

Amilan® CM1046

Polyamide 6
Toray Resin Company

Message:

Amilan® CM1046 is a Polyamide 6 (Nylon 6) product. It can be processed by blow molding and is available in Asia Pacific, Europe, or North America.

General Information				
Uses		Blow Molding Applications		
Processing Method		Blow Molding		
Part Marking Code		>PA6<		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.13	--	g/cm ³	ISO 1183
Water Absorption				ISO 62
23°C, 24 hr	1.8	--	%	
Saturation, 23°C	11	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	119	--		ISO 2039-2
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Stress				ISO 527-2
-40°C	110	100	MPa	
23°C	75.0	35.0	MPa	
80°C	25.0	20.0	MPa	
Tensile Strain				ISO 527-2
Break, -40°C	3.0	3.0	%	
Break, 23°C	50	50	%	
Break, 80°C	50	50	%	
Flexural Modulus				ISO 178
-40°C	3800	3600	MPa	
23°C	2500	800	MPa	
80°C	700	300	MPa	
Flexural Stress				ISO 178
-40°C	135	125	MPa	
23°C	100	40.0	MPa	
80°C	40.0	25.0	MPa	
Taber Abrasion Resistance (1000 Cycles)	3.00 to 4.00	--	mg	ISO 9352
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	3.0	--	kJ/m ²	ISO 179

Charpy Unnotched Impact Strength				ISO 179
-40°C	5.5	40	kJ/m ²	
23°C	No Break	--		
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	182	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	65.0	--	°C	ISO 75-2/A
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+14 to 1.0E+15	--	ohms·cm	IEC 60093
Electric Strength	20	--	kV/mm	IEC 60243-1
Dielectric Constant ¹				IEC 60250
23°C, 50 Hz	3.40	4.50		
23°C, 1 kHz	0.0300	0.130		
NOTE				
1.	60% RH			

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