Mitsubishi Engineering-Plastics Corp.

Iupital™ FC2020D

Mitsubishi Engineering-Plastics Corp - Acetal (POM) Copolymer

General Information

Product Description		
Carbon fiber filled; Electrically conductive		
General		
Filler / Reinforcement	• Carbon Fiber, 20% Filler by Weight	
Features	• Electrically Conductive	• High Rigidity
Uses	• Automotive Applications • Automotive Electronics	• Electrical/Electronic Applications • General Purpose

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.46	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.5	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	3.2	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.00 mm)	0.40	%	Internal Method
Water Absorption - 60% RH (23°C)	0.36	%	Internal Method
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	17000	MPa	ISO 527-1/1
Tensile Stress (Break)	130	MPa	ISO 527-2/5
Tensile Strain (Break)	1.5	%	ISO 527-2/5
Flexural Modulus [2]	16000	MPa	ISO 178
Flexural Stress [2]	200	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	4.5	kJ/m²	ISO 179
Charpy Unnotched Impact Strength (23°C)	30	kJ/m²	ISO 179
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, Unannealed	164	°C	ISO 75-2/B
1.8 MPa, Unannealed	162	°C	ISO 75-2/A
Melting Temperature	166	°C	ISO 11357-3
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	2.0E+2	ohms	IEC 60093
Volume Resistivity	2.0E+2	ohms·cm	IEC 60093
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.8 mm)	HB		UL 94

Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Hot Air Dryer	80	°C
Drying Time - Hot Air Dryer	3.0 to 4.0	hr

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Injection	Nominal Value	Unit
Rear Temperature	180	°C
Middle Temperature	190	°C
Front Temperature	200	°C
Nozzle Temperature	180 to 210	°C
Mold Temperature	60 to 100	°C
Injection Pressure	50.0 to 100	MPa
Injection Rate	Moderate	
Screw Speed	80 to 120	rpm