

XANTAR™ XRM 1006

Mitsubishi Engineering-Plastics Corp - Polycarbonate

General Information			
Product Description			
Flame Retardant, Non Br & Non P, Low Temp. Impact			
General			
Additive	• Flame Retardant		
Features	• Bromine Free • Flame Retardant	• Good Impact Resistance • Low (to None) Phosphorus Content	• Low Temperature Impact Resistance • Low Temperature Resistant
ASTM & ISO Properties ¹			
Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	6.0	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	6.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow	0.70 to 0.90	%	
Flow	0.70 to 0.90	%	
Water Absorption (Saturation, 23°C)	0.35	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2200	MPa	ISO 527-1/1
Tensile Stress (Yield)	55.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	6.0	%	
Break	> 50	%	
Flexural Modulus ²	2300	MPa	ISO 178
Flexural Stress ²	80.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179
Notched Izod Impact Strength			ISO 180/4A
-40°C	30	kJ/m ²	
-20°C	60	kJ/m ²	
23°C	70	kJ/m ²	
Multi-Axial Instrumented Impact Energy			ISO 6603-2
-30°C	60.0	J	
23°C	60.0	J	
Multi-Axial Instrumented Impact Peak Force			ISO 6603-2
-30°C	6000	N	
23°C	5500	N	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ISO 75-2/A
1.8 MPa, Unannealed	130	°C	



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Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	145	°C	ISO 306
Ball Pressure Test (140°C)	Pass		IEC 60695-10-2
CLTE - Flow	6.5E-5	cm/cm/°C	ISO 11359-2
Effective Thermal Diffusivity	1.50E-7	m²/s	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Constant			IEC 60250
100 Hz	2.90		
1 MHz	2.80		
Dissipation Factor			IEC 60250
100 Hz	6.6E-4		
1 MHz	9.2E-3		
Comparative Tracking Index (CTI)	PLC 2		UL 746A
Comparative Tracking Index	200	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.5 mm	V-1		
2.5 mm	V-0		
2.0 mm	5VB		
3.0 mm	5VA		
Glow Wire Flammability Index			IEC 60695-2-12
2.0 mm	960	°C	
3.0 mm	960	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
2.0 mm	850	°C	
3.0 mm	875	°C	
Oxygen Index	28	%	ISO 4589-2
Fill Analysis	Nominal Value	Unit	
Melt Density	1.04	g/cm³	
Melt Thermal Conductivity	0.26	W/m/K	
Specific Heat Capacity of Melt	2150	J/kg/°C	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Hot Air Dryer	120	°C
Drying Time - Hot Air Dryer	4.0	hr
Rear Temperature	290 to 320	°C
Middle Temperature	290 to 320	°C
Front Temperature	290 to 320	°C
Nozzle Temperature	290 to 320	°C
Mold Temperature	50 to 110	°C
Ejection Temperature	144	°C

