



KITE BRAND

SRBP Material Synthetic Resin Bonded Paper

Phenolic Paper laminate
Paper/phenolic resin laminated plastic

SRBP Material. KITE BRAND.

First class electrical insulation.

Kite Brand TUFNOL is a first class electrical insulating materials with good dielectric strength and high insulation resistance. It has low moisture absorption and good mechanical strength, although its impact strength is lower than that of most other grades of Tufnol. Kite Brand sheet meets British Standard BS EN 60893-3-4 Type PF CP 206. It is readily machined and can be hot punched in thicknesses up to 3.2mm.

What is Kite Brand used for?

Kite Brand is the most widely used of all TUFNOL phenolic paper grades, wherever a good quality general purpose electrical insulation material is required. It is used for a multitude of different applications at low, medium and high voltages, including such items as terminal boards, mounting panels, tag strips, coil formers, insulating sleeves and bushes, busbar supports, tool and instrument handles, coil supports, insulated enclosures, brush holders, insulating spacers and special purpose plugs and sockets.

Types available

	Sheets	Rods	Tubes	Other Sections
Natural colour	Yes	No (use swan brand)	Yes	Hollow sections only
Black Kite Brand	Yes*			

*Minimum order quantities may apply.

Specifications for KITE BRAND

British Standards	Current Standards	Recent Standards (now obsolete)
Sheet	BS EN 60893-3-4 Type PF CP 206	BS 2572 Type P3 BS 5102 Type 1
Round Tube	BS EN 61212-3-2 Type PF CP 32	BS 6128 Part 9 Type PF CP 91
Rectangular Tube	BS 6128 Part 13 Type PF CC 131	
NEMA*		
Sheet	NEMA LI-1-1983 Type XXX	-
Tube	NEMA LI-1-1983 Type XXX	-
Admiralty*		
Sheet	NES 2053	-
Round Tube	NES 2054	-

*Testing and certification to these standards is subject to special enquiry. Standard quality testing is to British Standards.



Physical Properties

Property	Typical Result	Units
Cross breaking strength	175	MPa
Impact strength, notched, Charpy	2.7	kJ/m ²
Compressive strength, flatwise	350	MPa
Compressive strength, edgewise	200	MPa
Resistance to flatwise compression	1.2	%
Shear strength, flatwise	105	MPa
Water Absorption		
- 1.6mm thk.	39	mg
- 3mm thk.	47	mg
- 6mm thk.	56	mg
- 12mm thk.	70	mg
Electric strength, flatwise in oil at 90°C		
- 1.6mm thk.	14.5	MV/m
- 3mm thk.	13	MV/m
- 6mm thk.	8.8	MV/m
- 12mm thk.	6.1	MV/m
Electric strength, edgewise in oil at 90°C		
	55	kV
Insulation resistance after immersion in water	1 x 10 ¹⁰	ohms
Loss tangent at 1 MHz	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 laminae	0.26	W/(mK)
Thermal expansion in plane of laminae	1.8	x 10 ⁻⁵ /K
Specific heat	1.5	kJ/(kgK)

Test methods as BS EN 60893-2, where applicable.

KITE BRAND
Round Tube

Property	Typical Result	Units
Axial compressive strength	190	MPa
Cohesion between layers	110	MPa
Water absorption	1.0	mg/cm ²
Insulation resistance after immersion in water	1 x 10 ⁹	ohms
Axial electric strength in oil at 90°C	40	KV
Radial electric strength in oil at 90°C		
-1.6mm wall	8	MV/m
- 3mm wall	6	MV/m
Relative Density	1.35	-

Test methods as BS EN 60893-2, where applicable.

**Users of highly stressed components at temperatures approaching the maximum are recommended to seek further advice from Tufnol Composites Ltd.

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Reliability in the field of engineering plastics & composites.

Tufnol is the byword for quality in laminated plastics and resin based materials for engineering applications. It was invented here in the UK and its development to meet modern engineering demands continues to keep it abreast of 21st century technology.

This type of material is known as 'synthetic resin bonded laminated plastic', and is made from layers of paper, cotton cloth or woven glass fibre cloth, dipped in resin, then compressed and bonded together in a hot press. It is a strong, hard material, made in a number of different grades with varying properties and uses.

Tufnol's reliability is key to the many sectors of engineering industry in which it serves.

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Tufnol warrants the materials it produces will conform to Tufnol specifications. It is entirely the customer's responsibility to make the final product choice and satisfy themselves of the suitability of the product for the intended application and carrying out testing where required. Tufnol does not warrant the conformity of its materials to these properties or the suitability of its materials for any particular purpose.

The values are "typical only" and are based on test results generally in accordance with Test methods BS EN 60893-2, where applicable.