

# Material safety data sheet

## PTFE glass, silicone adhesive backed

### 1: IDENTIFICATION

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#### 1.1 Product Identifier

Product name: PTFE-coated glass fabric with silicone adhesive

#### 1.2 Relevant identified use of the product

Industrial applications where high chemical and temperature resistance and excellent release is required

#### 1.3 Details of the supplier of the material data safety sheet

Company: HARDICK BV

Address: Thermen 5  
7521PS, Enschede  
The Netherlands

E-mail: @[hardick.nl](mailto:info@hardick.nl)

Telephone: +31 53 435 32 35

### 2: HAZARD IDENTIFICATION

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#### 2.1 Classification of the product

Our products are articles according Article 3 (3) of Regulation (EC) No. 1907/2006 (REACH) and therefore not subject of any legal requirements regarding Material Safety Data Sheets, safety assessment or testing.

#### 2.2 Label elements

Symbol: None

Signal word: Not applicable

Hazard statement: Not applicable

Precautionary statement: P261 – Avoid breathing any fume or dust that may be generated  
P264 – Wash hands thoroughly after handling  
P370 – In case of fire: Wear facemask and self-contained breathing apparatus

## 2.3 Other hazards

The products are considered nonhazardous when used according to accepted practices for the intended use. Cut offs are very slippery when on the floor and can cause slipping. Material dust caused by cutting, sawing or sanding may cause eye and/or skin irritation.

Exposure to fumes generated if the product is heated above 400°C (752°F) may result in “Polymer Fume Fever”-flu-like symptoms (chills, fever, tightness in the chest), appearing two or more hours after exposure and subsiding within 36 to 48 hours. Remove patient to fresh air and consult a physician if severe.

Thermal degradation of the product at temperatures over 400°C (752°F) yields a range of highly toxic and corrosive products like carbonyl fluoride, hydrogen fluoride, carbon dioxide and carbon monoxide.

## 3: COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Substances

Not applicable

### 3.2 Mixtures

| Ingredient              | CAS#       | % by Weight | Exposure limits <sup>1</sup>                                      | Symbol | Risk phrases |
|-------------------------|------------|-------------|-------------------------------------------------------------------|--------|--------------|
| Polytetrafluoroethylene | 9002-84-0  | 25 – 57     | N/A                                                               | None   | None         |
| Glass fiber cloth       | 65997-17-3 | 33 – 49     | OSHA PEL – 5 mg/m <sup>3</sup><br>ACGIH TLV – 5 mg/m <sup>3</sup> | None   | None         |
| Silioxane adhesive      | 556-67-2   | 7 – 19      |                                                                   | None   | None         |
| PVC liner               | 9002-86-2  | 7 – 19      |                                                                   | None   | None         |

Above products are defined under the European Union’s REACH regulation as articles and as such are exempt from the material data sheets provisions of 29 CFR 1910.1200

This product is REACH compliant and does not contain REACH SVHC’s (Substances of very high concern) and is considered non-hazardous when used as intended and in accordance with recommended specifications and parameters.

## 4: FIRST AID MEASURES

### 4.1 Description of First Aid Measures

Inhalation: Not applicable when product is used according accepted practices for the intended use.

Processing at high temperature (> 400°C (752°F)) may generate fumes which can cause “Polymer Fume Fever”. Remove the patient to fresh air and consult a physician if severe.

<sup>1</sup> According to OSHA and ACGIH

If the PVC liner decomposes due to overheating or fire, remove affected persons to fresh air. If unwell after prolonged exposure, seek medical attention.

**Skin contact:** Contact with dust caused by cutting, sawing or sanding may cause skin irritation. Also contact with the adhesive may cause skin irritation.

Skin contact with molten PVC liner may cause burns. Wash with water and treat as for thermal burn.

**Eye contact:** Contact with dust caused by cutting, sawing or sanding may cause eye irritation. Wash with plenty of water. If irritation persists, get medical attention.

After eye contact with molten PVC liner, immediately flush with water for several minutes and get medical attention.

**Ingestion:** If swallowed, get medical advice. Do not induce vomiting unless instructed by medical personnel.

#### **4.2 Most important symptoms and effects, both acute and delayed**

**Symptoms:** Symptoms of polymer fume fever may be delayed. Repeated episodes of polymer fume fever may result in persistent lung effects.

Inhalation of decomposition products from overheating may cause lung irritation or shortness of breath

Inhalation of decomposition products of the PVC liner may cause lung irritation. If necessary take action against irritation of the mucous membranes by HCl.

#### **4.3 Indication of any immediate medical attention and special treatment needed**

**Treatment:** Treat symptomatically

### **5: FIRE FIGHTING MEASURES**

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#### **5.1 Extinguishing media**

Suitable extinguishing media are water, CO<sub>2</sub>, foam and dry chemical

#### **5.2 Special hazards arising from the product**

Hazardous thermal decomposition products are: Hydrogen fluoride, fluorinated compounds, perfluoroisobutylene, tetrafluoroethylene, hexafluoropropylene, trifluoromethane and carbon oxides.

The PVC liner may decompose in hydrogen chloride which form HCl when in contact with water.

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus and protective suit. Wear neoprene gloves during cleaning up work after fire

Protect from hydrogen fluoride fumes which react with water to form hydrofluoric acid

Observe local regulations when contaminated water and burning waste are removed

## **6: ACCIDENTAL RELEASE MEASURES**

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### **6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions: None

For dust and fibers generated during sanding, sawing and cutting, use protective equipment

### **6.2 Environmental precautions**

Not applicable

### **6.3 Methods and materials for containment and cleaning up**

Collect solid product with broom and shovel and place in non-hazardous waste collection container for disposal. Collect dust and fibers generated during sanding, sawing and cutting by vacuuming

### **6.4 Reference to other sections**

For disposal instructions, see section 13

## **7: HANDLING AND STORAGE**

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### **7.1 Precaution for safe handling**

Solid product which presents minimal hazards to personnel when handling in accordance with operating and storage recommendations.

Wash hands thoroughly before smoking. Tobacco contaminated with PTFE can cause polymer fume fever

Dispose in accordance with local regulations as a solid non-hazardous waste and avoid inappropriate disposal practices

Do not incinerate PTFE waste or liner waste

### **7.2 Conditions for safe storage, including any incompatibilities**

No special precautions required but recommend storing in a dry cool place protected from contamination

## 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

In abnormal situations in confined spaces where the temperature of the polymer exceeds 400°C (752°F), thermal degradation products may be produced. Exposure limits for these products, which include perfluoroisobutylene, carbonyl fluoride and hydrogen fluoride, must not be exceeded.

|                      | TLV-TWA | TLV-STEL | IDHL (NIOSH) |
|----------------------|---------|----------|--------------|
| Perfluoroisobutylene | 10 ppb  | -        | -            |
| Carbonyl fluoride    | 2 ppm   | 5 ppm    | -            |
| Hydrogen fluoride    | 0,5 ppm | 2 ppm    | 30 ppm       |

In abnormal situations in confined spaces where the temperature of the PVC liner exceeds 120°C (248°F), thermal degradation products may be produced. Exposure limits for these products, which include hydrogen chloride, must not be exceeded.

|                   | TLV-TWA       | TLV-STEL      | IDHL (NIOSH) |
|-------------------|---------------|---------------|--------------|
| Hydrogen chloride | 2 ppm ceiling | 5 ppm ceiling | 50 ppm       |

In situations where high levels of airborne dust/glassfibers are present, specified exposure limits must not be exceeded.

|                  | OSHA-PEL                                                                                                                             | ACGIH-TLV                                                                                           | Other                                                            |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Dust/glassfibers | 5 mg/m <sup>3</sup> – nuisance<br>dust PEL (respirable<br>dust fraction)<br>15 mg/m <sup>3</sup> – 8 hr TWA<br>(total dust fraction) | 5 mg/m <sup>3</sup> – 8 hr TWA<br>(inhalable)<br>1 fiber/cm <sup>3</sup> – 8 hr<br>TWA (respirable) | 3 x 10 <sup>6</sup> fibers/m <sup>3</sup> – 10 hr<br>TWA (NIOSH) |

### 8.2 Exposure controls

Engineering measures: Adequate ventilation must be provided when working with the product at elevated temperatures (>400°C (752°F))

If cutting, sanding or sawing of the product is necessary, to maintain exposures below recommended limits, a properly designed dust collection system is recommended.

Eye protection: Throughout basic product handling processes and whenever handling materials containing fiberglass, safety glasses, goggles or face shield should be worn.

Hand protection: Throughout basic product handling processes and whenever handling materials containing fiberglass, leather or synthetic fiber gloves are recommended to minimize cuts and abrasions.

**Skin and body protection:** To minimize exposure to fiberglass, the wearing of a loose fitting long sleeved shirt and long trousers are recommended.

**Hygiene measures:** Wash hands immediately after handling the product and do not contaminate tobacco products

**Respiratory protection:** Not required for normal use of the product.

In situations where high levels of airborne dust/glass fibers are present, a correctly fitting NIOSH/MHSA approved disposable dust respirator should be used.

In situations in confined spaces where the temperature of the polymer exceeds 260°C (500°F), an air supplied respirator should be used

## 9: PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

|                                               |                                      |
|-----------------------------------------------|--------------------------------------|
| Appearance:                                   | Light tan or black with yellow liner |
| Physical state:                               | Solid                                |
| Odour:                                        | Odourless                            |
| Odour threshold:                              | Not applicable                       |
| pH:                                           | Not applicable                       |
| Melting point (PTFE):                         | 327°C (621°C)                        |
| Melting point liner (PVC)                     | 60 – 90°C (140 – 194°F)              |
| Boiling point:                                | Not applicable                       |
| Flash point:                                  | Not applicable                       |
| Evaporation rate:                             | Not applicable                       |
| Flammability:                                 | Not applicable                       |
| Upper/lower flammability or explosive limits: | Not applicable                       |
| Vapour pressure:                              | Not applicable                       |
| Vapour density:                               | Not applicable                       |
| Relative Density:                             | 0,25 – 1,5 g/cm <sup>3</sup>         |
| Solubility:                                   | Insoluble                            |
| Partition coefficient: n-octanol/water:       | Not applicable                       |
| Auto-ignition temperature:                    | Not applicable                       |
| Decomposition temperature (PTFE):             | 400°C (752°F)                        |
| Decomposition temperature liner (PVC):        | 150°C (302°F)                        |
| Viscosity:                                    | Not applicable                       |

## 10: STABILITY AND REACTIVITY

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### 10.1 Reactivity:

Stable at normal ambient temperature and pressure

### 10.2 Chemical stability:

Product is chemically stable

### 10.3 Possible hazardous reactions:

Stable under recommended storage conditions

### 10.4 Conditions to avoid:

Avoid heating for prolonged periods above the recommended upper usage limit

### 10.5 Incompatible materials:

Alkali metals, strong oxidizing agents, halogenated compounds

### 10.6 Hazardous decomposition product:

May include: fluorinated hydrocarbons, carbonyl fluoride, hydrogen fluoride, carbon oxides, perfluoroisobutylene, tetrafluoroethylene, hexafluoropropylene, trifluoromethane and hydrogen chloride (PVC liner)

Note: List not restrictive, dependent on climatic conditions

## 11 TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects:

|                                      |                                                                                                                          |                            |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Acute oral toxicity:                 | Polytetrafluoroethylene, LD <sub>50</sub> /rat: > 11,280 mg/kg<br>PVC (liner), recognized as safe and biologically inert |                            |
| Skin irritation:                     | Polytetrafluoroethylene                                                                                                  | Polytetrafluoroethylene    |
|                                      | Human                                                                                                                    | Rabbit                     |
|                                      | Not classified as irritant                                                                                               | Not classified as irritant |
|                                      | No skin irritation                                                                                                       | No skin irritation         |
| Eye irritation:                      | Mild eye irritation                                                                                                      |                            |
| Sensitization:                       | Polytetrafluoroethylene                                                                                                  |                            |
|                                      | Human                                                                                                                    |                            |
|                                      | Not classified as skin sensitizer                                                                                        |                            |
|                                      | Does not cause skin sensitization                                                                                        |                            |
| Patch test on human volunteers       | did not demonstrate sensitization properties                                                                             |                            |
| Repeated dose toxicity:              | Polytetrafluoroethylene                                                                                                  |                            |
|                                      | Oral, feed rat: no toxicologically significant effects were found                                                        |                            |
| Mutagenicity assessment:             | Polytetrafluoroethylene                                                                                                  |                            |
|                                      | Tests on bacterial or mammalian cell cultures did not show mutagenic effects                                             |                            |
| Carcinogenicity assessment:          | Polytetrafluoroethylene                                                                                                  |                            |
|                                      | Not classified as a human carcinogen                                                                                     |                            |
| Toxicity to reproduction assessment: | Polytetrafluoroethylene                                                                                                  |                            |
|                                      | No toxicity to reproduction                                                                                              |                            |
| STOT-single exposure:                | No data available                                                                                                        |                            |
| STOT-Repeated exposure:              | No data available                                                                                                        |                            |
| Aspiration hazard:                   | Not applicable                                                                                                           |                            |

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**12 ECOLOGICAL INFORMATION**

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**12.1 Toxicity:**

Toxicity to fish (Polytetrafluoroethylene): The substance is a polymer and is not expected to produce toxic effects

Toxicity to fish (PVC, liner): The substance is a polymer and is not expected to produce toxic effects

**12.2 Persistence and degradability:**

No data available

**12.3 Bio-accumulative potential:**

No data available

**12.4 Mobility in soil:**

No data available

**12.5 Results of PBT and vPvB assessment:**

No data available

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**13 DISPOSAL CONSIDERATIONS**

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**13.1 Waste treatment methods:**

Dispose in accordance with local regulations. Incinerate only if incinerator is capable of scrubbing out hydrogen fluoride and other acidic combustion products

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**14 TRANSPORT INFORMATION**

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No transport restriction (DOT, ADR/RID, IATA/ICAO, IMO/IMDG)

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**15 REGULATORY INFORMATION**

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**15.1 Safety, health and environment regulations/legislation specific for the substance or mixture**

Not applicable

**15.2 Chemical safety assessment**

No data available

## 16 OTHER INFORMATION

### 16.1 Abbreviations and acronyms:

| Section | Abbreviation     | Description                                                                                                          |
|---------|------------------|----------------------------------------------------------------------------------------------------------------------|
| 2.1     | EC               | European Commission                                                                                                  |
|         | REACH            | Registration, evaluation, authorization and restriction of chemicals                                                 |
| 3.2     | CAS              | Chemical abstracts service                                                                                           |
|         | CFR              | Code of federal regulations                                                                                          |
|         | OSHA             | Occupational safety and health administration USA                                                                    |
|         | ACGIH            | American conference of governmental industrial hygienists                                                            |
| 8.1     | TLV              | Threshold limit value                                                                                                |
|         | TWA              | Time weighted average                                                                                                |
|         | STEL             | Short-term exposure limit                                                                                            |
|         | IDHL             | Immediately dangerous to life or health (NIOSH)                                                                      |
|         | NIOSH            | National institute for occupational safety and health                                                                |
|         | PEL              | Permissible exposure limit                                                                                           |
|         | ppb              | Parts per billion                                                                                                    |
|         | ppm              | Parts per million                                                                                                    |
| 9.1     | pH               | Potential of hydrogen, Acidity scale                                                                                 |
|         | PTFE             | Polytetrafluoroethylene                                                                                              |
|         | PVC              | Polyvinyl chloride                                                                                                   |
| 11.1    | LD <sub>50</sub> | Lethal dose, 50%. Amount of substance required by body weight to kill 50% of the test population                     |
|         | STOT             | Specific target organ toxicity                                                                                       |
|         | DOT              | Department of transport                                                                                              |
| 12.5    | PBT              | Persistent, bio-accumulative and toxic                                                                               |
|         | vPvB             | Very persistent and very bio-accumulative                                                                            |
| 14      | ADR/RID          | Agreement on dangerous goods by road / Regulations concerning the international transport of dangerous goods by rail |
|         | IATA/ICAO        | International air transport association / International civil aviation organisation                                  |
|         | IMO/IMDG         | International maritime organization / International maritime dangerous goods                                         |