

Mitsubishi Xantar[®] 18 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-18-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	43 cm ³ /g	43 cm ³ /g	Limiting Viscosity Number; ISO 1628-4
Linear Mold Shrinkage, Flow	0.0060 cm/cm	0.0060 in/in	ISO 294-4
Melt Flow	27.6 g/10 min @Load 1.20 kg, Temperature 300 °C	27.6 g/10 min @Load 2.65 lb, Temperature 572 °F	Calculated from Volume Flow Rate of 23 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)	60.0 kJ/m ² @Temperature 23.0 °C	28.6 ft-lb/in ² @Temperature 73.4 °F	ISO 180/4A

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	65.0 µm/m-°C	36.1 µin/in-°F	ISO 11359-1/-2

Thermal Properties	@Temperature 20.0 Metric °C	@Temperature 68.0 English °F	Comments
Maximum Service Temperature, Air	125 °C	257 °F	Ball Pressure Temperature; IEC 60695-10-2
Deflection Temperature at 1.8 MPa (264 psi)	130 °C	266 °F	ISO 75-1/-2
Vicat Softening Point	145 °C	293 °F	50°C/h 50N; ISO 306
UL RTI, Electrical	130 °C	266 °F	UL746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	130 °C	266 °F	UL746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	125 °C	257 °F	UL746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	130 °C	266 °F	UL746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	125 °C	257 °F	UL746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	130 °C	266 °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-2	V-2	IEC 60695-11-10
	@Thickness 0.750 mm	@Thickness 0.0295 in	
Oxygen Index	26 %	26 %	ISO 4589-1/-2
Glow Wire Test	800 °C	1470 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	825 °C	1520 °F	Glow Wire Ignition Temperature; IEC 60695-2-13
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	875 °C	1610 °F	Glow Wire Ignition Temperature; IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	
	960 °C	1760 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	

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 Constant	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	
Dissipation Factor	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	PLC 2; UL 746A

Descriptive Properties	Value	Comments
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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