



Isoplast® 101 ETP

Lubrizol Advanced Materials, Inc. - Engineering Thermoplastic Polyurethane

Wednesday, November 6, 2019

General Information

Product Description

Type: Isoplast® 101 is an engineering thermoplastic polyurethane resin.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Forms	• Pellets		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.19		ASTM D792
Molding Shrinkage - Flow	4.0E-3 to 6.0E-3	in/in	ASTM D955
Water Absorption (24 hr, 73°F)	0.17	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	218000	psi	ASTM D638
Tensile Strength (Yield)	6960	psi	ASTM D638
Tensile Strength (Break)	6960	psi	ASTM D638
Tensile Elongation (Yield)	6.0	%	ASTM D638
Tensile Elongation (Break)	160	%	ASTM D638
Flexural Modulus	261000	psi	ASTM D790
Flexural Strength	9860	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°F, 0.126 in	3.0	ft-lb/in	
73°F, 0.126 in	24	ft-lb/in	
73°F, 0.252 in	21	ft-lb/in	
Instrumented Dart Impact			ASTM D3763
-20°F	602	in-lb	
73°F	602	in-lb	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	116		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	160	°F	ASTM D648
Deflection Temperature Under Load (66 psi, Annealed)	180	°F	ASTM D648
Deflection Temperature Under Load 264 psi, Unannealed	140	°F	ASTM D648
Deflection Temperature Under Load (264 psi, Annealed)	171	°F	ASTM D648
Vicat Softening Temperature	192	°F	ASTM D1525
CLTE - Flow	4.5E-5	in/in/°F	ASTM D696

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Processing Information		
Injection	Nominal Value	Unit
Drying Temperature	185 to 194	°F
Suggested Shot Size	25	%
Rear Temperature	401	°F
Middle Temperature	428	°F
Front Temperature	428	°F
Nozzle Temperature	446	°F
Processing (Melt) Temp	428 to 473	°F
Injection Rate	Slow	
Screw Compression Ratio	2.0:1.0 to 2.5:1.0	

Notes

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