



# Tufnol Whale

SRBF - Synthetic resin Bonded Fabric  
Medium weave cotton/phenolic resin laminate  
Colour: Natural (brown)  
Density: 1.36(sheet) 1.35(rod)/cm<sup>3</sup>

## Material Data Sheet

Mechanical Properties	Value	Unit
Cross breaking strength	130	MPa
Charpy impact strength (notched)	11.5	kJ/m <sup>2</sup>
Compressive strength (flatwise)	310	MPa
Compressive strength (edgewise)	200	MPa
Shear strength (flatwise)	90	MPa
Tensile strength	68	MPa
Young's modulus	6.3	GPa

Thermal Properties	Value	Unit
Maximum working temperature – continuous	120	°C
Maximum working temperature – intermittent	130	°C
Thermal classification	E	
Thermal conductivity through laminae	0.32	W/(mK)
Thermal expansion in plane of laminae	2.2	X10 <sup>-5</sup> /K
Specific heat	1.5	kJ/(kgK)

Electrical properties	Value	Unit
Insulation resistance after immersion in water	1 x 10 <sup>8</sup>	Ω (ohms)
Electric strength (edgewise in oil @ 90°C)	12	kV
Electric strength (flatwise in oil @ 90°C) 1.6mm thk.	4.5	MV/m
Electric strength (flatwise in oil @ 90°C) 3mm thk.	2.6	MV/m
Electric strength (flatwise in oil @ 90°C) 6mm thk.	2.0	MV/m

Other Properties	Value	Unit
Water absorption 1.6mm thk.	90	Mg
Water absorption 3mm thk.	105	Mg
Water absorption 6mm thk.	130	Mg
Water absorption 12mm thk.	160	Mg
Water absorption (rod)	3.3	Mg/cm <sup>2</sup>

Specifications
Sheet - BS EN 60893-3-4 Type PF CC 203
Rod - BS EN 61212-3-3 Type PF CC 42

Direct Plastics Ltd. Rother Valley Way, Holbrook, Sheffield, S20 3RW

The following information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of certain properties or the suitability for a specific application. Existing commercial patents must be observed. A definitive quality guarantee is given in our general conditions of sales. Unless otherwise stated, these values represent averages taken from injection moulding samples. We reserve the right of technical alterations.