

Amilan™ U121

Nylon 6

TECHNICAL DATA

Product Description

Standard

Uses

- Appliance Components
- Automotive Applications
- Construction Applications
- Electrical/Electronic Applications
- Office Automation Equipment
- Power/Other Tools
- Rubber Replacement
- Sporting Goods
- White Goods & Small Appliances

Processing Method

- Injection Molding

ISO Designation

- >PA6-|<

Type

- Nylon6/High impact

ASTM & ISO Properties

Physical	Dry	Water Absorption	Unit	Test Method
Density (23°C)	1.09	--	g/cm³	ISO 1183
Molding Shrinkage ¹ (3.00 mm)	1.20 to 1.30	--	%	Internal Method
Water Absorption ²				ISO 62
24 hr, 23°C	1.7	--	%	
Saturation, 23°C	8.0	--	%	
Mechanical	Dry	Water Absorption	Unit	Test Method
Tensile Strength				ISO 527-2
-40°C	90	70	MPa	
23°C	60	35	MPa	
Tensile Strain				ISO 527-2
Break, -40°C	13	19	%	
Break, 23°C	> 50	> 50	%	
Flexural Modulus				ISO 178
-40°C	2500	2500	MPa	
23°C	2000	800	MPa	
Flexural Stress				ISO 178
-40°C	115	100	MPa	
23°C	80	35	MPa	
Taber Abrasion Resistance				ISO 9352
1000 Cycles	6 to 7	--	mg	
Impact	Dry	Water Absorption	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-40°C	10.5	15.5	kJ/m²	
23°C	16.5	65.6	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179
23°C	No Break	No Break		
Hardness	Dry	Water Absorption	Unit	Test Method
Rockwell Hardness				ISO 2039-2
R-Scale, 23°C	114	--		

Thermal	Dry	Water Absorption	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	160	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	57	--	°C	ISO 75-2/A
Melting Temperature	225	--	°C	DSC
Coefficient of Linear Thermal Expansion	9 to 10	--	cm ³ -5/cm/°C	ISO 11359-2
Flammability	Dry	Water Absorption	Unit	Test Method
Flame Rating (1.5 mm)	HB	--		UL 94
Additional Information				
Dry	Water absorption Moisture Content 2.8%			

Notes

¹ 80x80x3mm

² in water

Toray Industries, Inc.

