

Amilan® U121

Polyamide 6
Toray Resin Company

Message:
Amilan® U121 is a Polyamide 6 (Nylon 6) product. It is available in Asia Pacific, Europe, or North America. Primary characteristic: impact resistant.

General Information				
UL YellowCard		E41797-233424		
Features		High Impact Resistance		
Part Marking Code		>PA6-I<		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.09	--	g/cm ³	ISO 1183
Molding Shrinkage - Across Flow ¹ (3.00 mm)	1.2 to 1.3	--	%	Internal Method
Water Absorption				ISO 62
23°C, 24 hr	1.7	--	%	
Saturation, 23°C	8.0	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	114	--		ISO 2039-2
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Stress				ISO 527-2
-40°C	90.0	70.0	MPa	
23°C	60.0	35.0	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	80.0	35.0	MPa	
Taber Abrasion Resistance (1000 Cycles)	6.00 to 7.00	--	mg	ISO 9352
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-40°C	11	16	kJ/m ²	
23°C	17	66	kJ/m ²	
Charpy Unnotched Impact Strength (23°C)	No Break	No Break		ISO 179

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	160	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	57.0	--	°C	ISO 75-2/A
Melting Temperature	225	--	°C	DSC
CLTE - Flow	9.0E-5 to 1.0E-4	--	cm/cm/°C	ISO 11359-2
NOTE				

1. 80x80x3

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