

**Iupital® F20-03**  
**Acetal (POM) Copolymer**  
**Mitsubishi Engineering-Plastics Corp**



General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Features	• Medium Viscosity		

Physical	Nominal Value Unit	Test Method
Density	1.41 g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	9.0 g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	7.70 cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage - Flow (3.00 mm)	2.0 %	
Water Absorption <sup>2</sup> (Equilibrium, 23°C, 50% RH)	0.22 %	ISO 62

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	2900 MPa	ISO 527-2
Tensile Stress (Yield)	64.0 MPa	ISO 527-2
Tensile Strain (Yield)	8.5 %	ISO 527-2
Nominal Tensile Strain at Break	30 %	ISO 527-2
Flexural Modulus	2600 MPa	ISO 178
Flexural Strength	90.0 MPa	ISO 178

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength (23°C)	7.0 kJ/m <sup>2</sup>	ISO 179
Charpy Unnotched Impact Strength (23°C)	250 kJ/m <sup>2</sup>	ISO 179

Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature		
0.45 MPa, Unannealed	156 °C	ISO 75-2/B
1.8 MPa, Unannealed	100 °C	ISO 75-2/A
Melting Temperature	166 °C	ISO 11357-3
CLTE		ISO 11359-2
Flow	0.00011 cm/cm/°C	
Transverse	0.00011 cm/cm/°C	

Electrical	Nominal Value Unit	Test Method
Surface Resistivity	1.0E+16 ohm	IEC 60093
Volume Resistivity	1.0E+14 ohm·cm	IEC 60093
Electric Strength		IEC 60243-1
1.00 mm	32 kV/mm	
3.00 mm	19 kV/mm	
Relative Permittivity		IEC 60250
100 Hz	3.90	
1 MHz	3.90	
Dissipation Factor		IEC 60250
100 Hz	0.0020	
1 MHz	0.0070	
Comparative Tracking Index	600 V	IEC 60112

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	170 °C
Middle Temperature	180 °C
Front Temperature	190 °C
Nozzle Temperature	180 to 210 °C
Mold Temperature	60.0 to 80.0 °C

Injection	Nominal Value Unit
Injection Pressure	50.0 to 100 MPa
Injection Rate	Moderate
Screw Speed	80 to 120 rpm

**Notes**

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 60% RH