

Mitsubishi Xantar[®] F 23 R Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Molded

Material Notes:

Xantar[®] materials are engineered for performance, consistency and reliability. This makes Xantar[®] resins ideal for interior automotive components, electrical equipment and consumer appliances where quality is a key requirement. The Xantar[®] range includes: clear and tinted grades for transparent applications reinforced materials Flame retardant and halogen free types lubricated materials for added wear resistance Mitsubishi Engineering Plastics acquired the Xantar[®] product line from DSM in 2010.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Mitsubishi-Xantar-F-23-R-Polycarbonate.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Water Absorption	0.35 %	0.35 %	Sim. to ISO 62
Viscosity Test	52 cm ³ /g	52 cm ³ /g	Limiting Viscosity Number; ISO 1628-4
	58 cm ³ /g	58 cm ³ /g	Viscosity Number
Linear Mold Shrinkage, Flow	0.0060 cm/cm	0.0060 in/in	ISO 294-4
Melt Flow	8.4 g/10 min @Load 1.20 kg, Temperature 300 °C	8.4 g/10 min @Load 2.65 lb, Temperature 572 °F	Calculated from Volume Flow Rate of 7 cm ³ /10min.; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	70	70	ISO 2039-2
Tensile Strength, Yield	60.0 MPa	8700 psi	ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	ISO 527-1/-2
Elongation at Yield	6.0 %	6.0 %	ISO 527-1/-2
Tensile Modulus	2.30 GPa	334 ksi	ISO 527-1/-2
Flexural Strength	90.0 MPa	13100 psi	ISO 178
Flexural Modulus	2.40 GPa	348 ksi	ISO 178
Izod Impact, Notched (ISO)	80.0 kJ/m ² @Temperature 23.0 °C	38.1 ft-lb/in ² @Temperature 73.4 °F	ISO 180/4A

Thermal Properties	Metric	English	Comments
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Thermal Properties	65.0 Åum/m-Å°C Metric	English in/in-Å°F	Comments
CTE, linear, Parallel to Flow	@Temperature 20.0 Å°C	@Temperature 68.0 Å°F	ISO 11359-1/-2
Maximum Service Temperature, Air	125 Å°C	257 Å°F	Ball Pressure Temperature; IEC 60695-10-2
Deflection Temperature at 1.8 MPa (264 psi)	130 Å°C	266 Å°F	ISO 75-1/-2
Vicat Softening Point	148 Å°C	298 Å°F	50Å°C/h 50N; ISO 306
UL RTI, Electrical	130 Å°C	266 Å°F	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	130 Å°C	266 Å°F	UL746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	125 Å°C	257 Å°F	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	125 Å°C	257 Å°F	UL746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	125 Å°C	257 Å°F	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	130 Å°C	266 Å°F	UL746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	V-2	V-2	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-0	V-0	IEC 60695-11-10
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	35 %	35 %	ISO 4589-1/-2
Glow Wire Test	850 Å°C	1560 Å°F	Glow Wire Ignition Temperature; IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	
	850 Å°C	1560 Å°F	Glow Wire Ignition Temperature; IEC 60695-2-13
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	960 Å°C	1760 Å°F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	
	960 Å°C	1760 Å°F	Glow Wire Flammability Index; IEC 60695-2-12

Thermal Properties	@Thickness 1.50 mm Metric	@Thickness 0.0591 in English	Comments
Optical Properties	Metric	English	Comments
Transmission, Visible	89 %	89 %	Light Transmittance; ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	IEC 60093
Dielectric Constant	2.9	2.9	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	3.0	3.0	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	29.0 kV/mm	737 kV/in	IEC 60243-1
Dissipation Factor	0.00066	0.00066	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	0.0092	0.0092	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	225 V	225 V	IEC 60112
	250 - 399 V	250 - 399 V	

Descriptive Properties	Value	Comments
Blow Molding	Yes	
Flame Retardant	Yes	
Flame Retarding Agent	Yes	
Heat stabilized or stable to heat	Yes	
High impact or impact modified	Yes	
Injection molding	Yes	
Release Agent	Yes	
Transparent	Yes	
Without Fillers	Yes	

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