initial results of the programme have been published. If you wish to participate in the CARE programme, contact ECFIA or your Thermal Ceramics' supplier.

#### 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.

For more information connect to:

The Morgan Thermal Ceramics' website: (<http://www.morganthermalceramics.com/>)  
Or ECFIA's website: (<http://www.ecfia.eu>)

#### Revision Summary

Update to section 15

#### Technical data sheets

For more information on individual products please see the relevant technical data sheet listed below:

Product Datasheet Code

#### NOTICE:

The information presented herein is based on data considered to be accurate as of the date of preparation of this Material 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).