Mitsubishi XantarÂ® MX 1000 Polycarbonate

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

Material Notes:

XantarÂ® materials are engineered for performance, consistency and reliability. This makes XantarÂ® resins ideal for interior automotive components, electrical equipment and consumer appliances where quality is a key requirement. The XantarÂ® range includes: clear and tinted grades for transparent applicationsreinforced materialsFlame retardant and halogen free typeslubricated materials for added wear resistanceMitsubishi Engineering Plastics acquired the XantarÂ® product line from DSM in 2010.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Mitsubishi-Xantar-MX-1000-Polycarbonate.php

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/inÂ³	ISO 1183
Water Absorption	0.35 %	0.35 %	Sim. to ISO 62
Linear Mold Shrinkage, Flow	0.0060 cm/cm	0.0060 in/in	ISO 294-4
Melt Flow	35.7 g/10 min @Load 1.20 kg, Temperature 300 Â°C	35.7 g/10 min @Load 2.65 lb, Temperature 572 Â°F	Calculated from Volume Flow Rate of 30 cm³/10min.; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	70	70	ISO 2039-2
Tensile Strength, Yield	55.0 MPa	7980 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	2.20 GPa	319 ksi	ISO 527-1/-2
Flexural Strength	80.0 MPa	11600 psi	ISO 178
Flexural Modulus	2.30 GPa	334 ksi	ISO 178
Izod Impact, Notched (ISO)	40.0 kJ/mÂ² @Temperature 23.0 Â°C	19.0 ft-lb/inÂ² @Temperature 73.4 Â°F	ISO 180/4A

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	65.0 Âµm/m-Â°C @Temperature 20.0 Â°C	36.1 Âµin/in-Â°F @Temperature 68.0 Â°F	ISO 11359-1/-2

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	125 Â°C	257 Â°F	Ball Pressure Temperature; IEC 60695-10-2
Deflection Temperature at 1.8 MPa (264 psi)	115 Â°C	239 Â°F	ISO 75-1/-2
Vicat Softening Point	135 Â°C	275 Â°F	50Â°C/h 50N; ISO 306
UL RTI, Electrical	110 Â°C @Thickness 1.50 mm	230 Â°F @Thickness 0.0591 in	UL746B
	110 Â°C @Thickness 3.00 mm	230 Â°F @Thickness 0.118 in	UL746B
UL RTI, Mechanical with Impact	85.0 Â°C @Thickness 1.50 mm	185 Â°F @Thickness 0.0591 in	UL746B
	105 Â°C @Thickness 3.00 mm	221 Â°F @Thickness 0.118 in	UL746B
UL RTI, Mechanical without Impact	105 Â°C @Thickness 1.50 mm	221 Â°F @Thickness 0.0591 in	UL746B
	110 Â°C @Thickness 3.00 mm	230 Â°F @Thickness 0.118 in	UL746B
Flammability, UL94	V-0 @Thickness 1.60 mm	V-0 @Thickness 0.0630 in	IEC 60695-11-10
	V-0 @Thickness 3.00 mm	V-0 @Thickness 0.118 in	IEC 60695-11-10
	5VB @Thickness 2.00 mm	5VB @Thickness 0.0787 in	IEC 60695-11-20
Oxygen Index	33 %	33 %	ISO 4589-1/-2
Glow Wire Test	960 Â°C @Thickness 3.00 mm	1760 Â°F @Thickness 0.118 in	Glow Wire Flammability Index; IEC 60695-2-12
	960 Â°C @Thickness 1.50 mm	1760 Â°F @Thickness 0.0591 in	Glow Wire Flammability Index; IEC 60695-2-12

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

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.8 @Frequency 1e+6 Hz	2.8 @Frequency 1e+6 Hz	IEC 60250
	2.9 @Frequency 100 Hz	2.9 @Frequency 100 Hz	IEC 60250
Dielectric Strength	29.0 kV/mm	737 kV/in	IEC 60243-1
Dissipation Factor	0.00066 @Frequency 100 Hz	0.00066 @Frequency 100 Hz	IEC 60250
	0.0092 @Frequency 1e+6 Hz	0.0092 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	250 - 399 V	250 - 399 V	PLC 2; UL 746A

Descriptive Properties	Value	Comments
Flame Retardant	Yes	
Flame Retarding Agent	Yes	
Heat stabilized or stable to heat	Yes	
High impact or impact modified	Yes	
Injection molding	Yes	
Other Extrusion	Yes	
Platable	Yes	
Release Agent	Yes	
Thermoforming	Yes	
Without Fillers	Yes	

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