

HEALTH & SAFETY DATA SHEET

<p>1. <u>PRODUCT NAMES.</u> This data sheet refers to the following products:</p> <table><tr><td>TUFNOL Grade 10G/40</td><td>TUFNOL Grade 10G/44</td></tr><tr><td>TUFNOL Grade 10G/42</td><td>TUFNOL Grade RL G/1</td></tr></table>	TUFNOL Grade 10G/40	TUFNOL Grade 10G/44	TUFNOL Grade 10G/42	TUFNOL Grade RL G/1						
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TUFNOL Grade 10G/42	TUFNOL Grade RL G/1									
<p>2. <u>GENERAL DESCRIPTION.</u> Non-metallic glass fibre reinforced thermosetting plastics material. Solid sheets, rods, tubes, bars or other profiles. Components made from these.</p>										
<p>3. <u>INTENDED USES.</u> Used for non-metallic engineering components for a wide range of purposes, including electrical insulation, mechanical applications and others.</p>										
<p>4. <u>CHEMICAL COMPOSITION.</u> Cured epoxy resin and woven glass fibre fabric.</p>										
<p>5. <u>REACTIVITY DATA.</u> Not highly reactive at normal temperatures.</p>										
<p>6. <u>PHYSICAL PROPERTIES.</u></p> <table><tr><td>6.1 PHYSICAL STATE.</td><td>Solid</td></tr><tr><td>6.2 THERMAL CHARACTERISTICS.</td><td>Will burn. See Section 9. below.</td></tr><tr><td>6.3 SOLUBILITY.</td><td>Insoluble in water.</td></tr><tr><td>6.4 DENSITY.</td><td>1.8 to 2.0 gm/cm³</td></tr><tr><td>6.5 OTHERS.</td><td>COLOUR: Greenish grey.</td></tr></table>	6.1 PHYSICAL STATE.	Solid	6.2 THERMAL CHARACTERISTICS.	Will burn. See Section 9. below.	6.3 SOLUBILITY.	Insoluble in water.	6.4 DENSITY.	1.8 to 2.0 gm/cm ³	6.5 OTHERS.	COLOUR: Greenish grey.
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<p>7. <u>HAZARDOUS CONSTITUENTS.</u> SOLID MATERIAL: Solid materials are not hazardous, under normal conditions. DUST: Machining causes dust. In the United Kingdom and some other countries, exposure to dust containing glass fibres is subject to mandatory control limits. Take suitable measures to measure and control exposure to airborne dust, such as the use of appropriate local exhaust ventilation, wearing of face masks, etc. These TUFNOL grades use glass fibres only in diameters which are considered to be non-respirable. None of these grades contain any superfine man-made mineral fibres.</p>										
<p>8. <u>OCCUPATIONAL EXPOSURE LIMITS.</u> SOLID MATERIAL: No exposure limits are applicable to solid materials. DUST: Dust from machining of these materials will contain glass fibres and is therefore subject to mandatory Control Limits set for man-made mineral fibre. Personal exposure to dust should be kept below 5 mg/cu.m 8 hour TWA total inhalable dust and below the general dust limit of 5 mg/cu.m 8 hour TWA for respirable dust. (Refer to HSE Guidance Note EH 40.) Different limits may apply outside the United Kingdom. Appropriate dust control measures should be applied, such as the use of local exhaust ventilation and protective personal equipment.</p>										
<p>9. <u>FIRE & EXPLOSIVE HAZARDS.</u> Solid materials are chemically stable under normal conditions and difficult to ignite. In a fire they will burn, contributing to the fire and evolving hazardous fumes and smoke. Constituents of smoke vary with local conditions, but may include carbon dioxide, carbon monoxide, ammonia, and water vapour, plus a number of more complex substances resulting from partial combustion. Avoid inhalation of fumes. Follow normal fire fighting procedures, including the wearing of breathing apparatus. 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.</p>										

CONTINUED OVERLEAF

9. FIRE & EXPLOSIVE HAZARDS continued.

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.

10. HANDLING AND USE PRECAUTIONS.

Sheets may be smooth and slippery. Avoid accidental slippage of stacked material. Take care to avoid injury caused by sharp edges. Inhalation of dust is to be avoided (see above).

Dust containing glass fibres may cause temporary irritation to the skin and mouth. Barrier 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.

11. STORAGE & TRANSPORT PRECAUTIONS.

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

12. EMERGENCY ACTION.

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| 12.1 | FIRE. | Extinguish with water. Use wetting agent if available. Foam or CO ₂ may also be used. |
| 12.2 | SPILLAGE. | Not applicable. |
| 12.3 | INHALATION. | For significant inhalation of dust or smoke, consult a doctor. |
| 12.4 | INGESTION. | For significant ingestion of dust or eye irritation, consult a doctor.
Do not induce vomiting. |
| 12.5 | SKIN CONTACT. | Wash thoroughly with water to remove dust. |
| 12.6 | FIRST AID. | N/A |

13. ECOLOGICAL INFORMATION.

Do not dispose of dusts or waste in the water system or open air.

14. WASTE DISPOSAL.

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.

15. RELEVANT REGULATIONS.

In the United Kingdom, see occupational exposure limits for dust and maximum exposure limits for man-made mineral fibres in Health & Safety Executive Guidance Note EH 40.

Other regulations may apply elsewhere.

16. OTHER INFORMATION and REFERENCES.

For further information on these materials, contact TUFNOL Ltd.

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'.

DISCLAIMER.

While the information on this data sheet is believed to be accurate, it is the responsibility of the user to ensure the correct use and application of this product.