MATERIAL SAFETY DATA SHEET

(MATERIAL SAFETY DATA SHEET (EUROPEAN))

MSDS NUMBER 6000E Revision 1
According to 2001/58/EC
DATE OF ISSUE 30th April 2009
DATE OF LAST REVISION: 30th April 2009

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

IDENTIFICATION OF THE SUBSTANCE

TRADE NAMES: Excelfrax 550 Felt
DENOMINATION: Glass wool (MMVF)

IDENTIFICATION OF THE MANUFACTURER AND SALES CONTACTS

<table>
<thead>
<tr>
<th>GERMANY</th>
<th>UK</th>
<th>FRANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unifrax GmbH</td>
<td>Unifrax Limited</td>
<td>Unifrax France</td>
</tr>
<tr>
<td>Kappeler Straße 105</td>
<td>Mill Lane, Rainford</td>
<td>17 Rue Antoine Durafour</td>
</tr>
<tr>
<td>40597 Düsseldorf</td>
<td>St Helens, Merseyside</td>
<td>42420 Lorette, France</td>
</tr>
<tr>
<td>Tel.: +49(0)211 87746 0</td>
<td>Tel: + 44 (0) 1744 88 7600</td>
<td>Tel.: +33(0)4-7773-7000</td>
</tr>
<tr>
<td>Fax.: +49(0)211 87746 115</td>
<td>Fax: + 44 (0) 1744 9916</td>
<td>Fax:+33(0)4-7773-3991</td>
</tr>
</tbody>
</table>

SALES CONTACTS ONLY

<table>
<thead>
<tr>
<th>SPAIN</th>
<th>ITALY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unifrax Spain</td>
<td>Unifrax Italia Srl</td>
</tr>
<tr>
<td>Cristobal Bordu 20</td>
<td>Via Volontorio 19</td>
</tr>
<tr>
<td>Madrid 28003</td>
<td>Saronno (Va) 21047</td>
</tr>
<tr>
<td>Spain</td>
<td>Italy</td>
</tr>
<tr>
<td>Tel: + 34 91 395 2279</td>
<td>Tel: + 39 02 967 01 808</td>
</tr>
<tr>
<td>Fax: + 34 91 395 2124</td>
<td>Fax: + 39 02 962 5721</td>
</tr>
</tbody>
</table>

Occupational Hygiene and CARE: Tel: + 44 (0) 1744 887603. Fax: + 44 (0) 1744 886173

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2. HAZARDS IDENTIFICATION

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

3. COMPOSITION / INFORMATION OF INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NUMBER</th>
<th>SYMBOL</th>
<th>R PHRASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass wool</td>
<td>65997-17-3</td>
<td>Xn</td>
<td>R40</td>
</tr>
</tbody>
</table>

COMPOSITION
Excelfrax 550 is composed of specially blended glass fibres and contains no binders.

DESCRIPTION
**Excelfrax 550 Felt** is an inorganic self-supporting insulation material available in the form of a felt mat.

Use of the product
Application as thermal insulation at temperature up to 550°C, in various industrial process equipment including automotive and domestic appliance industries.

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.

NOSE AND THROAT:
Move to a dust free area, drink water and blow nose.

5. FIRE-FIGHTING MEASURES

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

6. ACCIDENTAL RELEASE MEASURES

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

Prevent further dust dispersion for example by damping the materials.
METHODS FOR CLEANING 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.
Check for local regulations, which may apply.

For wastes disposal refer to section 13

7. HANDLING AND STORAGE

HANDLING / TECHNIQUES TO REDUCE DUST EMISSIONS DURING HANDLING

HANDLING
Handling can be a source of dust emission.
The Process or processes should be designed to limit the amount of handling. Whenever possible, handling should be carried out under controlled conditions (i.e., use dust exhaust system).
Regular good housekeeping will minimise secondary dust dispersal.

STORAGE
Store in original packaging in dry area whilst awaiting use
Always use sealed and visibly labelled containers.
Avoid damaging containers.
Reduce dust emission during unpacking.
Emptied containers, which may contain debris, should be cleaned before disposal or recycling.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

HYGIENE STANDARDS AND CONTROL MEASURES

Hygiene standards and occupational exposure limits may vary between countries and local jurisdictions. Check which exposures apply to your facility. 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 to mineral wool in different countries are given below:

Examples of exposure limits* in January 2009 are given below:

<table>
<thead>
<tr>
<th>Country</th>
<th>Limit</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>3.0 mg/m³</td>
<td>TRGS 900, Bunderarbeitsblatt 2005 **</td>
</tr>
<tr>
<td>France</td>
<td>1.0 f/ml</td>
<td>Circulaire DRT no 95-4 du 12/01/95</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>2.0 f/ml</td>
<td>HSE EH40 Workplace Exposure Limit</td>
</tr>
</tbody>
</table>

* Respirable dust, TRGS 900 does not specify an exposure limit in f/ml.

8-hr time weighted average concentrations of airborne respirable fibres measured using the conventional membrane filter method

** Engineering CONTROLS
Review your application(s) 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 material handling equipment.

Keep the workplace clean. Use a vacuum cleaner fitted with an HEPA filter; avoid brushing and using compressed air.

PERSONAL PROTECTIVE EQUIPMENTS

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).

EYE PROTECTION
As necessary wear goggles or safety glass 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 your supplier.

INFORMATION AND TRAINING OF WORKERS
Workers should be trained on good working practices and informed on applicable local regulations.

ENVIRONMENTAL EXPOSURE CONTROLS
Refer to local, national or European applicable environmental permitted standards for release to air, water and soil.
For waste, refer to section13

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Melting point</th>
<th>Density</th>
<th>Appearance</th>
<th>Explosive properties</th>
<th>Odour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid</td>
<td>700°C</td>
<td>130kg/m³</td>
<td>White</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Flammability</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH (1000g/l H₂O)</td>
<td>NA</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID | MATERIALS TO AVOID | N.A.
DECOMPOSITION PRODUCTS | None |

11. TOXICOLOGICAL INFORMATION

Irritant Properties
All man made mineral fibres, can produce a mild mechanical irritation resulting in itching or rarely, in some
sensitive individuals, in slight reddening. Unlike other irritant reactions this is not the result of allergy or chemical skin damage but is caused by a temporary mechanical effect.

12. ECOLOGICAL INFORMATION

These products are inert materials, which remain stable overtime. No adverse effects of this material on the environment are anticipated.

13. DISPOSAL CONSIDERATIONS

Waste from these products are classed as non hazardous and may generally be disposed of at landfill, which has been licensed for this purpose. Please refer to the European list (Decision no 2000/532/CE as modified) to identify your appropriate waste number, and insure national and or regional regulation are complied with. Taking into account any possible contamination during use, expert guidance should be sought.

Unless wetted, such a waste is normally dusty and so should be properly sealed in clearly labelled 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 wind blown. Check for national and/or regional regulations, which may apply.

14. TRANSPORT INFORMATION

Not classified as dangerous goods under relevant international transport regulations (ADR, RID, IATA, IMDG Refer Section 16 “Definitions”).

Ensure that dust is not wind blown during transportation.

15. REGULATORY INFORMATION

Fibre type definition according to Directive 67/548/EEC


According to Directive 67/548/EEC, the fibre contained in this product is a glass wool belonging to the group of “man made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na₂O +K₂O+CaO+MgO+BaO) content greater than 18% by weight”.

This applies for sales in the European Union

PROTECTION OF WORKERS

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


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 national regulations.

16. OTHER INFORMATION

USEFUL REFERENCES (the directives which are cited must be considered in their amended version)


TRGS 521 : Faserstaube 5/2000 - Germany

DEFINITIONS

ADR – Transport by road, council directive 94/55/EC
IMDG – Regulations relating to transport by sea
ICAO/IATA - Regulations relating to transport by air

NOTE

The directives and subsequent regulations detailed in this Material Safety Data Sheet are only applicable to the European Union (EU) Countries and not to countries outside of the EU.

NOTICE:
The information presented here in is based on data considered to be accurate as of the date of preparation of this Material 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 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.