### 1. Product and company identification

**Product**: T 1777 Surfacing Veil  
**Company**: Freudenberg Vliesstoffe KG (D-79389 Neuenburg)  
**Telephone / Telefax**: +49 7631 71-0 / +49 7631 73607  
**Informing department**: Produktentwicklung Naßvliesstoffe  
**Telephone / Telefax**: +49 7631 71-263 / +49 7631 7929054  
**E-mail address**: holger.schilling@freudenberg-nw.com

### 2. Possible hazards

**Special hazards information**: No hazardous product under normal conditions.  
**Accidental thermal decomposition and/or (partially) melting state can present hazards, see pt. 10.**

### 3. Composition / information on ingredients

This document provides safety-related information created on a voluntary basis. As nonwovens are generally not hazardous materials, a Material Safety Data Sheet (MSDS) is not legally required or obligatory for such products. The TSIS is an alternative means of transferring essential hazard information (including information on handling, storage, transport and actions in case of emergency) from the supplier of the nonwoven product to the recipient. The information content is based on the EC regulation for MSDS (EC 1907/2006).

The information of this TSIS has been developed by the supplier on express request of its customer and to the best of today's knowledge. The supplier does not assume any liability with respect to the correctness and/or completeness of this information. The TSIS does not release the customer from a possible duty to check all safety relevant properties of the nonwoven referring to official information on the local obligations.

**Chemical characterization (product)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Wet-laid nonwoven, chemically bonded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main components</td>
<td>Fibre type(s): C-glass</td>
</tr>
<tr>
<td></td>
<td>Binder type(s): Polyacrylate</td>
</tr>
<tr>
<td>Side components, additives</td>
<td>Fibre additives (e.g. spin finishes, delustering, etc.)</td>
</tr>
<tr>
<td></td>
<td>Process auxiliaries (e.g. dispersing agents, defoamer, etc.)</td>
</tr>
<tr>
<td>Finishing</td>
<td>None</td>
</tr>
<tr>
<td>Further information</td>
<td>None</td>
</tr>
</tbody>
</table>

### 4. First-aid measures

**Under normal conditions**

- **Inhalation**: ... not applicable  
- **Skin contact**: ... no specific measures to be taken  
- **Eye contact**: ... no specific measures to be taken  
- **Ingestion**: ... no specific measures to be taken  
- **Information for the doctor**: ... no specific measures to be taken

### 5. Fire-fighting measures

**Suitable extinguishing media**: All common extinguishing media (e.g. water, CO2, sand)  
**Unsuitable extinguishing media**: None  
**Special hazards due to combustion products or emerging gases**: Ref. to formation of flammable and toxic combustion products, as well as skin contact with molten material, see pt. 10.  
**Ref. to disposal of unburned residues and contaminated extinguishing media**: see pt. 12  
**Special protective equipment**: In event of fire it is advisable to wear a self-contained breathing apparatus.
## 6. Accidental release measures

<table>
<thead>
<tr>
<th>Personal precautions</th>
<th>No specific measures to be taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental precautions</td>
<td>No specific measures to be taken</td>
</tr>
<tr>
<td>Procedure for cleaning / absorption</td>
<td>No specific measures to be taken</td>
</tr>
</tbody>
</table>

## 7. Handling and storage

| Handling | Ref. to exposure controls and personal protection in case of mechanical-thermal treatment / processing, see pt. 8, otherwise no specific measures to be taken. |
| Protection against fire and explosion | No specific measures to be taken |
| Storage | Storage under cool, dry and light-protected conditions is recommended (storage temperature max. 40°C, avoidance of high relative air-humidity, formation of condensed water and direct solar radiation). |

## 8. Exposure controls and personal protection

**Technical protective measures**
- During mechanical-thermal processing (e.g. grinding, cutting, laminating), irritant (fibre) dusts and traces of irritant volatile components may possibly be released. In these cases vacuum equipment should be present or at least proper ventilation should be implemented.

**Components with workplace-related exposure limits (to be monitored)**
- None

**Personal protective equipment**
- If (fibre) dusts are released in higher extent during mechanical-thermal processing, ...
- the use of a respirator is recommended...

**Respiratory protection**
- ... the use of a respirator is recommended...

**Hand protection**
- ... wearing of protective gloves or at least the application of a barrier cream is recommended, ...

**Eye protection**
- ... wearing of safety glasses is recommended, ...

**Skin protection**
- ... avoidance of intense skin contact is recommended, ...
- otherwise no specific measures to be taken.

**General safety and hygiene measures**
- Precautions similar to handling of chemicals are recommended.

## 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>White</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Boiling point resp. range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting point resp. range</td>
<td>Decomposition / Dissimilation (at least partially) above ca. 250°C</td>
</tr>
<tr>
<td>Flash point / Ignition temperature</td>
<td>Not easily inflammable / Not tested</td>
</tr>
<tr>
<td>Autoignition</td>
<td>Not tested</td>
</tr>
<tr>
<td>Explosion hazard / Explosion limits</td>
<td>Not liable to explode / Not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>ca. 0.1</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Not tested (Product contains traces of water-soluble ingredients)</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Binder system is &quot;soluble&quot; / &quot;softening&quot; in styrene (resp. in common styrene containing resins for manufacturing of FRP parts)</td>
</tr>
<tr>
<td>pH value</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Further information</td>
<td>None</td>
</tr>
</tbody>
</table>
10. Stability and reactivity
   Conditions to avoid
   Product may (at least partially) melt and/or decompose at
   temperatures above ca. 250°C. Decomposition is enhanced
   resp. accelerated in case of contact with below mentioned
   substances to avoid.
   Substances to avoid
   Strong alkalis, strong (oxidizing) acids
   Hazardous decomposition products
   Under thermal-chemical decomposition resp. in case of fire
   flammable and toxic fumes may be generated (as e.g. carbon
   monoxide (CO)). Type and amount of decomposition and oxidation
   products are subjected to specific (fire) conditions.
   Further information
   (Partially) molten product must not come in contact with the
   skin, because it may stick and cause strong burns.

11. Toxicological information
   Acute toxicity
   ... not applicable / not known
   Inhalation effects
   ... not applicable / not known
   Sensitization
   ... not applicable / not known
   Subacute to chronic toxicity
   ... not applicable / not known
   Carcinogenicity, mutagenicity, teratogenicity
   ... not applicable / not known
   Experience from practise
   None
   Further information
   Under thermal-chemical decomposition resp. in case of fire
   toxic substances may be generated, see pt. 10.

12. Ecological information
   Biodegradability
   Not biodegradable
   Ecotoxicity
   No ecotoxic effects are to be expected for regular transportation,
   storage and daily use.
   Further ecological information
   In event of fire, unburned residues as well as contaminated
   extinguishing media must be disposed of in compliance with
   existing regulations.

   General information
   Product can be disposed off as non hazardous solid waste in
   compliance with existing regulations (e.g. by incineration or landfill).
   Disposal code no. / AVV-Code
   040222

14. Transport Information
   Product is under normal conditions no hazardous good according to
   existing transport regulations.

15. Regulatory information
   Labelling according to EC regulations
   Product needs not be labelled according to existing EC regulations.
   National regulations
   Product is not subjected to special national regulations for daily use
   (e.g. German chemicals act or direction on hazardous materials).

16. Other information
    None
Freudenberg
Vliesstoffe KG

Technical Safety Information Sheet for Nonwovens
on a voluntary basis (TSIS)
according to EC 1907/2006
for product(s):  

T 1777 Surfacing Veil

All information mentioned above is based on the present state of our knowledge and experience. The TSIS describes the product with regard to general safety requirements. The information does not guarantee certain properties. Recipients of the product must take their own responsibility for observing existing (local) laws and regulations.

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