

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1 Product Identifier**
Polytetrafluoroethylene (PTFE), solid articles
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
Relevant identified uses: For general laboratory use.
Uses advised against: No further relevant information available.
- 1.3 Details of the supplier of the safety data sheet**
Supplier: Cowie Technology Group Ltd
Address: Ridgeway, Coulby Newham, Middlesbrough, TS8 0TQ, England.
Telephone: +44 (0) 1642 599190
Email: enquiries@cowie.com
- 1.4 Emergency telephone number**
+44 (0) 1642 599190

SECTION 2: Hazards identification

- 2.1 Classification of the substance of mixture**
The substance is not classified as hazardous according to CLP Regulation, (EC) No. 1272/2008.
- 2.2 Label elements**
Not applicable.
- 2.3 Other hazards**
May cause thermal burns at high temperature.
The thermal decomposition vapours of fluorinated plastics may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco.
This substance/mixture contains no components considered to be either PBT or vPvB at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

- 3.1 Substances**
Substance name: Polytetrafluoroethylene
CAS Number: 9002-84-0
Remarks: No hazardous ingredients

SECTION 4: First aid measures

- 4.1 Description of first aid measures**
General information: No special precautions are necessary for first aid responders.
If systems persist consult a doctor.
- Inhalation: Remove person to fresh air. Get medical attention if symptoms occur.
- Skin Contact: Wash with water and soap as a precaution. Get medical attention if symptoms occur.
Heated material: Immediately flush skin with cold water for 15 minutes. DO NOT ATTEMPT TO REMOVE MOLTEN MATERIAL. Cover affected area with a clean dressing. Get immediate medical attention.
- Eye Contact: Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
Heated material: Immediately flush eyes with cold water for 15 minutes. DO NOT ATTEMPT TO REMOVE MOLTEN MATERIAL. Get immediate medical attention.
- If Swallowed: Rinse mouth thoroughly with water. Do NOT induce vomiting. Get medical attention if symptoms occur.
- 4.2 Most important symptoms and effects, both acute and delayed**
Polymer Fume Fever
- 4.3 Indication of any immediate medical attention and special treatment needed.**
Treat systematically and supportively.

SECTION 5: Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray; alcohol-resistant spray; carbon dioxide (CO₂); dry chemical.

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: Exposure to combustion products may be hazardous to health.

Hazardous combustion products: Hydrogen Fluoride, Carbon Monoxide, Carbon Dioxide, potentially toxic fluorinated compounds, aerosolized particulates.

5.3 Advice for firefighters

Protective equipment: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

Additional Information: Use fire extinguishing methods suitable to the surrounding conditions. Remove undamaged articles from fire area if it is safe to do so.

SECTION 6: Accidental release measure

6.1 Personal precautions, protective equipment and emergency procedures

Follow safe handling advice (see section 7) and PPE recommendations (see section 8).

6.2 Environmental precautions

Avoid release to the environment.

6.3 Methods and materials for containment and cleaning up

Collect released material in a suitable container for disposal according to local/national regulations.

6.4 Reference to other sections

See sections: 7, 8, and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not breathe thermal decomposition products.

Avoid skin contact with hot material.

Store work clothes separately from other clothing, food and tobacco products.

Do not breathe dust/fume/gas/mist/vapour/spray.

Do not eat/drink/smoke when using this product.

Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to polymer fume fever caused by the formation of the hazardous decomposition products.

7.2 Conditions for safe storage, including any incompatibilities

Store away from heat and strong oxidizing agents.

Store at room temperature, in a clean and dry place.

7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

The product contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Overheating may form hazardous compounds (see section 10).

Provide appropriate local exhaust when product is heated.

Minimise workplace exposure concentrations.

Individual protection measures, such as personal protective equipment

For routine handling of solid PTFE items at room temperature, standard industrial hygiene and safety practices are sufficient:

- Hand Protection: General purpose work gloves.
- Eye Protection: Safety glasses (EN 166).

- Hygiene: Wash hands before breaks and after work; do not eat, drink, or smoke in the handling area.

When heating PTFE where vapours or fumes may be generated, the following additional PPE is required:

- Hand Protection: Wear heat resistant gloves when handling hot material.
- Skin Protection: Wear protective work clothing. Skin should be washed after contact.
- Respiratory: Not necessary if room is well ventilated. Use suitable respiratory protective devices in case of insufficient ventilation. During heating, avoid breathing of vapours.

Environmental exposure controls

No further relevant information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid
Colour	White
Odour	Odourless
Odour Threshold	No data available
Melting Point	327-345°C
Boiling Point	Not applicable
Flammability	Product is not flammable
Lower Explosion Limit, LEL	Not applicable
Upper Explosion Limit, UEL	Not applicable
Flash Point	Not applicable
Auto ignition temperature	No data available
Decomposition temperature	No data available
pH	Not applicable
Viscosity	Not applicable
Solubility in water	Insoluble
Particle Coefficient: n-octanol/water	No data available
Vapour Pressure	Not applicable
Density	2.2g/cm ³
Relative Vapour Density	Not applicable
Particle characteristics	No data available

9.2 Other information

Explosives	Not explosive
Oxidising properties	Not classified as oxidising
Evaporation rate:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.
Hazardous decomposition products will be formed at elevated temperatures.
Can react with strong oxidising agents.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Alkali metals and alkaline earth metals.
Reactions with metal powders can occur at high temperatures.
Strong oxidising agents (e.g. Fluorine, F₂; Oxygen Difluoride, OF₂; Chlorine Trifluoride, ClF₃).

10.6 Hazardous decomposition products

Thermal decomposition: Hydrogen fluoride
Carbonyl fluoride
Carbon monoxide
Carbon dioxide
Low molecular weight fluoropolymers and particles

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity	Not classified based on available information.
Skin corrosion/irritation	Not classified based on available information.
Serious eye damage/irritation	Not classified based on available information.
Respiratory or skin sensitisation	Not classified based on available information.
Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	Not classified based on available information.
Reproductive toxicity	Not classified based on available information.
STOT-single exposure	Not classified based on available information.
STOT-repeated exposure	Not classified based on available information.
Aspiration hazard	Not classified based on available information.

11.2 Information on other hazards

Endocrine disrupting properties	Substance is not listed.
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SECTION 12: Ecological information**12.1 Toxicity**

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

The substance/mixture does not contain components considered to be either PBT or vPvB at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties at levels of 0.1% or higher.

12.7 Other adverse effects

No data available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Dispose of in accordance with local regulations.
Note: if incinerated combustion products will include hydrogen fluoride.

SECTION 14: Transport information**14.1 UN number**

Not regulated as a dangerous good.

14.2 UN proper shipping name

Not regulated as a dangerous good.

14.3 Transport hazard class(es)

Not regulated as a dangerous good.

14.4 Packing group

Not regulated as a dangerous good.

14.5 Environmental hazards

Not regulated as a dangerous good.

14.6 Special precautions for user

Not regulated as a dangerous good.

14.7 Maritime transport in bulk according to IMO instruments

Not regulated as a dangerous good.

SECTION 15: Regulatory information

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

UK REACH Annex XIV Substances Subject to Authorization – Not applicable.
 UK REACH Annex XVII Restrictions on Certain Dangerous Substances – Not applicable.
 UK REACH Article 59, Candidate List of Substances of Very High Concern (SVHC) – Not applicable.
 Regulation (EU) 2019/1021 The Persistent Organic Pollutants Regulations – Not applicable.
 Regulation (EU) 1005/2009 Substances that deplete the ozone layer – Not applicable.
 Directive 2012/18/EU, the control of major-accident hazards involving dangerous substances - Not applicable.
 Regulation (EC) No 649/2012 concerning the export and import of hazardous chemicals – Not Applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

16.1 Abbreviations:

CAS: Chemical Abstracts Service
 CLP: Classification, Labelling and Packaging
 IMO: International Maritime Organisation
 PBT: Persistent, Bioaccumulative, Toxic
 PPE: Personal Protective Equipment
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
 SDS: Safety Data Sheet
 STOT: Specific Target Organ Toxicity
 TSCA: Toxic Substances Control Act
 UN: United Nations
 vPvB: very Persistent, very Bioaccumulative

16.2 Key literature reference and sources:

Supplier safety data sheets
<https://echa.europa.eu/information-on-chemicals>

16.3 Disclaimer:

The information in this Safety Data Sheet (SDS) is believed to be correct to the best of our knowledge at the date issued. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The user is responsible for determining whether the Cowie Technology Group Ltd product is fit for a particular purpose and suitable for user's method of use or application.

16.4 Revision History:

DATE	ISSUE	PAGE	DETAILS OF AMENDMENT
13/05/2024	04	ALL	SDS revised in line with the requirements of regulation (EU) 1907/2006 (REACH)
26/11/2025	05	ALL	Section 1+2 - Improved clarity that SDS is for solid PTFE articles. Other minor changes throughout following receipt of updated supplier SDS's.