



# Whale Grade Tufnol

## Sheet

### Technical Specification

Physical Properties	Typical Results	Units
Cross Breaking Strength	130	MPa
Impact Strength Notched	11.5	kJ/m <sup>2</sup>
Compressive Strength Flatwise	310	MPa
Compressive Strength Edgewise	200	MPa
Shear Strength Flatwise	90	-
Tensile Strength	68	MPa
Young Modulus	6.3	GPa
Water Absorption		
- 1.6mm thick	90	mg
- 3mm thick	105	mg
- 6mm thick	130	mg
- 12mm thick	160	mg
Electrical Strength Flatwise in Oil at 90°C		
- 1.6mm thick	4.5	MV/m
- 3mm thick	2.6	MV/m
- 6mm thick	2	MV/m
Electric Strength Edgewise in Oil at 90°C	12	kV
Insulation Resistance after immersion in water	1x10 <sup>8</sup>	ohms
Relative Density	1.36	-
Maximum Working Temperature		
- Continuous	120	°C
- Intermittent	130	°C
Thermal Classification	Class E	-
Thermal Conductivity Through Laminate	0.32	W/(mK)
Thermal Expansion in plane of Laminate	2.2	X10 <sup>-5</sup> /k
Specific Heat	1.5	kJ/(kgK)
Test Methods as BS 2572, where applicable.		

## Rod

### Technical Specification

Physical Properties	Typical Results	Units
Flexural Strength	130	MPa
Water Absorption	3.3	mg/cm <sup>2</sup>
Insulation Resistance after immersion in water	1x10 <sup>7</sup>	ohms
Axial Electric Strength in oil at 90°C	4	kV
Relative Density	1.35	-
Test Method as BS 6128		



# Bay Plastics Datasheet

## Round Tube Technical Specification

Physical Properties	Typical Results	Units
Axial Compressive Strength	170	MPa
Cohesion Between Layers	130	MPa
Water Absorption	3.2	mg/cm <sup>2</sup>
Insulation Resistance after immersion in water	1x10 <sup>7</sup>	ohms
Relative Density	1.35	-
Test Methods as BS EN 6128		

### Specification

Sheet: BS 2572 Type F2/1

Round Rod: BS 6128 Part 2 Type PF CC 24

Rectangle Bar: BS 6128 Part 4 Type PF CC 44

Hexagon Bar: BS 6128 Part 6 Type PF CC 64

Round Tubes: BS 6128 Part 9 Type PF CC 93

Rectangular Tube: BS 6128 Part 13 Type PF CC 133

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Sheet: MIL-I-24768

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