

Amilan® CM3006G-45

Polyamide 66
Toray Resin Company

Message:

Amilan® CM3006G-45 is a Polyamide 66 (Nylon 66) product filled with 45% glass fiber. It is available in Asia Pacific, Europe, or North America. Primary characteristic: heat resistant.

General Information				
Filler / Reinforcement		Glass Fiber,45% Filler by Weight		
Features		Good Thermal Stability		
Part Marking Code		>PA66-GF45<		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.50	--	g/cm ³	ISO 1183
Molding Shrinkage				Internal Method
Across Flow : 3.00 mm ¹	0.50 to 0.80	--	%	
Flow : 3.00 mm ²	0.20 to 0.40	--	%	
Water Absorption				ISO 62
23°C, 24 hr	0.40	--	%	
Saturation, 23°C	4.8	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness				ISO 2039-2
M-Scale, 23°C	103	--		
R-Scale, 23°C	121	--		
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Stress				ISO 527-2
-40°C	280	250	MPa	
23°C	220	165	MPa	
80°C	140	115	MPa	
Tensile Strain				ISO 527-2
Break, -40°C	2.5	--	%	
Break, 23°C	3.0	--	%	
Break, 80°C	5.5	--	%	
Flexural Modulus				ISO 178
-40°C	15500	14400	MPa	
23°C	13800	11000	MPa	
80°C	8600	7300	MPa	
Flexural Stress				ISO 178
-40°C	380	350	MPa	
23°C	345	295	MPa	
80°C	230	195	MPa	

Compressive Stress				ISO 604
-40°C	265	--	MPa	
23°C	195	--	MPa	
80°C	120	--	MPa	
Shear Strength (23°C)	105	--	MPa	ASTM D732
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-40°C	12	12	kJ/m ²	
23°C	15	17	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179
-40°C	85	90	kJ/m ²	
23°C	90	100	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)				
	263	--	°C	ISO 75-2/B
Melting Temperature	265	--	°C	DSC
CLTE - Flow	2.0E-5 to 3.0E-5	--	cm/cm/°C	ISO 11359-2
Specific Heat	1500	--	J/kg/°C	
Thermal Conductivity	0.42	--	W/m/K	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+15	1.0E+12 to 1.0E+13	ohms·cm	IEC 60093
Electric Strength	19	--	kV/mm	IEC 60243-1
Dielectric Constant ³				IEC 60250
23°C, 50 Hz	4.70	--		
23°C, 1 kHz	4.50	--		
23°C, 1 MHz	4.10	--		
Dissipation Factor ⁴				IEC 60250
23°C, 50 Hz	0.020	--		
23°C, 1 kHz	0.020	--		
23°C, 1 MHz	0.020	--		
NOTE				
1.	80x80x3			
2.	80x80x3mm			
3.	60% RH			
4.	60% RH			

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