



Safety DataSheet

SDS07

This Safety Data Sheet is voluntarily supplied to assist customers with identifying the potential risks to those involved in handling, transporting and working with the material, as well as describing potential risks to the consumer and the environment. A Safety Data Sheet is not required by the REACH Regulation (EC) No 1907/2006, nevertheless the formatting described in these regulations has been followed to assist customers.

SECTION 1:

Identification of the substance/mixture and of the company/undertaking

1.1

Product identifier

This SDS covers the following grades:

TUFNOL Grade 2F/3/PTFE

1.2

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

Used for non-metallic bearings and sliding components for a wide range of mechanical engineering purposes.

1.3

Details of the supplier of the safety data sheet

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UK

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Fax: +44(0) 121 331 4235
Email: info@tufnol.co.uk

1.4

Emergency telephone number

In case of emergency Tel.
+44(0) 121 356 9351 (office hours only)

**SECTION 2:
Hazards Identification**

2.1

Classification of the substance or mixture

This product is not classified as hazardous in accordance with EU regulations (Dangerous Preparations Directive 1999/45/EC or CLP Regulation (EC) No 1272/2008).

2.2

Label elements

No labelling is required in accordance with EU regulations (Dangerous Preparations Directive 1999/45/EC or CLP Regulation (EC) No 1272/2008).

2.3

Other hazards

SOLID MATERIAL: Solid materials are not hazardous under normal conditions.

DUST: Dust generated during machining may cause skin and eye irritation. Fumes from thermal decomposition or burning may irritate eyes and respiratory system.

**SECTION 3:
Composition**

3.1

Substances

Not applicable. Product is not a substance under REACH.

3.2

Mixtures

Non-metallic thermosetting plastics materials, reinforced with woven cotton fabric and containing a polytetrafluoroethylene (PTFE) lubricant powder dispersed throughout.

SECTION 4: First Aid Measures

4.1

Description of first aid measures

EYE CONTACT: Rinse eye with plenty of water. Seek medical attention if irritation persists.

INHALATION: Inhalation of the product as supplied is not likely to occur. Dust may be generated if the product is machined. If significant inhalation of process generated dust or smoke occurs, remove the victim to fresh air and keep warm and comfortable. If breathing difficulties occur, consult a doctor.

SKIN CONTACT: Wash skin with plenty of soap and water.

INGESTION: Ingestion is not likely to occur. Dust may be generated if the product is machined. If significant ingestion of process generated dust occurs, rinse mouth. Consult a doctor if there are any symptoms of irritation of the mouth and throat or abdominal discomfort.

4.2

Most important symptoms and effects, both acute and delayed

Exposure to dust may cause mechanical irritation of the skin and eye, and of the mouth, nose and throat if inhaled or ingested.

4.3

Indication of any immediate medical attention and special treatments needed

Following inhalation of smoke or fumes, apply symptomatic treatment and supportive therapy as indicated. Following severe exposure, the patient should be kept under medical review for at least 48 hours.

SECTION 5: Firefighting Measures

5.1

Extinguishing media

No known adverse reactions with any extinguishing media. Use extinguisher appropriate to surrounding conditions.

5.2 Special hazards arising from the substance or mixture

Solid materials are difficult to ignite, but may burn in a fire. Dust from machining is more combustible than the solid and may become ignited from a small heat source. Constituents of smoke vary with temperature and local conditions, but may include carbon dioxide, carbon monoxide, ammonia, phenol, formaldehyde, hydrogen fluoride, carbonyl fluoride, tetrafluoroethylene, hexafluoropropylene, perfluoroisobutene and water vapour, plus a number of other substances resulting from partial combustion.

5.3 Advice for fire fighters

Fire-fighters should wear positive pressure self-contained breathing apparatus and protective clothing.

**SECTION 6:
Accidental Release Measures**

6.1 Personal precautions, protective equipment and emergency procedures

Sheets may be smooth and slippery. Wear suitable skin and eye protection (see section 8).

6.2 Environmental precautions

Do not discharge into drains or rivers

6.3 Methods and materials for containment and clearing up

Unused material should be collected and reused, or disposed of according to local and national regulations.

6.4 References to other sections

See section 8 and section 13 for further advice on protective clothing and disposal.

SECTION 7: Handling and Storage

7.1

Precautions for safe handling

Sheets may be smooth and slippery. Avoid accidental slippage of stacked material. Take care to avoid injury caused by sharp edges.

Dust from machining is more combustible than the solid and may become ignited from a small heat source. Use correct machining techniques which do not give rise to excessive heat, or burn the material. Incorrect machining techniques usually cause a marked change in the colour of the cut surface, accompanied by a strong burning odour. If these, or any other signs of burning occur during machining, stop work immediately. Check to ensure that dust has not ignited and re-assess machining techniques before proceeding.

In dust extraction systems, finely divided organic dust is a potential source of combustion or explosion. Care must be taken in the design and servicing of ducted extraction systems to ensure that explosive limits are not exceeded. Explosion relief devices should be provided. In all cases, expert advice should be obtained.

The presence of polytetrafluoroethylene (PTFE) lubricant in the material adds significantly to the toxic and corrosive hazard associated with burning or thermal decomposition of the material. Thermal decomposition of PTFE begins around 260°C. Significant decomposition occurs above 400°C.

Particular care should be taken to avoid smoking of tobacco products which have become contaminated with dust from this material. Wash face and hands before eating, drinking or smoking. Take care to avoid transfer of dust from hands or clothing onto materials which may be burnt.

Avoid inhalation of dust, and wear suitable protective clothing to avoid skin and eye contact. Wash thoroughly after handling and before eating or drinking.

7.2

Conditions for safe storage, including any incompatibilities

Store in a cool dry place. Avoid extremes of temperature.

7.3

Specific end uses(s)

Further information on dust is given in the following HSE publications:- EH 44 'Dust: General principles of protection'; EH 46 'Man-made mineral fibres'; MDHS 59 'Man-made mineral fibre'.

SECTION 8: Exposure Controls/Personal Protection

8.1

Control parameters

Substance	Long-term exposure limit (8-hr TWA reference period)	Short-term exposure limit (15 minute reference period)	Source
Nuisance dust: inhalable dust respirable dust	10 mg/m ³ 4 mg/m ³	-	EH40, 2011

8.2

Exposure controls

No special precautions required for the unused product. If dust is likely to be generated as a result of processing, appropriate dust control measures should be applied, such as the use of local exhaust ventilation and the use of dust suppression techniques such as water sprays.

Respiratory protection

No special precautions required when handling the unused product. If dust is likely to be generated during processing at levels in excess of the occupational exposure limit respiratory protective equipment fitted with a P2 filter or better may be required.

Hand Protection

Dust may cause temporary irritation to the skin and mouth. Barriers creams are generally ineffective, as they can cause fibres to adhere. In cases of difficulty, other barrier methods may be necessary, such as the wearing of plastic or rubber gloves.

Eye protection

Wear suitable eye protection, e.g. safety glasses with side shields or goggles if dust is likely to be generated.

Skin protection

Overalls should be worn to protect the skin if dust is likely to be generated.

Environmental exposure controls

No special precautions required.

SECTION 9:
Physical and Chemical Properties

9.1 **Information on basic physical and chemical properties**

Appearance	Brown solid sheets, rods, tubes, bars or other profiles. Components made from these.
Odour	None
Odour Threshold	Not applicable
pH	Not applicable
Melting Point	Not applicable
Boiling Point	Not applicable
Flashpoint	Not applicable
Evaporation Rate	Not applicable
Flammability	Combustible
Upper/lower flammability limits	Not applicable
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	1.2 to 1.4 gm/cm ³
Solubility in water	Insoluble
Solubility in other solvents	Not applicable
Partition coefficient (log Kow)	Not applicable
Autoignition temperature	No data
Decomposition temperature	No data
Viscosity	Not applicable
Explosive properties	Not considered explosive
Oxidising properties	Not considered oxidising

9.2 **Other information**

None

**SECTION 10:
Stability and Reactivity**

10.1	Reactivity No reactive hazards known.
10.2	Chemical stability Stable under normal conditions of use.
10.3	Possibility of hazardous reactions No hazardous reactions expected.
10.4	Conditions to avoid Do not allow this material to reach temperatures which might result in the decomposition of PTFE, resulting in the release of toxic and corrosive fumes. Thermal decomposition of PTFE begins around 260°C. Significant decomposition occurs above 400°C.
10.5	Incompatible materials Avoid contact with strong oxidizing agents, strong acids and strong bases.
10.6	Hazardous decomposition products Thermal decomposition of the PTFE lubricant may release substances including carbon dioxide, carbon monoxide, ammonia, phenol, formaldehyde, hydrogen fluoride, carbonyl fluoride, tetrafluoroethylene, hexafluoropropylene, perfluoroisobutene and water vapour, plus a number of other substances/

11.1

Information on toxicological effects

This product has not been tested. Judgements on the expected toxicity of this product have been made based upon consideration of its major components.

(a) acute toxicity - No effects are anticipated from the product as supplied.

(b) skin corrosion/irritation - Dust from processing of the product may cause mechanical irritation of the skin.

(c) serious eye damage/irritation - Dust from processing of the product may cause mechanical irritation of the eye.

(d) respiratory/skin sensitisation - The product is not expected to cause sensitisation.

(e) germ cell mutagenicity - Contains no known mutagens

(f) carcinogenicity - Contains no known carcinogens

(g) reproductive toxicity - Contains no known reproductive toxins

(h) STOT-single exposure - Dust from processing of the product may cause mechanical irritation of the mouth and throat.

(i) STOT-repeated exposure - No effects are anticipated from the product as supplied.

(j) aspiration hazard - Not applicable to this product.

**SECTION 12:
Ecological Information**

12.1

Toxicity

No effects are anticipated from the product as supplied.

12.2

Persistence and degradability

This product is not expected to biodegrade in the environment.

12.3

Bioaccumulative potential

None of the components are known to be bioaccumulative.

12.4

Mobility in soil

Not expected to be mobile.

12.5

Results of PBT and vPvB assessment

None of the components are known to be PBT or vPvB.

12.6

Other adverse effects

None known.

**SECTION 13:
Disposal Considerations**

13.1

Waste treatment methods

All waste products should be disposed of by normal waste disposal methods, including controlled incineration or burial at approved sites, in accordance with local regulations.

SECTION 14: Transport Information

Not regulated as hazardous for transport.

	ADR	IMDG	ICAO
14.1 UN Number	None	None	None
14.2 UN Proper shipping name	None	None	None
14.3 Transport hazard class(es)	None	None	None
14.4 Packing group	None	None	None
14.5 Environmental hazards	None	None	None
14.6 Special precautions for user	None	None	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	None	None	None

SECTION 15: Regulatory Information

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

All components are listed as existing substances in Europe.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

SECTION 16:
Other Information

Revision information:

Revised and reformatted following the format in Regulation 1907.2006 as amended by Regulation 453/2010.

Special Training:

no specialist training required with respect to chemical hazards.

List of Abbreviations used in this SDS:

CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging Regulation (EC) no 1272/2008 Dangerous Substances Directive
DSD	67/548/EEC
DPD	Dangerous Preparations Directive 1999/45/EC
EC	European Community/Commission
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) no 1907/2006
vPvB	very Persistent, very Bioaccumulative

Legal disclaimer:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

Safety Data Sheet 07

Reliability in the field of engineering plastics & composites.

Tufnol is the byword for quality in laminated plastics and resin based materials for engineering applications. It was invented here in the UK and its development to meet modern engineering demands continues to keep it abreast of 21st century technology.

This type of material is known as 'synthetic resin bonded laminated plastic', and is made from layers of paper, cotton cloth or woven glass fibre cloth, dipped in resin, then compressed and bonded together in a hot press. It is a strong, hard material, made in a number of different grades with varying properties and uses.

Tufnol's reliability is key to the many sectors of engineering industry in which it serves.

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Tufnol warrants the materials it produces will conform to Tufnol specifications. It is entirely the customer's responsibility to make the final product choice and satisfy themselves of the suitability of the product for the intended application and carrying out testing where required. Tufnol does not warrant the conformity of its materials to these properties or the suitability of its materials for any particular purpose.

The values are "typical only" and are based on test results generally in accordance with Test methods BS EN 60893-2, where applicable.