Mitsubishi Engineering-Plastics Corp.

Reny™ 1021UCS

Mitsubishi Engineering-Plastics Corp - High Performance Polyamide

General Information

Product Description		
GF-reinforced; Weather Resistant; HB equivalent per in-house testing		
General		
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight	
Features	• Good Weather Resistance	• Light Stabilized
Uses	• Automotive Applications • Automotive Electronics	• Electrical/Electronic Applications • General Purpose

ASTM & ISO Properties [1]

Physical	Dry	Conditioned	Unit	Test Method
Density	1.61	--	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)				ISO 1133
275°C/2.16 kg	13	--	g/10 min	
Melt Volume-Flow Rate (MVR)				ISO 1133
275°C/2.16 kg	11	--	cm³/10min	
Molding Shrinkage [2]				Internal Method
Across Flow : 130°C, 2.00 mm	0.72	--	%	
Flow : 130°C, 2.00 mm	0.32	--	%	
Water Absorption				Internal Method
24 hr, 23°C	0.47	--	%	
Equilibrium, 23°C, 50% RH	1.3	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	17800	14400	MPa	ISO 527-1/1
Tensile Stress (Break)	252	184	MPa	ISO 527-2/5
Tensile Strain (Break)	2.5	3.4	%	ISO 527-2/5
Flexural Modulus [3]	18300	13800	MPa	ISO 178
Flexural Stress [3]	392	305	MPa	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179
23°C	14	16	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179
23°C	87	100	kJ/m²	
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load				
0.45 MPa, Unannealed	227	221	°C	ISO 75-2/B
1.8 MPa, Unannealed	217	210	°C	ISO 75-2/A

Additional Information	
Conditioned	Conditioned to 50% RH

Reny™ 1021UCS

Mitsubishi Engineering-Plastics Corp - High Performance Polyamide

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	270	°C
Middle Temperature	275	°C
Front Temperature	280	°C
Nozzle Temperature	280	°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