

Amilan® CM1001R

Polyamide 6
Toray Resin Company

Message:

Amilan® CM1001R is a Polyamide 6 (Nylon 6) product filled with 40% mineral. It is available in Asia Pacific, Europe, or North America.
Characteristics include:
Flame Rated
Warp Resistant

General Information				
UL YellowCard		E41797-233404		
Filler / Reinforcement		Mineral,40% Filler by Weight		
Features		Low Warpage		
Part Marking Code		>PA6-MD40<		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.51	--	g/cm ³	ISO 1183
Molding Shrinkage				Internal Method
Across Flow : 3.00 mm ¹	0.80 to 1.0	--	%	
Flow : 3.00 mm ²	0.80 to 1.0	--	%	
Water Absorption				ISO 62
23°C, 24 hr	0.90	--	%	
Saturation, 23°C	5.8	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness				ISO 2039-2
M-Scale, 23°C	81	--		
R-Scale, 23°C	119	--		
R-Scale, 80°C	25 to 30	--		
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Stress				ISO 527-2
-40°C	130	--	MPa	
23°C	95.0	55.0	MPa	
80°C	40.0	--	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	70.0	MPa	
80°C	60.0	--	MPa	
Shear Strength (23°C)	73.0	62.0	MPa	ASTM D732
Taber Abrasion Resistance (1000 Cycles)	0.400	--	mg	ISO 9352
Coefficient of Friction - vs. Metal ³	0.150	--		Suzuki Method
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	5.0	7.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength				ISO 179
-40°C	35	--	kJ/m ²	
23°C	45	--	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	203	--	°C	ISO 75-2/B
Melting Temperature	225	--	°C	DSC
CLTE - Flow	8.0E-5	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Electric Strength	21	--	kV/mm	IEC 60243-1
Dielectric Constant ⁴				IEC 60250
23°C, 50 Hz	4.60	--		
23°C, 1 kHz	4.50	--		
23°C, 1 MHz	3.80	--		
Dissipation Factor ⁵				IEC 60250
23°C, 50 Hz	0.040	--		
23°C, 1 kHz	0.030	--		
23°C, 1 MHz	0.020	--		
Arc Resistance ⁶	137	--	sec	UL 746
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (0.794 mm)	HB	--		UL 94
NOTE				
1.	80x80x3			
2.	80x80x3mm			
3.	Without Lubrication			
4.	60% RH			
5.	60% RH			
6.	Tungsten Electrode			

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

