

Iupital™ FW-21

Mitsubishi Engineering-Plastics Corp - Acetal (POM) Copolymer

General Information			
Product Description			
Abrasion resistant; Oil added; Natural Color			
General			
Additive	• Lubricant		
Features	• Abrasion Resistant	• Lubricated	
Uses	• Automotive Applications • Automotive Electronics	• Electrical/Electronic Applications • General Purpose	
Appearance	• Natural Color		
ASTM & ISO Properties ¹			
Physical	Nominal Value	Unit	Test Method
Density	1.41	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	9.5	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	8.2	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.00 mm)	2.0	%	Internal Method
Water Absorption - 60% RH (23°C)	0.22	%	Internal Method
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2800	MPa	ISO 527-1/1
Tensile Stress (Yield)	56.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	10	%	
Break	30	%	
Flexural Modulus ²	2500	MPa	ISO 178
Flexural Stress ²	81.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	6.5	kJ/m²	ISO 179
Charpy Unnotched Impact Strength (23°C)	100	kJ/m²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	154	°C	ISO 75-2/B
1.8 MPa, Unannealed	104	°C	ISO 75-2/A
Melting Temperature	166	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	1.1E-4	cm/cm/°C	
Transverse	1.1E-4	cm/cm/°C	
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.8 mm)	HB		UL 94

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Hot Air Dryer	80	°C
Drying Time - Hot Air Dryer	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 to 80	°C
Injection Pressure	50.0 to 100	MPa
Injection Rate	Moderate	
Screw Speed	80 to 120	rpm

Notes

¹ Typical properties: these are not to be construed as specifications.

² 2.0 mm/min

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