Mitsubishi Engineering-Plastics Corp.

Reny™ 1313H

Mitsubishi Engineering-Plastics Corp - Polyamide MXD6

General Information		
Product Description		
GF-reinforced; Rigidity, High; Impact Resistance, High		
General		
Filler / Reinforcement	• Glass Fiber, 40% Filler by Weight	
Features	• High Impact Resistance	• High Rigidity
Uses	• Automotive Applications • Automotive Electronics	• Electrical/Electronic Applications • General Purpose

ASTM & ISO Properties [1]				
Physical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Density	1.47	--	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)				ISO 1133
280°C/2.16 kg	2.3	--	g/10 min	
Melt Volume-Flow Rate (MVR)				ISO 1133
280°C/2.16 kg	2.7	--	cm³/10min	
Molding Shrinkage [2]				Internal Method
Across Flow : 130°C, 2.00 mm	0.65	--	%	
Flow : 130°C, 2.00 mm	0.27	--	%	
Water Absorption				Internal Method
24 hr, 23°C	0.21	--	%	
Equilibrium, 23°C, 50% RH	1.2	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	12000	11000	MPa	ISO 527-1/1
Tensile Stress (Break)	162	136	MPa	ISO 527-2/5
Tensile Strain (Break)	2.0	2.4	%	ISO 527-2/5
Flexural Modulus [3]	11600	10900	MPa	ISO 178
Flexural Stress [3]	258	219	MPa	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179
23°C	12	13	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179
23°C	66	55	kJ/m²	
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load				
0.45 MPa, Unannealed	235	231	°C	ISO 75-2/B
1.8 MPa, Unannealed	217	207	°C	ISO 75-2/A
CLTE				ISO 11359-2
Flow	2.0E-5	--	cm/cm/°C	
Transverse	6.0E-5	--	cm/cm/°C	

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Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+15	3.0E+14	ohms	IEC 60093
Volume Resistivity	1.0E+16	1.0E+15	ohms·cm	IEC 60093
Electric Strength				IEC 60243-1
1.00 mm	27	28	kV/mm	
2.00 mm	24	22	kV/mm	
Dielectric Constant				IEC 60250
1 MHz	--	4.00		
100 MHz	--	5.00		
Dissipation Factor				IEC 60250
1 MHz	--	0.015		
100 MHz	--	0.020		
Comparative Tracking Index	> 600	> 600	V	IEC 60112

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.6 mm)	HB	--		UL 94

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