



CARP BRAND TUFNOL® (Fabric laminates)

Technical information

SHEET

Property

Typical Results

Units

Cross breaking strength	150	MPa
Impact Strength notched, Charpy	8.6	kJ/m ²
Compressive strength flatwise	350	MPa
Compressive strength edgewise	200	MPa
Shear Strength, flatwise	105	Mpa
Tensile strength	68	MPa
Youngs modulus	6.5	GPa
Water absorption		
- 1.6mm thk	55	mg
- 3mm thk	70	mg
- 6mm thk	90	mg
- 12mm thk	125	mg
Electric strength edgewise in oil at 90°C		
- 1.6mm thk	7.2	MV/m
- 3mm thk	4.9	MV/m
- 6mm thk	4.0	MV/m
Electric strength edgewise in oil at 90°C	23	kV
Insulation resistance after immersion in water	7x10 ⁹	ohms
Relative density	1.36	-
Maximum working temperature**		
- continous	120	°C
- intermittent	130	°C
Thermal classification	Class E	-
Thermal conductivity through laminea	0.37	W/(mK)
Thermal expansion in plane of laminea	1.9	X10 ⁻⁵ /k
Specific heat	1.5	kJ(kgK)

Test methods as BS 2572, where applicable

Round Rods

Fleural strength	170	MPa
Water absorption	2.5	mg/cm ²
Insulation resistance after immersion	5x10 ⁸	ohms
Axial electric strength in oil at 90°C	15	kv
Relative density	1.35	-

Test methods as BS 6128

Round Tubes

Axial compressive strength	180	MPa
Cohesion between layers	140	MPa
Water absorption	2.4	mg/cm ²
Insulation resistance after immersion in water	5x10 ⁸	ohms
Relative density	1.35	-

Specifications

Sheet: BS2572 Type F1
 Sheet: BS EN 60893 Type PF CC 203
 Round Rod : BS6128 Part 2 Type PF CC 21 & 22
 Rectangular Bar: BS6128 Part 4 PF CC 41 & 42
 Hexagon bar: BS6128 Part 6 Type PF CC 61 & 62
 Round Tube : BS6128 Part 9 Type PF CC 91
 Rectangular Tube : BS6128 Part 13 Type PF CC 131

NEMA*
 Sheet: LI-1-1989 Type LE

MIL*
 Sheet: MIL-I-24768

DIN*
 Round Rod and Tube: DIN7735 Type Hgw 2088 & 2089

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