Bay Plastics Datasheet

Kite Grade Tufnol

Sheet

Technical Specification

Physical Properties	Typical Results	Units
Cross Breaking Strength	175	MPa
Impact Strength Notched	2.7	kj/m²
Compressive Strength Flatwise	350	MPa
Tensile Strength	200	MPa
Youngs Modulus	1.2	%
Shear Strength Flatwise	105	MPa
Water Absorption		
- 1.6mm thick	39	mg
- 3mm thick	47	mg
- 6mm thick	56	mg
- 12mm thick	70	mg
Electrical Strength Flatwise in Oil at 90°C		
- 1.6mm thick	14.5	MV/m
- 3mm thick	13	MV/m
- 6mm thick	8.8	MV/m
- 12mm thick	6.1	MV/m
Electric Strength Edgewise in Oil at 90°C	55	kV
Insulation Resistance after immersion in water	$1x10^{10}$	ohms
Loss Tangent at 1MHz	0.037	-
Permittivity at 1 MHz	5.1	-
Relative Density	1.36	-
Maximum Working Temperature		
- Continuous	90	°C
- Intermittent	120	°C
Thermal Classification	Class E	-
Thermal Conductivity through Laminate	0.26	W/(mK)
Thermal Expansion in lane on Laminate	1.8	$X10^{-5}/k$
Specific Heat	1.5	kj(kgK)
Test methods as BS 2572, where applicable		

Round Rods

Flexural Strength	170	MPa
Water Absorption	2.5	mg/cm
Insulation Resistance after Immersion	5x10	ohms
Axial Electric Strength in oil at 90°C	15	kv
Relative Density	1.35	-
Test methods as BS 6128		

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Round Tubes

Technical Specification

Physical Properties	Typical Results	Units
Axial Compressive Strength	190	MPa
Cohesion between layers	110	MPa
Water Absorption	1.0	mg/cm²
Insulation Resistance after immersion in water	$1x10^9$	ohms
Radial Electric Strength in oil at 90°C		
- 1.6 wall	8	MV/m
- 3.0 wall	6	MV/m
Relative Density	1.35	-

Specifications

British Standards	Sheet: BS EN 60893 Type PF CP 206	Round Tube: EN 61212-3-2 Type PF CP 32
Admiralty	Sheet: NES 2053	Round Tube: NES 2054
NEMA*	Sheet: Nema Type XXX	Round Tube: Nema Type XXX
MIL*	Sheet: MIL-I-24768	Round Tube: MIL-I-24768

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