Amilan™ CM1001G-15

Toray Industries, Inc. - Polyamide 6

General Information			
Product Description			
High flow, GF15%			
General			
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight		
Features	• Chemical Resistant	• High Flow	• High Strength
Uses	• Appliance Components • Construction Applications	• Electrical/Electronic Applications • Office Automation Equipment	• Sporting Goods • White Goods & Small Appliances
Processing Method	• Injection Molding		
ISO Designation	• >PA6-GF15<		

Properties [1]				
Physical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Density (73°F)	1.25	--	g/cm³	ISO 1183
Molding Shrinkage [2]				Internal Method
Across Flow : 0.118 in	0.70 to 1.1	--	%	
Flow : 0.118 in	0.50 to 0.70	--	%	
Water Absorption [3] (24 hr, 73°F)	1.3	--	%	ISO 62
Water Absorption [3]				ISO 62
Saturation, 73°F	8.3	--	%	
Water Absorption - Moisture Content	3.0	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Stress				ISO 527-2
-40°F	19600	16700	psi	
73°F	16000	7980	psi	
176°F	6530	3630	psi	
Tensile Strain				ISO 527-2
Break, -40°F	2.0	3.0	%	
Break, 73°F	2.0	4.5	%	
Break, 176°F	5.5	6.0	%	
Flexural Modulus				ISO 178
-40°F	1.06E+6	870000	psi	
73°F	827000	392000	psi	
176°F	334000	247000	psi	
Flexural Stress				ISO 178
-40°F	29700	--	psi	
73°F	24700	12300	psi	
176°F	11600	6530	psi	
Compressive Stress				ISO 604
-40°F	29700	18900	psi	
73°F	19600	9430	psi	
176°F	10200	5080	psi	
Shear Strength (73°F)	14500	--	psi	ASTM D732

Amilan™ CM1001G-15

Toray Industries, Inc. - Polyamide 6

Mechanical	Dry	Conditioned	Unit	Test Method
Taber Abrasion Resistance				ISO 9352
1000 Cycles	10.0	--	mg	
Coefficient of Friction - vs. Metal [4]	0.30	--		Suzuki Method
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179
-40°F	2.6	3.1	ft·lb/in²	
73°F	3.3	4.0	ft·lb/in²	
Charpy Unnotched Impact Strength				ISO 179
-40°F	9.5	12	ft·lb/in²	
73°F	14	17	ft·lb/in²	
Hardness	**Dry**	**Conditioned**	**Unit**	**Test Method**
Rockwell Hardness				ISO 2039-2
M-Scale, 73°F	90	--		
R-Scale, 73°F	119	--		
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load				ISO 75-2/B
66 psi, Unannealed	410	--	°F	
Deflection Temperature Under Load				ISO 75-2/A
264 psi, Unannealed	347	--	°F	
Melting Temperature	437	--	°F	DSC
Specific Heat	0.406	--	Btu/lb/°F	
Thermal Conductivity	2.2	--	Btu·in/hr/ft²/°F	
Coefficient of Linear Thermal Expansion	2.5	--	in^-5/in/°F	ISO 11359-2
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Electric Strength	510	--	V/mil	IEC 60243-1
Dielectric Constant				IEC 60250
73°F, 50 Hz	4.50	--		
73°F, 1 kHz	4.30	--		
73°F, 1 MHz	3.70	--		
Dissipation Factor				IEC 60250
73°F, 50 Hz	0.050	--		
73°F, 1 kHz	0.040	--		
73°F, 1 MHz	0.030	--		
Arc Resistance	120	--	sec	UL 746
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating (0.06 in)	HB	HB		UL 94
Additional Information				
Dry	Water absorption Moisture content 3.0%			

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 80x80x3mm

[3] in water

[4] Without Lubrication