

Amilan™ CM1001R Nylon 6

TECHNICAL DATA

Product Description

Low warpage, Mineral filler reinforced

Uses

- Appliance Components
- Automotive Applications
- Automotive Interior Parts
- Construction Applications
- Electrical/Electronic Applications
- Office Automation Equipment
- Power/Other Tools
- Seats
- Sporting Goods
- White Goods & Small Appliances

Processing Method

- Injection Molding

ISO Designation

- >PA6-MD40<

Type

- Nylon6/Reinforced

ASTM & ISO Properties

Physical	Dry	Water Absorption	Unit	Test Method
Density (23°C)	1.51	--	g/cm ³	ISO 1183
Molding Shrinkage ¹				Internal Method
Across Flow : 3.00 mm	0.80 to 1.00	--	%	
Flow : 3.00 mm	0.80 to 1.00	--	%	
Water Absorption ²				ISO 62
24 hr, 23°C	0.90	--	%	
Saturation, 23°C	5.8	--	%	
Mechanical	Dry	Water Absorption	Unit	Test Method
Tensile Strength				ISO 527-2
-40°C	130	--	MPa	
23°C	95	55	MPa	
80°C	40	--	MPa	
Tensile Strain				ISO 527-2
Break, -40°C	2.0	--	%	
Break, 23°C	2.5	2.5	%	
Break, 80°C	7.0	--	%	
Flexural Modulus				ISO 178
-40°C	6900	--	MPa	
23°C	5800	2300	MPa	
80°C	1800	--	MPa	
Flexural Stress				ISO 178
-40°C	160	--	MPa	
23°C	145	70	MPa	
80°C	60	--	MPa	
Shear Strength (23°C)	73	62	MPa	ASTM D732
Taber Abrasion Resistance				ISO 9352
1000 Cycles	25 to 30	--	mg	
Coefficient of Friction - vs. Metal ³	0.40	--		Suzuki Method

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Impact	Dry	Water Absorption	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
23°C	5.0	7.0	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179
-40°C	35.0	--	kJ/m²	
23°C	45.0	--	kJ/m²	
Hardness	Dry	Water Absorption	Unit	Test Method
Rockwell Hardness				ISO 2039-2
M-Scale, 23°C	81	--		
R-Scale, 23°C	119	--		
Thermal	Dry	Water Absorption	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	203	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	173	--	°C	ISO 75-2/A
Melting Temperature	225	--	°C	DSC
Coefficient of Linear Thermal Expansion	8.0	--	cm ⁻⁵ /cm/°C	ISO 11359-2
Electrical	Dry	Water Absorption	Unit	Test Method
Volume Resistivity	1.0E+13	1.0E+10	ohms·m	IEC 60093
Electric Strength	21	--	kV/mm	IEC 60243-1
Dielectric Constant				IEC 60250
23°C, 50 Hz	4.6	--		
23°C, 1 kHz	4.5	--		
23°C, 1 MHz	3.8	--		
Dissipation Factor				IEC 60250
23°C, 50 Hz	0.040	--		
23°C, 1 kHz	0.030	--		
23°C, 1 MHz	0.020	--		
Arc Resistance	137	--	sec	UL 746
Flammability	Dry	Water Absorption	Unit	Test Method
Flame Rating (0.75 mm)	HB	HB		UL 94
Additional Information				
Dry	Water Absorption Moisture Content 2.1%			

Notes

¹ 80x80x3mm

² in water

³ Without Lubrication

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