Section 1: Identification of the substance/mixture and of the company/undertaking

<table>
<thead>
<tr>
<th>1.1</th>
<th>Product Identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mineral fibre insulation material Firefly Flex 1000 (FFF1000)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.2</th>
<th>Relevant identified uses of the substance or mixture and uses advised against</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wide range of applications such as high and low temperature thermal insulation in industrial processes, heating systems and construction.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.3</th>
<th>Details of the supplier of the safety data sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TENMAT Limited</td>
</tr>
<tr>
<td></td>
<td>Ashburton Road West</td>
</tr>
<tr>
<td></td>
<td>Trafford Park</td>
</tr>
<tr>
<td></td>
<td>Manchester M17 1TD</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
</tr>
<tr>
<td></td>
<td>Tel: +44 (0)161 872 2181</td>
</tr>
<tr>
<td></td>
<td>Fax: +44 (0)161 872 7596</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:sales@tenmat.com">sales@tenmat.com</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.4</th>
<th>Emergency telephone number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+44 (0)161 872 2181</td>
</tr>
<tr>
<td></td>
<td>+44 (0)161 955 2446 (24 hours)</td>
</tr>
</tbody>
</table>
Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:
Not classified.

Classification according to Directive 67/548/EEC or 1999/45/EC:
Not classified.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]:
Not applicable.

Supplemental hazard information (EU):
This product is not hazardous in the form in which it is shipped by the manufacturer.

However, there may be low levels of dust as a result of downstream activities (eg, cutting) that contain low bio-persistence mineral fibres.

This product does not contain substances that meet the criteria for PBT or vPvB according to Annex XIII of REACH.

2.3 Other hazards

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

Section 3: Composition/information on ingredients

This product is an insulation sheet made from varying amounts of low bio-persistence mineral fibres, and binders.
Section 4: First Aid Measures

4.1 Description of first aid measures

<table>
<thead>
<tr>
<th>4.1</th>
<th>Description of First Aid Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>General Information:</strong></td>
</tr>
<tr>
<td></td>
<td>The main hazards arise from downstream activities such as cutting and machining.</td>
</tr>
<tr>
<td></td>
<td><strong>Following Inhalation:</strong></td>
</tr>
<tr>
<td></td>
<td>Avoid breathing dust. If breathing difficulties are experienced whilst machining, remove to fresh air or a ventilated area and seek medical advice.</td>
</tr>
<tr>
<td></td>
<td><strong>Following Skin Contact:</strong></td>
</tr>
<tr>
<td></td>
<td>If possible, vacuum excessive dust from clothes as well as skin and hair. Wash and clean contaminated skin with soap and clean water. Clothes should be washed professionally.</td>
</tr>
<tr>
<td></td>
<td><strong>Following Eye Contact:</strong></td>
</tr>
<tr>
<td></td>
<td>In case of eye contact, Irrigate abundantly with water. Seek medical attention.</td>
</tr>
<tr>
<td></td>
<td><strong>Following Ingestion:</strong></td>
</tr>
<tr>
<td></td>
<td>If small quantities are ingested, seek medical advice.</td>
</tr>
<tr>
<td></td>
<td><strong>Self-Protection for First Aider:</strong></td>
</tr>
<tr>
<td></td>
<td>Wear suitable personal protective equipment to avoid inhaling dust.</td>
</tr>
</tbody>
</table>

4.2 Most Important Symptoms and Effects, both Acute and Delayed

<table>
<thead>
<tr>
<th>4.2</th>
<th>Most Important Symptoms and Effects, both Acute and Delayed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Symptoms:</strong> No symptoms expected.</td>
</tr>
<tr>
<td></td>
<td><strong>Effects:</strong> No effects expected.</td>
</tr>
</tbody>
</table>

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

<table>
<thead>
<tr>
<th>4.3</th>
<th>Indication of any Immediate Medical Attention and Special Treatment Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Notes for doctor:</strong> None required</td>
</tr>
<tr>
<td></td>
<td><strong>Special Treatment:</strong> None required.</td>
</tr>
</tbody>
</table>
Section 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media:
Not flammable.

Unsuitable extinguishing media:
Not applicable.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products:
There is the possibility of release of gaseous oxidation products from organic binders during initial heating up to around 400 °C.

5.3 Advice for fire-fighters

None required.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:
Avoid inhaling dust.

Protective equipment:
Protective clothing should be provided for operators along with protective equipment shown in Section 8.

Emergency procedures:

For emergency responders:
Avoid inhaling dust.

Personal protective equipment:
Protective clothing should be provided along with protective equipment shown in Section 8.
6.2 Environmental precautions
Prevent spread of dust by dampening any dust spillages. Check local regulations before rinsing or flushing to drain.

6.3 Methods and materials for containment and cleaning up

For containment:
Dampen down any dust spillages as soon as possible. Do not allow dust to be dispersed by wind.

For cleaning up:
Remove large pieces of sheet by hand and use a vacuum cleaner to remove dust. If a brush is used ensure that dust is dampened beforehand.
Do not allow dust to be dispersed by use of compressed air.
Dust and pieces of sheet should be packaged into impermeable plastic sacks which should be sealed. Such waste should then be disposed of according to local regulations.

6.4 Reference to other sections
Section 7 for Handling and Storage and Section 8 for protective equipment.

Section 7: Handling and storage

7.1 Precautions for safe handling

Protective measures:
No special protective measures are normally required.

Fire prevention:
Products are not flammable.

Aerosol and dust generation prevention:
Small amounts of dust may be generated if sheets are allowed to abrade against each other.

Environmental precautions:
No special precautions are required.

Advice on general occupational hygiene:
Wear protective clothing.
### 7.2 Conditions for safe storage, including any incompatibilities

#### Technical measures and storage conditions:
Both un-machined and machined sheets should be packed to prevent movement, abrasion during transit and absorption of water.

Otherwise normal safe precautions for storage can be used.

To avoid damage and distortion, store on a smooth level surface, in a fully supported position off the ground and in a dry place.

#### Packaging materials:
Card cartons.

#### Requirements for storage rooms and vessels:
Dry location.

#### Hints on storage assembly:
Mineral fibre insulation sheets are not considered to be dense materials but care should be taken not to exceed safe working loads for equipment and storage shelves or racks.

#### Storage class:
N/A

#### Materials to avoid:
No special requirements.

#### Further information on storage conditions:
N/A

### 7.3 Specific end uses:

#### Recommendations:
N/A

#### Specific end uses:
See references to dust hazards during cutting and machining, Section 4.

---

**Section 8: Exposure controls/personal protection**

#### 8.1 Control Parameters
Reference should be made to local and country-specific occupational exposure limits for
dust and low bio-persistence mineral fibres.

UK monitoring methods can be found as follows:

MDHS 59 – Machine-made fibres airborne number concentration and classification by phase contrast light microscopy.

NIOSH 0500 – Particulates not otherwise regulated, total
NIOSH 0600 – Particulates not otherwise regulated, respirable.
NIOSH 7400 – Asbestos and other fibres by PCM

8.2 Exposure Controls
Fit and use appropriate local exhaust ventilation systems for cutting and machining operations.

Maintain a clean workplace using a vacuum cleaner.

Section 9: Physical and chemical properties

9.1 Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Solid material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Fibrous sheet</td>
</tr>
<tr>
<td>Colour</td>
<td>Buff</td>
</tr>
<tr>
<td>Odour</td>
<td>N/A</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>N/A</td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>Melting/Freezing Point</td>
<td>Does not melt. Maximum working temperature 1000 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash point</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>N/A</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>N/A</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>N/A</td>
</tr>
<tr>
<td>Upper explosive limit</td>
<td>N/A</td>
</tr>
<tr>
<td>Lower explosive limit</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapour density</td>
<td>N/A</td>
</tr>
<tr>
<td>Relative density</td>
<td>250 kg.m³</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not soluble in water</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water</td>
<td>N/A</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Section 10: Stability and reactivity

10.1 Reactivity
Stable and non-reactive

10.2 Chemical Stability
Stable and inert.

10.3 Possibility of Hazardous Reaction
There is the possibility of release of gaseous oxidation products from organic binders during initial heating up to around 400 °C. It is recommended that the work area is ventilated until the oxidation product gases have dispersed.

10.4 Conditions to Avoid
Exposure to water.

10.5 Incompatible Materials
None.

10.6 Hazardous Decomposition Products
None.

Section 11: Toxicological Information

11.1 Information on Toxicological Effects

Exposure is mainly to low levels of dusts generated during downstream activities such as cutting and machining.

Low bio-persistence mineral fibres as used in these products have been developed to be quickly and effectively cleared from lung tissues.
Safety Data Sheet
according to Regulation (EC) No 1907/2006 (REACH)

Trade Name: FireFly Flex 1000 (FFF1000)

Revision Date: 4th August 2016

Acute Effects

<table>
<thead>
<tr>
<th>Acute Inhalation Toxicity</th>
<th>Nose and throat irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Irritation</td>
<td>Mild irritation</td>
</tr>
<tr>
<td>Eye Irritation</td>
<td>Irritation</td>
</tr>
</tbody>
</table>

Chronic Effects

| Respiratory or Skin Sensitisation | Irritation of both the respiratory tract and skin is by mechanical means and is not the result of an allergic reaction or chemical damage. |

Section 12: Ecological Information

12.1 Toxicty
These products are insoluble in water and remain stable over time. The major constituents are similar in their chemical composition to naturally occurring minerals.

12.2 Persistence and Degradability
Not established.

12.3 Bio-accumulative Potential
Not established.

12.4 Mobility in Soil
No information available.

12.5 Results of PBT and vPvB Assessment
These products do not contain substances that are considered as either PBT or vPvB.

12.6 Other Adverse Effects
No other additional information available.

Section 13: Disposal Considerations

13.1 Waste Treatment Methods

Product/Packaging Disposal:
Packaging can be cleaned and recycled.

Waste Treatment Options:
Waste from these products may be disposed of in landfill according to local regulations.

Section 14: Transport Information

| 14.1 | UN Number | N/A |
| 14.2 | UN Proper Shipping Name | N/A |
| 14.3 | Transport Hazard Class(es) | N/A | Hazard Labels |
| 14.4 | Packing Group | N/A |
| 14.5 | Environmental Hazards | N/A |
| 14.6 | Special Precautions for User | N/A |
| 14.7 | Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code | N/A |

Section 15: Regulatory Information

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

EU Regulations
Regulation (EC) No 1907/2006, 18th December 2006, on Regulation, Evaluation, Authorisation and Restriction of Chemicals (REACH)

The 7th Adaptation to Technical Progress (ATP) to Regulation (EC) No 1272/2008 was published on 15th July 2015.

**Worker Protection**
In accordance with the following directives and their amendments:


15.2 **Chemical Safety Assessment**
Available on request.

---

Section 16: **Other Information**

16.1 **Indication of Changes**
All sections updated 4th August 2016

16.2 **Abbreviations and Acronyms**
None used.

16.3 **Key Literature References and Sources of Data**
See main sections.

16.4 **Classification for Mixtures and Used Evaluation Method According to Regulation (EC) 1207/2008 [CLP]**
See Section 2.

16.5 **Relevant R-, H- and EUH Phrases (Number and Text)**
N/A

16.6 **Training Advice**
See Tenmat Fire Fly Flex FFF 1000 Technical Brochure for information on use.

16.7 **Further Information**
For further information visit [www.tenmat.com](http://www.tenmat.com)