

Iupital® FC2020H

Acetal (POM) Copolymer

Mitsubishi Engineering-Plastics Corp

Message:

Iupital® FC2020H is an Acetal (POM) Copolymer material filled with 20% carbon fiber. It is available in Asia Pacific, Europe, or North America for injection molding.

Important attributes of Iupital® FC2020H are:

Flame Rated

Rigid

General Information			
UL YellowCard	E41179-231677		
Filler / Reinforcement	Carbon Fiber,20% Filler by Weight		
Features	High Rigidity		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.46	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	6.0	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	5.40	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.00 mm)	0.40	%	
Water Absorption ¹ (Equilibrium, 23°C, 50% RH)	0.28	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	17000	MPa	ISO 527-2
Tensile Stress (Break)	170	MPa	ISO 527-2
Tensile Strain (Break)	2.0	%	ISO 527-2
Flexural Modulus	16000	MPa	ISO 178
Flexural Stress	270	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	7.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	50	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
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
CLTE			ISO 11359-2
Flow	1.5E-5	cm/cm/°C	
Transverse	1.1E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method

Surface Resistivity	5.0E+5	ohms	IEC 60093
Volume Resistivity	2.0E+5	ohms·cm	IEC 60093
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.800 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	3.0 to 4.0	hr	
Rear Temperature	180	°C	
Middle Temperature	190	°C	
Front Temperature	200	°C	
Nozzle Temperature	180 to 210	°C	
Mold Temperature	60.0 to 100	°C	
Injection Pressure	50.0 to 100	MPa	
Injection Rate	Moderate		
Screw Speed	80 to 120	rpm	
NOTE			

1. 60% RH

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