

Isoplast® 101 ETPU

Engineering Thermoplastic Polyurethane

Lubrizol Advanced Materials, Inc.

Message:

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

General Information			
UL YellowCard	E106426-100187496		
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm ³	ASTM D792
Molding Shrinkage - Flow	0.40 to 0.60	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.17	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	116		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1500	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	48.0	MPa	
Break	48.0	MPa	
Tensile Elongation			ASTM D638
Yield	6.0	%	
Break	160	%	
Flexural Modulus	1800	MPa	ASTM D790
Flexural Strength	68.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°C, 3.20 mm	160	J/m	
23°C, 3.20 mm	1300	J/m	
23°C, 6.40 mm	1100	J/m	
Instrumented Dart Impact			ASTM D3763
-29°C	68.0	J	
23°C	68.0	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	71.0	°C	
0.45 MPa, Annealed	82.0	°C	
1.8 MPa, Unannealed	60.0	°C	
1.8 MPa, Annealed	77.0	°C	
Vicat Softening Temperature	89.0	°C	ASTM D1525

CLTE - Flow	8.1E-5	cm/cm/°C	ASTM D696
Injection	Nominal Value	Unit	
Drying Temperature	85.0 to 90.0	°C	
Suggested Shot Size	25	%	
Rear Temperature	205	°C	
Middle Temperature	220	°C	
Front Temperature	220	°C	
Nozzle Temperature	230	°C	
Processing (Melt) Temp	220 to 245	°C	
Injection Rate	Slow		
Screw Compression Ratio	2.0:1.0 to 2.5:1.0		

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