



GRADE 2F/14

SRBF Material Synthetic Resin Bonded Fabric

Cotton fabric based laminate
Medium weave cotton/phenolic resin
laminated plastic

SRBF Material. GRADE 2F/14

For electromechanical applications.

TUFNOL Grade 2F/14 is a cotton fabric laminate with enhanced electrical properties, specially developed to meet the requirements of the relevant British Standard specification.

What is Grade 2F/14 used for?

It is used for electro-mechanical applications where the benefits of mechanical toughness and wear resistance are combined with a need for good insulation resistance. Typical uses include slot wedges, stator packings, coil formers and operating arms.

Types available

	Sheets	Rods	Tubes	Other Sections
Natural colour	Yes	Yes	No	No

*Minimum order quantities may apply.

Specifications for GRADE 2F/14

British Standards	Current Standards	Recent Standards (now obsolete)
Sheet	BS EN 60893-3-4 Type PF CC 202	BS 2572 Types F4 & F5

*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	115	MPa
Impact strength, notched, Charpy	7.0	kJ/m ²
Compressive strength, flatwise	290	MPa
Compressive strength, edgewise	215	MPa
Resistance to flatwise compression	1.4	%
Shear strength, flatwise	80	MPa
Water Absorption		
- 1.6mm thk.	50	mg
- 3mm thk.	60	mg
- 6mm thk.	80	mg
- 12mm thk.	90	mg
Electric strength, flatwise in oil at 90°C		
- 1.6mm thk.	9.0	MV/m
- 3mm thk.	7.5	MV/m
- 6mm thk.	6.0	MV/m
Electric strength, edgewise in oil at 90°C		
	35	kV
Insulation resistance after immersion in water	5 x 10 ¹⁰	ohms
Loss tangent at 1 MHz	0.047	-
Permittivity at 1 MHz	4.8	-
Relative density	1.33	-
Maximum working temperature**		
- continuous	120	°C
- intermittent	130	°C
Thermal classification	Class E	-

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.