



Amilan™ CM1007

Toray Industries, Inc. - Polyamide 6

General Information

Product Description

High flow

General

Features	<ul style="list-style-type: none"> Chemical Resistant High Flow
Uses	<ul style="list-style-type: none"> Appliance Components Construction Applications Electrical/Electronic Applications Office Automation Equipment Sporting Goods White Goods & Small Appliances
Processing Method	<ul style="list-style-type: none"> Injection Molding
ISO Designation	<ul style="list-style-type: none"> >PA6<

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.13	g/cm ³	ISO 1183
Spiral Flow ²	> 27.6	in	Internal Method
Molding Shrinkage - Flow			Internal Method
0.0394 in ³	0.50 to 1.0	%	
0.118 in ⁴	1.0 to 1.6	%	
Water Absorption ⁵ (24 hr, 73°F)	1.8	%	ISO 62
Water Absorption ⁵ (Saturation, 73°F)	11	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress			ISO 527-2
-40°F	16000	psi	
73°F	11600	psi	
176°F	3630	psi	
Tensile Strain (Yield, 73°F)	2.0	%	ISO 527-2
Tensile Strain (Break, 73°F)	35	%	ISO 527-2
Flexural Modulus			ISO 178
-40°F	551000	psi	
73°F	406000	psi	
176°F	102000	psi	
Flexural Stress			ISO 178
-40°F	19600	psi	
73°F	16000	psi	
176°F	5800	psi	
Compressive Stress (73°F)	11600	psi	ISO 604
Shear Strength (73°F)	10200	psi	ASTM D732
Taber Abrasion Resistance (1000 Cycles)	3.00 to 4.00	mg	ISO 9352
Coefficient of Friction - vs. Metal ⁶	0.15 to 0.20		Suzuki Method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-40°F	1.4	ft-lb/in ²	
73°F	2.4	ft-lb/in ²	

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Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength			ISO 179
-40°F	No Break		
73°F	No Break		
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ISO 2039-2
R-Scale, 73°F	119		
R-Scale, 176°F	80		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	360	°F	ISO 75-2/B
Melting Temperature	437	°F	DSC
CLTE - Flow	4.4E-5	in/in/°F	ISO 11359-2
Specific Heat	0.454	Btu/lb/°F	
Thermal Conductivity	1.7	Btu·in/hr/ft²/°F	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+14 to 1.0E+15	ohms·cm	IEC 60093
Electric Strength	510	V/mil	IEC 60243-1
Dielectric Constant			IEC 60250
73°F, 50 Hz	4.10		
73°F, 1 kHz	3.90		
73°F, 1 MHz	3.40		
Dissipation Factor			IEC 60250
73°F, 50 Hz	0.070		
73°F, 1 kHz	0.060		
73°F, 1 MHz	0.030		
Arc Resistance	120	sec	UL 746
Comparative Tracking Index (CTI)	600	V	UL 746A
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.031 in)	V-2		UL 94

Additional Information

Water absorption Moisture Content 3.5%

Notes

- ¹ Typical properties: these are not to be construed as specifications.
- ² Melt Temperature: 500°F, Injection Pressure: 1.31E+4 psi, 0.0787 in
- ³ 80x80x1mm
- ⁴ 80x80x3mm
- ⁵ in water
- ⁶ Without Lubrication