

Material safety data sheet

PTFE glass, acrylic adhesive backed

1: IDENTIFICATION

1.1 Product Identifier

Product name: PTFE-coated glass fabric with acrylic adhesive

1.2 Relevant identified use of the product

Industrial applications where high chemical resistance and excellent release and stronger adhesive bonding is required at lower temperatures

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
Telephone: +31 53 435 32 35

2: HAZARD IDENTIFICATION

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 ¹	Symbol	Risk phrases
Polytetrafluoroethylene	9002-84-0	33 – 46	N/A	None	None
Glass fiber cloth	65997-17-3	19 – 33	OSHA PEL – 5 mg/m ³ ACGIH TLV – 5 mg/m ³	None	None
Polyvinyl ester polymer adhesive	556-67-2	10-23		None	None
PE liner	9002-88-4	10-24		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.

¹ According to OSHA and ACGIH

If the PE 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 PE 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 PE 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 PE liner may cause lung irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically

5: FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media are water, CO₂, 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 PE liner may decompose in carbon monoxide and carbon dioxide

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. The PE liner may be combustible at high temperatures

Observe local regulations when contaminated water and burning waste are removed

6: ACCIDENTAL RELEASE MEASURES

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

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 PE liner exceeds 280°C (536°F), thermal degradation products may be produced. These products include carbon monoxide, carbon dioxide, various hydrocarbons and dense smoke

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

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

9.1 Information on basic physical and chemical properties

Appearance:	Light tan or black with blue liner
Physical state:	Solid
Odour:	Odourless
Odour threshold:	Not applicable
pH:	Not applicable
Melting point (PTFE):	327°C (621°C)
Melting point liner (PE)	115 - 135°C (239 – 275°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 ³
Solubility:	Insoluble
Partition coefficient: n-octanol/water:	Not applicable
Auto-ignition temperature:	Not applicable
Decomposition temperature (PTFE):	400°C (752F)
Decomposition temperature liner (PE):	280°C (536°F)
Viscosity:	Not applicable

10: STABILITY AND REACTIVITY

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 and trifluoromethane

Note: List not restrictive, dependent on climatic conditions

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Acute oral toxicity:	Polytetrafluoroethylene, LD ₅₀ /rat: > 11,280 mg/kg PE (liner), LD ₅₀ /rat: > 5,000 mg/kg	
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	

12 ECOLOGICAL INFORMATION

12.1 Toxicity:

Toxicity to fish (Polytetrafluoroethylene and PE): The substances are polymers and are 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

13 DISPOSAL CONSIDERATIONS

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

14 TRANSPORT INFORMATION

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

15 REGULATORY INFORMATION

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
	PE	Polyethylene
11.1	LD ₅₀	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