

Manifattura Cattaneo VESPELÂ® SP1 Polyimide

Category : Polymer , Thermoplastic , Polyimide, Thermoplastic

Material Notes:

Manifattura Cattaneo products are available in semi-finished forms such as bars, profiles, sheets and plates. Information provided by Manifattura Cattaneo s.p.a.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Manifattura-Cattaneo-VESPEL-SP1-Polyimide.php

Physical Properties	Metric	English	Comments
Density	1.43 g/cc	0.0517 lb/inÂ³	ASTM D792
Moisture Absorption at Equilibrium	1.0 - 1.3 % @Temperature 23.0 Â°C	1.0 - 1.3 % @Temperature 73.4 Â°F	50% RH; ASTM D570
Water Absorption at Saturation	0.72 %	0.72 %	ASTM D570
Deformation	1.0 % @Time 86400 sec, Pressure 100 MPa	1.0 % @Time 24.0 hour, Pressure 14500 psi	ASTM D621

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	86.0 MPa	12500 psi	ASTM D638
Elongation at Break	7.5 %	7.5 %	ASTM D638
Flexural Strength	110 MPa	16000 psi	ASTM D790
Compressive Yield Strength	24.8 MPa @Strain 1.00 %, Time 3.60e+6 sec	3600 psi @Strain 1.00 %, Time 1000 hour	ASTM D695
Compressive Modulus	2.413 GPa	350.0 ksi	ASTM D695
Poissons Ratio	0.41	0.41	
Izod Impact, Notched (ISO)	0.0430 kJ/mÂ²	0.0205 ft-lb/inÂ²	ASTM D256
Izod Impact, Unnotched (ISO)	0.750 kJ/mÂ²	0.357 ft-lb/inÂ²	ASTM D256
Coefficient of Friction, Dynamic	0.29	0.29	on polished steel; MPC Test
Coefficient of Friction, Static	0.35	0.35	on polished steel; MPC Test

Thermal Properties	Metric	English	Comments
	54.0 Âµm/m-Â°C	30.0 Âµin/in-Â°F	

Thermal Properties	Metric	English	Comments
	@ Temperature 23.0 - 100 Å°C	@ Temperature 73.4 - 212 Å°F	
Thermal Conductivity	0.350 W/m-K	2.43 BTU-in/hr-ftÅ²- Å°F	ASTM D177
Maximum Service Temperature, Air	395 Å°C	743 Å°F	
Deflection Temperature at 1.8 MPa (264 psi)	360 Å°C	680 Å°F	ASTM D648-45
Flammability, UL94	V-0	V-0	
Oxygen Index	53 %	53 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+16 ohm-cm	>= 1.00e+16 ohm-cm	ASTM D257
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ASTM D257
Dielectric Constant	3.55	3.55	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	22.0 kV/mm	559 kV/in	ASTM D149
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Dielectric Loss Index	0.0034	0.0034	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Compliance Properties	Metric	English	Comments
FDA	No	No	

Descriptive Properties	Value	Comments
Color	Brown	
UV Resistance	N	

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