



**GRADE 6F/45 TUFNOL**  
**TECHNICAL DATA and PHYSICAL PROPERTIES**

**for TUFNOL Grade 6F/45 Sheet:**

PROPERTY	TYPICAL RESULT	UNITS
Cross breaking strength	170	MPa
Impact strength, notched, Charpy	4.6	kJ/m <sup>2</sup>
Compressive strength, flatwise	290	MPa
Compressive strength, edgewise	190	MPa
Shear strength, flatwise	100	MPa
Water Absorption		
- 1.6mm thk.	30	mg
- 3mm thk.	35	mg
- 6mm thk.	45	mg
- 12mm thk.	55	mg
Electric strength, flatwise in oil at 90°C		
- 1.6mm thk.	15	MV/m
- 3mm thk.	12	MV/m
- 6mm thk.	10	MV/m
Electric strength, edgewise in oil at 90°C	80	kV
Insulation resistance after immersion in water	3x10 <sup>11</sup>	ohms
Loss tangent at 1 MHz	0.040	-
Permittivity at 1 MHz	4.3	-
Comparative tracking index	800	-
Relative density	1.36	-
Maximum working temperature**		
- continuous	130	°C
- intermittent	150	°C
Thermal classification	Class B	-
Thermal conductivity through laminae	0.36	W/(mK)
Thermal expansion in plane of laminae	1.8	x 10 <sup>-5</sup> /K
Specific heat	1.5	kJ/(kgK)
Test methods as BS EN 60893-2, where applicable.		

**for TUFNOL Grade 6F/45 Round Tube:**

PROPERTY	TYPICAL RESULT	UNITS
Axial compressive strength	180	MPa
Cohesion between layers	130	MPa
Water absorption	1.2	mg/cm <sup>2</sup>
Insulation resistance after immersion in water	1x10 <sup>10</sup>	ohms
Loss tangent at 1 MHz	0.04	-
Permittivity at 1 MHz	4.0	-
Axial electric strength in oil at 90°C	75	KV
Radial electric strength in oil at 90°C		
- 1.6mm wall	13	MV/m
- 3.0mm wall	10	MV/m
Relative density	1.35	-
Test methods as BS EN 61212-2, where applicable.		

**for TUFNOL Grade 6F/45 Round Rod:**

PROPERTY	TYPICAL RESULT	UNITS
Flexural strength	170	MPa
Water absorption	1.3	mg/cm <sup>2</sup>
Insulation resistance after immersion in water	1x10 <sup>10</sup>	ohms
Axial electric strength in oil at 90°C	80	kV
Relative density	1.35	-
Test methods as BS EN 61212-2, where applicable.		

\*\*Users of highly stressed components at temperatures approaching the maximum are recommended to seek further advice from [www.theplasticshop.co.uk](http://www.theplasticshop.co.uk)

The information given here is believed to be correct, but completeness and accuracy are not guaranteed. The user shall be fully responsible for determining the suitability of products for the intended use.