

Reny™ C-56

Mitsubishi Engineering-Plastics Corp - Polyamide MXD6

General Information				
Product Description				
Carbon Fiber-reinforced; Hardness, Ultra high				
General				
Filler / Reinforcement	• Carbon Fiber, 50% Filler by Weight			
Features	• High Hardness			
Uses	• Automotive Applications • Automotive Electronics		• Electrical/Electronic Applications • General Purpose	
ASTM & ISO Properties ¹				
Physical	Dry	Conditioned	Unit	Test Method
Density	1.44	--	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)				ISO 1133
280°C/5.0 kg	10	--	g/10 min	
Melt Volume-Flow Rate (MVR)				ISO 1133
280°C/5.0 kg	7.0	--	cm³/10min	
Molding Shrinkage ²				Internal Method
Across Flow : 130°C, 2.00 mm	0.32	--	%	
Flow : 130°C, 2.00 mm	0.10	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	45000	43800	MPa	ISO 527-1/1
Tensile Stress (Break)	304	227	MPa	ISO 527-2/5
Tensile Strain (Break)	0.60	0.60	%	ISO 527-2/5
Flexural Modulus ³	43000	41300	MPa	ISO 178
Flexural Stress ³	517	443	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
23°C	6.0	6.0	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179
23°C	50	33	kJ/m²	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	237	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	232	222	°C	ISO 75-2/A
CLTE				ISO 11359-2
Flow	6.0E-6	--	cm/cm/°C	
Transverse	5.0E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	4.0E+3	--	ohms	IEC 60093
Volume Resistivity	2.0E+6	--	ohms·cm	IEC 60093

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Additional Information

Conditioned Conditioned to 50% RH

Processing Information

Injection	Dry Unit
Drying Temperature	
Hot Air Dryer, A	120 °C
Hot Air Dryer, B	80 °C
Drying Time	
Hot Air Dryer, A	> 3.0 hr
Hot Air Dryer, B	> 12 hr
Rear Temperature	265 °C
Middle Temperature	270 °C
Front Temperature	275 °C
Nozzle Temperature	275 °C
Mold Temperature	120 to 140 °C
Injection Pressure	20.0 to 150 MPa
Injection Rate	Moderate-Fast
Screw Speed	60 to 150 rpm

Notes

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

² 100-mm square

³ 2.0 mm/min

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