Amilan™ CM1046

Toray Industries, Inc. - Polyamide 6

General Information		
Product Description		
Standard		
General		
Features	• Chemical Resistant	
Uses	• Automotive Applications • Blow Molding Applications	• Bottles • Tubing
Processing Method	• Blow Molding	
ISO Designation	• >PA6<	

Properties [1]				
Physical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Density (73°F)	1.13	--	g/cm³	ISO 1183
Water Absorption [2] (24 hr, 73°F)	1.8	--	%	ISO 62
Water Absorption [2]				ISO 62
Saturation, 73°F	11	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Stress				ISO 527-2
-40°F	16000	14500	psi	
73°F	10900	5080	psi	
176°F	3630	2900	psi	
Tensile Strain				ISO 527-2
Break, -40°F	3.0	3.0	%	
Break, 73°F	> 50	> 50	%	
Break, 176°F	> 50	> 50	%	
Flexural Modulus				ISO 178
-40°F	551000	522000	psi	
73°F	363000	116000	psi	
176°F	102000	43500	psi	
Flexural Stress				ISO 178
-40°F	19600	18100	psi	
73°F	14500	5800	psi	
176°F	5800	3630	psi	
Taber Abrasion Resistance				ISO 9352
1000 Cycles	3.00 to 4.00	--	mg	
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179
-40°F	1.4	--	ft·lb/in²	
73°F	2.6	> 19	ft·lb/in²	
Charpy Unnotched Impact Strength				ISO 179
73°F	No Break	--		
Hardness	**Dry**	**Conditioned**	**Unit**	**Test Method**
Rockwell Hardness				ISO 2039-2
R-Scale, 73°F	119	--		

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Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ISO 75-2/B
66 psi, Unannealed	360	--	°F	
Deflection Temperature Under Load				ISO 75-2/A
264 psi, Unannealed	149	--	°F	
Melting Temperature	437	--	°F	DSC
Coefficient of Linear Thermal Expansion	8	--	cm^-5/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	510	--	V/mil	IEC 60243-1
Dielectric Constant				IEC 60250
73°F, 1 MHz	3.40	4.50		
Dissipation Factor (73°F, 1 MHz)	0.030	0.13		IEC 60250
Additional Information				
Dry	Water absorption Moisture Content 3.5%			

Notes

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

[2] in water