

Amilan™ U121

Toray Industries, Inc. - Polyamide 6

General Information

Product Description

Standard

General

Features	<ul style="list-style-type: none"> Chemical Resistant 	<ul style="list-style-type: none"> High Impact Resistance 	<ul style="list-style-type: none"> High Toughness
Uses	<ul style="list-style-type: none"> Appliance Components Automotive Applications Construction Applications 	<ul style="list-style-type: none"> Electrical/Electronic Applications Office Automation Equipment Power/Other Tools 	<ul style="list-style-type: none"> Rubber Replacement 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-I< 		

Properties¹

Physical	Dry	Conditioned	Unit	Test Method
Density (73°F)	1.09	--	g/cm ³	ISO 1183
Molding Shrinkage ² (0.118 in)	1.2 to 1.3	--	%	Internal Method
Water Absorption ³ (24 hr, 73°F)	1.7	--	%	ISO 62
Water Absorption ³ Saturation, 73°F	8.0	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Stress				ISO 527-2
-40°F	13100	10200	psi	
73°F	8700	5080	psi	
Tensile Strain				ISO 527-2
Break, -40°F	13	19	%	
Break, 73°F	> 50	> 50	%	
Flexural Modulus				ISO 178
-40°F	363000	363000	psi	
73°F	290000	116000	psi	
Flexural Stress				ISO 178
-40°F	16700	14500	psi	
73°F	11600	5080	psi	
Taber Abrasion Resistance				ISO 9352
1000 Cycles	6.00 to 7.00	--	mg	
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-40°F	5.0	7.4	ft·lb/in ²	
73°F	7.9	31	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179
73°F	No Break	No Break		
Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness				ISO 2039-2
R-Scale, 73°F	114	--		

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Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load 66 psi, Unannealed	320	--	°F	ISO 75-2/B
Deflection Temperature Under Load 264 psi, Unannealed	135	--	°F	ISO 75-2/A
Melting Temperature	437	--	°F	DSC
Coefficient of Linear Thermal Expansion	9 to 10	--	cm ³ -5/cm/°C	ISO 11359-2
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (0.06 in)	HB	--		UL 94
Additional Information				
Dry	Water absorption Moisture Content 2.8%			

Notes

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

² 80x80x3mm

³ in water