

Safe Use Instruction Sheet

Rolls and sheets of cast PTFE film are classified as articles under European Regulation 1907/2006 (REACH) and TSCA program. Therefore, no (Material) Safety Data Sheet is legally required. However, Versiv has made a decision to deliver appropriate information to its customers in the safe handling and use of cast PTFE films through this **Safe Use Instruction Sheet**. This **SUIS** sheet follows the exact same format and contains the same information as required in a SDS.

Revision date: 17/01/2024; Version 3.0

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SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Commercial product names: **CHEMFILM***
MR Series Films
C-Type low thickness
DF Series Films
LF Series Films
VB Series Films

1.2 Relevant identified uses of the substance or mixture and uses advised against

Mould liner release film, & other industrial use
Medical & Pharmaceutical applications.
PTFE film for Glass fabric / PTFE Laminate composite applications, food, energy, chemical processes
EM transparent films for communication equipment

1.3 Details of the supplier of the safety data sheet

Manufacturer / distributor: Versiv Composites Ltd.
Address: Kilrush, Co. Clare, Ireland. V15NW27

1.4 Emergency Telephone number + 353 65 90 80 100
Responsible department Quality & Technical Dept.

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Not considered hazardous under recommended usage conditions

2.2 Label elements

No label required

2.3 Other hazards

Thermal decomposition of the PTFE film (at temperatures well above the recommended limit) may cause polymer fume fever with flu like symptoms in humans, especially when smoking contaminated tobacco.

Potential Health Effects: None under recommended usage conditions

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Ingestion: N / A under recommended usage conditions.
Skin Contact: N / A under recommended usage conditions.
Inhalation: N / A under recommended usage conditions.
Eye Contact: N / A under recommended usage conditions.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Product description: Cast Polytetrafluoroethylene (PTFE) film, 0.010mm to 0.127mm (0.001" to 0.005") in thickness, sometimes lightly coloured with ≤4% proprietary stable inorganic pigments or inert fillers.

Hazardous Ingredients: None

Name:	CAS No.	%	Symbols & Health Risk Phrases
Polytetrafluoroethylene	9002-84-0	>96 % - ≤100%	-
Proprietary stable inorganic Pigment		> 0 % - ≤ 4 %	-

3.2 Mixtures no mixtures

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

Skin: No hazards which require special first aid. Wash with soap and water. Cool skin with cold water if contacted or burnt with high temperature film. Consult a physician if hot film sticks to the skin. Do not risk peeling off skin.

Eyes: N / A

Inhalation: N/A

Ingestion: N / A

Other first aid information: N / A

4.2 Most Important symptoms and effects, both acute and delayed

We have no description of any toxic symptoms

4.3 Indication of any immediate medical attention and special treatments needed

No information available

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SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Water, Carbon Dioxide, Foam, Dry Powder.

5.2 Special hazards arising from the substance or mixture

Product is physiologically inert and non-toxic at normal service temperatures (-150 to +260°C).

Specific hazards during firefighting

Above 275°C some decomposition of the PTFE will occur, with the evolution of gaseous and particulate products which are toxic and if inhaled, can give rise to a characteristic syndrome with influenza-like symptoms known as "polymer fume fever". These symptoms subside within 24 / 48 hours away from further exposure with no long term effects.

Hazardous thermal decomposition products include: Hydrogen fluoride, fluorinated compounds, carbon oxides

5.3 Advice for firefighters

Special protective equipment for fire-fighting:

Use self-contained breathing apparatus (SCBA), gloves and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures.

Personal Precautions

- No special precautions expected to be necessary if material is used under ordinary conditions and as recommended.

Emergency Procedures

- No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended. Use normal clean up procedures.

6.2 Environmental precautions

Stable, inert material. No special precautions required.

6.3 Methods and materials for containment and cleaning up

No special procedure or materials required.

The PTFE film is slippery. Avoid slip hazard conditions, especially when wet.

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6.4 Reference to other sections

Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

- Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours) when rolling or winding the film. Avoid friction when rolling or winding.
- Use good safety and industrial hygiene practices. Use only in well ventilated areas. To avoid thermal decomposition, do not overheat. Avoid breathing fumes generated during overheating of this product

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool dry place

7.3 Specific end use(s)

Handling precautions:

Product is physiologically inert and non-toxic at stated service temperatures (-150°C to +260°C).

When processing e.g. machining, wear safety glasses or appropriate face shield. Local Exhaust Ventilation must be used to keep dust levels below acceptable limit. Do not smoke while cutting, fusing, heat sealing or further fabricating the film. Extract and clean any such dust or fumes away from the workspace.

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours) when rolling or high speed processing.

The film is fully airtight and could cause asphyxiation if placed over a person's head or airways. For industrial use only. Keep away from children.

The film is slippery. Avoid slip hazard conditions, especially when wet. Pick up to prevent slipping hazard.

Storage: No special requirements.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

No special controls required

8.2 Exposure controls

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Engineering controls

Adequate ventilation and local extraction must be used in high temperature use of this material.
Use static dissipation equipment in situation where static electricity is likely to be generated.

Eye protection

Hand protection

Wear heat resistant gloves in high temperature use of this product

Skin and body protection

Not normally required

Hygiene measures

Not normally required

Respiratory protection

Not normally required.

Use extraction and wear a P1 dust filter mask if continuously machining or cutting large volumes of the film.

Individual protection measures

Not normally required

Exposure controls for hazardous components: N / A under recommended usage conditions.

Personal protective equipment:

None required under normal processing conditions.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	Solid – Plastic film in roll or sheets
Colour	available in various colours.
Odour	none
Odour threshold	none
pH	neutral
Melting point	327°C (PTFE),

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Boiling point	Not available
Flash point	Does not flash
Evaporation rate	No evaporation loss under 275°C
Flammability (solid, gas)	Not flammable at recommended temperatures, UL 94 V-0 rated.
Lower explosion limit.	No information available
Upper explosion limit.	No information available
Vapour pressure	No information available
Relative vapour pressure	No information available
Relative density	2.2 to 2.5 g/cm ³
Water solubility	Not soluble in water
Partition coefficient n-octanol / water	No information available
Auto ignition temperature	No information available
Decomposition Temperature	No information available
Viscosity dynamic	No information available
Explosive properties	Not considered explosive
Oxidising properties	Not an oxidiser
9.2 Other data	None

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity	non-reactive at normal temperature and pressure (-150°C to +275°C)
10.2 Chemical stability	Very stable chemically at recommended temperatures

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10.3 Possibility of hazardous reactions Stable under recommended storage and use

10.4 Conditions to avoid:

Avoid exposure to temperature over 275 c. Use Local Exhaust Ventilation to avoid breathing fumes evolved if processing above 275°C.

10.5 Incompatible materials

Reacts with molten alkali metals and interhalogen compounds. Will burn in atmosphere of 95% oxygen when an ignition source is present.

10.6 Hazardous decomposition products

Decomposition of PTFE increases further above 350°C and becomes significant above 400°C. The principal gases evolved are tetrafluoroethylene (from 430°C), hexafluoropropylene (from 440°C), and perfluoroisobutylene (from 475°C). Carbonyl Fluoride is produced above 500°C which is converted to the highly corrosive hydrogen fluoride in moist air.

Significant decomposition of PTFE occurs only above 300°C. The principal gases evolved are tetrafluoroethylene (from 430°C), hexafluoropropylene (from 440°C), and perfluoroisobutylene (from 475°C). Carbonyl Fluoride is produced above 500°C which is converted to the highly corrosive hydrogen fluoride in moist air. Exposure to fumes generated if product is heated above 275°C may result in "Polymer Fume Fever".

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity

Acute inhalation toxicity

Chemical name	Occupational Exposure limits	Regulation
Polytetrafluoroethylene	LD50/Rat 11,280 mg/Kg	

Acute dermal toxicity	This information is not available
Skin irritataion	Not considered as an irritant in humans, rabbit
Eye irritation	Not considered as an irritant in humans, rabbit
Sensitisation	Not considered as a sensitizer – patch test on humans
Germ cell mutagenicity	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Carcinogenicity	Not listed under IARC
Reproductive toxicity	No toxicity to reproduction.
Teratogenicity	This information is not available
STOT-single exposure	not classified as a STOT toxicant, single exposure
STOT-repeated exposure	not classified as a STOT toxicant, repeated exposure

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Aspiration hazard.

No aspiration toxicity classification

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Not considered toxic to fish

12.2 Persistence and degradability

PTFE Fluoropolymers are inert and are slow to degrade in nature

12.3 Bio accumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not a suspected PBT or vPvB chemical

12.6 Other adverse effects

No data available

No known harmful effects on the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product Landfill is preferred, provided it complies with local regulations. Burning is not recommended. With incineration, gaseous products should be removed by alkaline scrubbing.

Contaminated packaging: Dispose as solid waste according to local regulations.

SECTION 14. TRANSPORT INFORMATION

This material is not regulated for transport

Land Transport (ADR/RID)

14.1 UN Number

Not applicable

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14.2 UN Proper Shipping name.	Not applicable
14.3 Transport Hazard Class(es)	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental hazards	None
14.6 Special precautions for user	Not classified as dangerous for transport

Inland waterway transport (ADN)

Not relevant

Air Transport (IATA)

14.1 UN Number	Not applicable
14.2 UN Proper Shipping name.	Not applicable
14.3 Transport Hazard Class(es)	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental hazards	None
14.6 Special precautions for user	Not classified as dangerous for transport

Sea transport (IMDG)

14.1 UN Number	Not applicable
14.2 UN Proper Shipping name.	Not applicable
14.3 Transport Hazard Class(es)	Not applicable
14.4 Packing group	Not applicable
14.5 Environmental hazards	None
14.6 Special precautions for user	Not classified as dangerous for transport

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

SECTION 15. REGULATORY INFORMATION

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

15.2 Chemical safety assessment

- No Chemical Safety Assessment has been carried out.

SECTION 16. OTHER INFORMATION

This version of the product safety data sheet was prepared in compliance with Regulation (EC) No. 1907/2006 (in particular as amended by Regulation (EU) No. 453/2010 with respect to SDSs) and Regulation (EC) No. 1272/2008 as well as their relevant amendments, on the approximation of laws,

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regulations and administrative provisions relative to the classification, packaging and labelling of dangerous substances and preparations.

The above information describes exclusively the safety requirements of the product(s) and is based on our present-day knowledge. It does not represent a guarantee for the properties of the product(s) described in terms of the legal warranty regulations. Properties of the product are to be found in the respective product leaflet.

The information contained in this sheet does not constitute a hazard assessment, and should not be used in place of the user's own assessment of workplace risks as required by other health and safety legislation.

Version	0	Original	03/04/2017
Version	1.0	Update	12/08/2021
Version	2.0	Updated 5.2, 7.3, 10.6. reviewed high temperature situations	
Version	3.0	Company name changed to Versiv. Added more film types, uses. Slippery	