

2.3. Other hazards

None expected in industrial use. PTFE is nonhazardous at ambient temperatures. At temperatures above 260°C (500°F), toxic decomposition products may be emitted. Due to toxic decomposition, avoid smoking (wash hands to avoid transfer to tobacco products) when handling PTFE products.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2. Mixtures**

Hazardous Ingredients ¹	% Wt.	CAS No./ EC No.	REACH Reg. No.	CLP/GHS Classification
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None				
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¹ Classified according to:

- 29 CFR 1910.1200, 1915, 1916, 1917, Mass. Right-to-Know Law (ch. 40, M.G.L..O. 111F)
- 1272/2008/EC, GHS, REACH
- WHMIS 2015
- Safe Work Australia

SECTION 4: FIRST AID MEASURES**4.1. Description of first aid measures**

Inhalation: If overcome by decomposition fumes, remove to fresh air. If not breathing, administer artificial respiration. Contact physician.

Skin contact: Not applicable

Eye contact: Not applicable

Ingestion: Not applicable

Protection of first-aiders: No special precautions.

4.2. Most important symptoms and effects, both acute and delayed

PTFE is nontoxic at ambient temperatures. However, small quantities of toxic gases may be produced at temperatures above 260°C (500°F), due to PTFE decomposition. Inhalation of these decomposition products may cause temporary flu-like symptoms.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptoms.

SECTION 5: FIREFIGHTING MEASURES**5.1. Extinguishing media**

Use extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Toxic fumes may be emitted at temperatures above 260°C (500°F). Product will burn in an atmosphere of > 95% oxygen, when an ignition source is present. See section 10.6 for hazardous combustion products.

5.3. Advice for firefighters

Recommend Firefighters wear self-contained breathing apparatus to protect against hazardous decomposition products.

Flammability Classification: –

HAZCHEM Emergency Action Code: 1 Z

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

Utilize exposure controls and personal protection as specified in Section 8.

6.2. Environmental Precautions

No special requirements.

6.3. Methods and material for containment and cleaning up

No special steps required. Nontoxic.

6.4. Reference to other sections

Refer to section 13 for disposal advice.

SECTION 7: HANDLING AND STORAGE**7.1. Precautions for safe handling**

Not recommended for use in potable or drinking water service. Do not smoke when handling PTFE products; wash hands after handling to avoid transfer to tobacco products.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry area.

7.3. Specific end use(s)

Not applicable

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters****Occupational exposure limit values**

Ingredients	OSHA PEL ¹		ACGIH TLV ²		UK WEL ³		AUSTRALIA ES ⁴	
	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
None								

None

¹ United States Occupational Health & Safety Administration permissible exposure limits

² American Conference of Governmental Industrial Hygienists threshold limit values

³ EH40 Workplace exposure limits, Health & Safety Executive

⁴ Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003]

8.2. Exposure controls**8.2.1. Engineering measures**

No special requirements. If using under extreme heat, use local exhaust.

8.2.2. Individual protection measures

Respiratory protection: Not required.

Protective gloves: Not normally needed.

Eye and face protection: Not normally needed.

Other: None

8.2.3. Environmental exposure controls

No special requirements.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Physical state	solid	Odour	odorless
Colour	white/yellow	Odour threshold	not applicable
Initial boiling point	not applicable	Vapour pressure @ 20°C	not applicable
Melting point	not applicable	% Aromatics by weight	not applicable
% Volatile (by volume)	not applicable	pH	not applicable
Flash point	not applicable	Relative density	not applicable
Method	not applicable	Weight per volume	not applicable
Viscosity	not applicable	Coefficient (water/oil)	not applicable
Autoignition temperature	not applicable	Vapour density (air=1)	not applicable
Decomposition temperature	not determined	Rate of evaporation (ether=1)	not applicable
Upper/lower flammability or explosive limits	not applicable	Solubility in water	insoluble
Flammability (solid, gas)	not applicable	Oxidising properties	not applicable
Explosive properties	not applicable		

9.2. Other information

None

SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity**

Refer to sections 10.3 and 10.5.

10.2. Chemical stability

Stable

10.3. Possibility of hazardous reactions

No dangerous reactions known under conditions of normal use.

10.4. Conditions to avoid

Extreme heat above 260°C (500°F).

10.5. Incompatible materials

None known

10.6. Hazardous decomposition products

Carbon Monoxide, Carbon Dioxide, trace amounts of Hydrogen Fluoride, Carbonyl Fluoride, Perfluorocarbon olefins and other toxic fumes may be evolved above 260°C (500°F).

SECTION 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****Primary route of exposure under normal use:** Inhalation (PTFE decomposition fumes) and skin contact.**Acute effects:** PTFE is nontoxic at ambient temperatures. However, small quantities of toxic gases may be produced at temperatures above 260°C (500°F), due to PTFE decomposition. Inhalation of these decomposition products may cause temporary flu-like symptoms.**Chronic effects:** None known**Carcinogenicity:** This product contains no carcinogens as listed by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), the Occupational Safety and Health Administration (OSHA) or the European Chemicals Agency (ECHA).**Aspiration hazard:** Not applicable**Other information:** None known**SECTION 12: ECOLOGICAL INFORMATION**

Ecotoxicological data have not been determined specifically for this product. The information given below is based on a knowledge of the components and the ecotoxicology of similar substances.

12.1. Toxicity

This material is not toxic to aquatic life. It is essentially inert to the environment.

12.2. Persistence and degradability

PTFE: material is chemically unreactive and nonbiodegradable.

12.3. Bioaccumulative potential

No information available

12.4. Mobility in soil

Solid. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9).

12.5. Results of PBT and vPvB assessment

Not available

12.6. Other adverse effects

None

SECTION 13: DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods**

Unused product is not a regulated waste. Not classified as hazardous according to 2008/98/EC. Check local, state and national/federal regulations and comply with the most stringent requirement.

SECTION 14: TRANSPORT INFORMATION**14.1. UN number**

ADG/ADR/RID/ADN/IMDG/ICAO: NOT APPLICABLE

TDG: NOT APPLICABLE

US DOT: NOT APPLICABLE

14.2. UN proper shipping name

ADG/ADR/RID/ADN/IMDG/ICAO: NON-HAZARDOUS, NON REGULATED

TDG: NON-HAZARDOUS, NON REGULATED

US DOT: NON-HAZARDOUS, NON REGULATED

14.3. Transport hazard class(es)

ADG/ADR/RID/ADN/IMDG/ICAO: NOT APPLICABLE

TDG: NOT APPLICABLE

US DOT: NOT APPLICABLE

14.4. Packing group

ADG/ADR/RID/ADN/IMDG/ICAO: NOT APPLICABLE

TDG: NOT APPLICABLE

US DOT: NOT APPLICABLE

14.5. Environmental hazards

NOT APPLICABLE

14.6. Special precautions for user

NOT APPLICABLE

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

NOT APPLICABLE

14.8. Other information

NOT APPLICABLE

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU regulations**

Authorisations under Title VII: Not applicable

Restrictions under Title VIII: None

Other EU regulations: None

15.1.2. National regulations**US EPA SARA TITLE III****312 Hazards:**

None

313 Chemicals:

None

Other national regulations: None

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms: ADG: Australian Dangerous Goods Code
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE: Acute Toxicity Estimate
 BCF: Bioconcentration Factor
 cATpE: Converted Acute Toxicity point Estimate
 CLP: Classification Labelling Packaging Regulation (1272/2008/EC)
 ES: Exposure Standard
 GHS: Globally Harmonized System
 ICAO: International Civil Aviation Organization
 IMDG: International Maritime Dangerous Goods
 LC50: Lethal Concentration to 50 % of a test population
 LD50: Lethal Dose to 50% of a test population
 LOEL: Lowest Observed Effect Level
 N/A: Not Applicable
 NA: Not Available
 NOEC: No Observed Effect Concentration
 NOEL: No Observed Effect Level
 OECD: Organization for Economic Co-operation and Development
 PBT: Persistent, Bioaccumulative and Toxic substance
 (Q)SAR: Quantitative Structure-Activity Relationship
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (1907/2006/EC)
 REL: Recommended Exposure Limit
 RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
 SDS: Safety Data Sheet
 STEL: Short Term Exposure Limit
 STOT RE: Specific Target Organ Toxicity, Repeated Exposure
 STOT SE: Specific Target Organ Toxicity, Single Exposure
 TDG: Transportation of Dangerous Goods (Canada)
 TWA: Time Weighted Average
 US DOT: United States Department of Transportation
 vPvB: very Persistent and very Bioaccumulative substance
 WEL: Workplace Exposure Limit
 WHMIS: Workplace Hazardous Materials Information System
 Other abbreviations and acronyms can be looked up at www.wikipedia.org.

Key literature references and sources for data: Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST)
 Chemical Classification and Information Database (CCID)
 European Chemicals Agency (ECHA) - Information on Chemicals
 Hazardous Chemical Information System (HCIS)
 National Institute of Technology and Evaluation (NITE)
 Swedish Chemicals Agency (KEMI)
 U.S. National Library of Medicine Toxicology Data Network (TOXNET)

Procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008 [CLP] / GHS:

Classification	Classification procedure
Not applicable	Not applicable

Relevant H-statements: None

Hazard pictogram names: None

Changes to the SDS in this revision: Original issue.

Date of last revision: 26 October 2018

Further information: None

This information is based solely on data provided by suppliers of the materials used, not on the mixture itself. No warranty is expressed or implied regarding the suitability of the product for the user's particular purpose. The user must make their own determination as to suitability.