

Amilan™ CM1046

Nylon 6

TECHNICAL DATA

Product Description

Standard

Uses

- Automotive Applications
- Bottles
- Blow Molding Applications
- Tubing

Processing Method

- Blow Molding

ISO Designation

- >PA6<

Type

- Nylon6/Blow molding

ASTM & ISO Properties

Physical	Dry	Water Absorption	Unit	Test Method
Density (23°C)	1.13	--	g/cm³	ISO 1183
Water Absorption ¹				ISO 62
24 hr, 23°C	1.8	--	%	
Saturation, 23°C	10.5	--	%	
Mechanical	Dry	Water Absorption	Unit	Test Method
Tensile Strength				ISO 527-2
-40°C	110	100	MPa	
23°C	75	35	MPa	
80°C	25	20	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	MPa	
80°C	40	25	MPa	
Taber Abrasion Resistance				ISO 9352
1000 Cycles	3 to 4	--	mg	
Impact	Dry	Water Absorption	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-40°C	3.0	--	kJ/m²	
23°C	5.5	> 40.0	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179
23°C	No Break	--		
Hardness	Dry	Water Absorption	Unit	Test Method
Rockwell Hardness				ISO 2039-2
R-Scale, 23°C	119	--		



Thermal	Dry	Water Absorption	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	182	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	65	--	°C	ISO 75-2/A
Melting Temperature	225	--	°C	DSC
Coefficient of Linear Thermal Expansion	8	--	cm ³ -5/cm/°C	ISO 11359-2
Electrical	Dry	Water Absorption	Unit	Test Method
Volume Resistivity	1.0E+12 to 1.0E+13	--	ohms·m	IEC 60093
Electric Strength	20	--	kV/mm	IEC 60243-1
Dielectric Constant				IEC 60250
23°C, 1 MHz	3.4	4.5		
Dissipation Factor (23°C, 1 MHz)	0.030	0.130		IEC 60250
Additional Information				
Dry	Water absorption Moisture Content 3.5%			

Notes

¹ in water

Toray Industries, Inc.

