



Polypropylene Natural

Proteus, Natural co-polymer polypro

Physical Properties	Metric	English	Comments
Specific Gravity	0.9 g/cc	0.0325 lb/in ³	ASTM D792
Water Absorption	Max 0.01 %	Max 0.01 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	Max 0.01 %	Max 0.01 %	Immersion; ASTM D570(2)

Mechanical Properties

Hardness, Shore D	72	72	ASTM D2240
Tensile Strength, Ultimate	23.4 MPa	3400 psi	ASTM D638
Elongation at Break	11 %	11 %	ASTM D638
Tensile Modulus	1.05 GPa	152 ksi	ASTM D638
Flexural Modulus	1.24 GPa	180 ksi	ASTM D790
Flexural Yield Strength	33.1 MPa	4800 psi	ASTM D790
Compressive Strength	33.1 MPa	4800 psi	10% Def., 73°F; ASTM D695
Compressive Modulus	1.21 GPa	175 ksi	ASTM D695
Coefficient of Friction	0.24	0.24	Dry vs. Steel; QTM55007
Izod Impact, Notched	4.27 J/cm	8 ft-lb/in	ASTM D256 Type A

Electrical Properties

Surface Resistivity per Square	Min 1e+015 ohm	Min 1e+015 ohm	ASTM D257
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Thermal Properties

Melting Point	152 °C	305 °F	Crystalline, Peak; ASTM D3418
Maximum Service Temperature, Air	82.2 °C	180 °F	Long Term
Deflection Temperature at 1.8 MPa (264 psi)	100 °C	212 °F	ASTM D648
Flammability, UL94 (Estimated Rating)	HB	HB	1/8 inch

Qualitative Processing Properties

Compliance - FDA	Compliant	
Machinability	3	1-10, 1=Easier to Machine
Service in Alcohols	Acceptable Service	
Service in Aliphatic Hydrocarbons	Unacceptable	
Service in Aromatic Hydrocarbons	Unacceptable	
Service in Chlorinated Solvents	Unacceptable	
Service in Ethers	Unacceptable	
Service in Ketones	Unacceptable	
Service in Strong Acids	Acceptable Service	
Service in Strong Alkalies	Acceptable Service	
Service in Sunlight	Limited Service	
Service in Weak Acids	Acceptable Service	
Service in Weak Alkalies	Acceptable Service	

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