

Amilan® CM1001G-15

Polyamide 6
Toray Resin Company

Message:

Amilan® CM1001G-15 is a Polyamide 6 (Nylon 6) product filled with 15% glass fiber. It is available in Asia Pacific, Europe, or North America.
Characteristics include:
Flame Rated
High Flow

General Information				
UL YellowCard		E41797-233401		
Filler / Reinforcement		Glass Fiber,15% Filler by Weight		
Features		High Flow		
Part Marking Code		>PA6-GF15<		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.25	--	g/cm ³	ISO 1183
Molding Shrinkage - Across Flow ¹ (3.00 mm)	0.70 to 1.1	--	%	Internal Method
Water Absorption				ISO 62
23°C, 24 hr	1.3	--	%	
Saturation, 23°C	8.3	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness				ISO 2039-2
M-Scale, 23°C	90	--		
R-Scale, 23°C	119	--		
R-Scale, 80°C	10	--		
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Stress				ISO 527-2
-40°C	135	115	MPa	
23°C	110	55.0	MPa	
80°C	45.0	25.0	MPa	
Tensile Strain				ISO 527-2
Break, -40°C	2.0	3.0	%	
Break, 23°C	2.0	4.5	%	
Break, 80°C	5.5	6.0	%	
Flexural Modulus				ISO 178
-40°C	7300	6000	MPa	
23°C	5700	2700	MPa	
80°C	2300	1700	MPa	
Flexural Stress				ISO 178
-40°C	205	--	MPa	

23°C	170	85.0	MPa	
80°C	80.0	45.0	MPa	
Compressive Stress				ISO 604
-40°C	205	130	MPa	
23°C	135	65.0	MPa	
80°C	70.0	35.0	MPa	
Shear Strength (23°C)	100	--	MPa	ASTM D732
Taber Abrasion Resistance (1000 Cycles)	0.300	--	mg	ISO 9352
Coefficient of Friction - vs. Metal ²	0.150	--		Suzuki Method
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-40°C	5.5	6.5	kJ/m ²	
23°C	8.5	7.0	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179
-40°C	20	25	kJ/m ²	
23°C	30	35	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	210	--	°C	ISO 75-2/B
Melting Temperature	225	--	°C	DSC
CLTE - Flow	4.5E-5	--	cm/cm/°C	ISO 11359-2
Specific Heat	1700	--	J/kg/°C	
Thermal Conductivity	0.31	--	W/m/K	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Electric Strength	20	--	kV/mm	IEC 60243-1
Dielectric Constant ³				IEC 60250
23°C, 50 Hz	4.50	--		
23°C, 1 kHz	4.30	--		
23°C, 1 MHz	3.70	--		
Dissipation Factor ⁴				IEC 60250
23°C, 50 Hz	0.050	--		
23°C, 1 kHz	0.040	--		
23°C, 1 MHz	0.030	--		
Arc Resistance ⁵	120	--	sec	UL 746
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.59 mm)	HB	--		UL 94
NOTE				
1.	80x80x3			

2.	Without Lubrication
3.	60% RH
4.	60% RH
5.	Tungsten Electrode

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