



# Bear Grade Tufnol

## Sheet

### Technical Specification

Physical Properties	Typical Results	Units
Cross Breaking Strength	110	MPa
Impact Strength Notched	11.0	kJ/m <sup>2</sup>
Compressive Strength Flatwise	290	MPa
Compressive Strength Edgewise	210	MPa
Shear Strength Flatwise	100	-
Water Absorption		
- 3mm thick	45	mg
- 6mm thick	80	mg
- 12mm thick	100	mg
Electrical Strength Flatwise in Oil at 90°C		
- 3mm thick	3.9	MV/m
- 6mm thick	3.5	MV/m
Electric Strength Edgewise in Oil at 90°C	15	kV
Insulation Resistance after immersion in water	5x10 <sup>10</sup>	ohms
Relative Density	1.32	-
Maximum Working Temperature		
- Continuous	120	°C
- Intermittent	130	°C
Thermal Classification	Class E	-
Thermal Conductivity Through Laminate	0.29	W/(mK)
Thermal Expansion in plane of Laminate	2.7	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	110	MPa
Water Absorption	2.0	mg/cm <sup>2</sup>
Insulation Resistance after immersion in water	5x10 <sup>7</sup>	ohms
Axial Electric Strength in oil at 90°C	6	kv
Relative Density	1.32	-

Test Method as BS 6128



## Round Tube

### Technical Specification

Physical Properties	Typical Results	Units
Axial Compressive Strength	180	MPa
Cohesion Between Layers	110	MPa
Water Absorption	2.0	mg/cm <sup>2</sup>
Insulation Resistance after immersion in water	1x10 <sup>8</sup>	ohms
Relative Density	1.32	-
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

MIL\*

Sheet: MIL-I-24768

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