

TECHNICAL SPECIFICATIONS

BLUE PTFE

Physical properties (Typical); Ingredients: 755 Virgin P.T.F.E ; Filler / Pigment : 25 % Glass Fibre , Blue (by Weight)
Colour: Blue

MECHANICAL PROPERTIES		Value	Units	Standard
Tensile Strength (Moulding Direction)		11-15	MPa	BS2782:Pt3
Elongation at break (Moulding Direction)		120-270	%	BS2782:Pt3
Density		2.19-2.27	g/cc	BS2782:Pt6
Hardness		64-68	Shore D	ASTM D2240
Deformation under Load @ 1hr, 23°C,14.2MPa		9.0	%	ASTM D621
@24Hrs,23°C, 14.2MPa		12.4	%	
@Permanent Deformation		6.4	%	
@1Hr,150°C,5MPa		9.2	%	
Flexural Yield Strength @0.2% Offset, 23°C		5.5	MPa	ASTM D790
Flexural Modulus @ 23°C		1000	MPa	ASTM D790
Compressive Strength @0.2% Offset, 23°C		7.2	MPa	ASTM D695
@0.2% Offset, 150°C		1.8	MPa	
Compressibility @23°C		-	%	ASTM F36
@100°C		-	%	
Recovery @23°C		-	%	ASTM F36
@100°C		-	%	
Leak Rate @23°C		-	ml/Hr	ASTM F37
@100°C		-	ml/Hr	
Creep Relaxation @23°C		-	%	ASTM F38
@100°C		-	%	
ELECTRICAL PROPERTIES		Value	Units	Standard
Dielectric Strength @Air		12.9	KV/mm	ASTM D149
@ Oil		34.2	KV/mm	
Proof Test (Dielectric Strength)		-	KV/mm	BS6564 (E)
Dielectric Factor @ 60Hz		2.63	-	ASTM D150
@10 ⁶ Hz		2.85	-	
Dissipation Factor @ 60 Hz		0.0718	-	ASTM D150
@10 ⁶ Hz		0.0028	-	
Resistivity @Surface		>10 ¹⁶	Ω	ASTM D257
@Volume		>10 ¹⁷	Ω cm	
THERMAL PROPERTIES		Value	Units	Standard
Point of Fusion DSC		327	°C	ASTM D3417
Max. Working Temperature		260	°C	-
Max. Working Temperature @ Short Periods		300	°C	-
Min. Working Temperature		-200	°C	-
Thermal Conductivity @ Moulding Direction (MD)		0.41	W/(m.K)	ASTM C177
Coefficient of Linear Thermal Expansion TMA (23-200°C)				
@Moulding Direction (MD)		136	10 ⁻⁶ /°C	ASTM E831
@Right Angles to MD		84	10 ⁻⁶ /°C	

Flammability	-	-	UL94V(0)
Flash Point	630	°C	ASTM D1929
Limiting Oxygen Index	98-100	%	ASTM D2863
WEAR PROPERTIES	Value	Units	Standard
Coefficient of Friction @ Dry sliding	-	-	
Linear Wear	-	-	
Wear Coefficient	-	-	
Test Conditions as below:- Load:- N/mm ² , Speed:- m/s, Pf:- N/mm ² , Friction Partner :- Wheel Roughness :- μ M			
PHYSICAL PROPERTIES (Typical)			
BOND STRENGTH	Value	Units	Standard
Unetched:- Lap Shear Strength @ PTFE / Stainless Steel	12	N/mm	RPS407
Etched: Lap Shear Strength @ PTFE / Stainless Steel	16	N/mm	RPS407
Peel Force @PTFE / Stainless Steel	20	N/25mm	BS5350:PtC9
Peel Force @PTFE / PTFE	40	N/25mm	BS5350:PtC11
Test Conditions, as below:- Adhesive Ciba- Geigy Araldite 2001, PTFE Thickness 1mm, After 24 Hrs			

Chemical Resistance

The strength of the carbon-fluorine bond and the shielding of the carbon chains by the fluorine atoms result in a chemical inertness which is virtually universal, except alkali metals, fluorine under certain conditions, and some fluorine compounds at elevated temperatures. Resistant to organic solvent.

This compound has a fair resistance to the following chemicals:

Ammonium hydroxide, Bromine, Chromic acid, Hydroboric acid, hydrochloric acid, Hydrocyanic acid, Nitric acid (0-50%), Phenol, Sodium hydroxide.

This compound has an unsatisfactory resistance to the following chemicals:

Fluorosilicic acid, Hydrofluoric acid Hydrogen sulphide (solution) , Sodium silicate.

Applications and Industries

25% Glass fibre is the most widely used filler. It improves the creep resistance, compressive strength, rigidity, and wear of PTFE, both at low and high temperatures. It is chemically stable. 25% glass filler improves the wear resistance properties of PTFE.

Chemical:

Dynamic and shaft seals

Seals and Gaskets. Flat gaskets are used to seal flanges in pipelines.

Construction:

Bridge bearing. Slide Bearing

Electrical:

None

Engineering:

Anti-Friction bearing cages and plates

Bearings, bushes, shaft bearings/seals.

Chain tension slide bearings. Film bearings. Multilayer composite bearings.

Laboratory equipment. Measuring and control technology.

Pipe supports. Glandless valves & pumps, valve seats.

Piston rings in hydraulic systems.

Piston rod packing's used in compressor plunger pumps and valves.

Food:

None



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