

Mitsubishi Xantar® 18 UR 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 applicationsreinforced materialsFlame retardant and halogen free typeslubricated materials for added wear resistanceMitsubishi 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-UR-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 °F 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	UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	130 °C	266 °F	UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	125 °C	257 °F	UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	130 °C	266 °F	UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	125 °C	257 °F	UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	130 °C	266 °F	UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	V-2	V-2	IEC 60695-11-10
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	V-2	V-2	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 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	
	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	
	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	
Light stabilized or stable to light	Yes	
Release Agent	Yes	
Transparent	Yes	
U.V. stabilized or stable to weather	Yes	
Without Fillers	Yes	

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