

Isoplast® 300 ETPU

Engineering Thermoplastic Polyurethane

Lubrizol Advanced Materials, Inc.

Message:

Type: Isoplast® 300 is an engineering thermoplastic polyurethane resin.

Appearance: Clear transparent pellets

Application: Sheet extrusion, composite structures for industrial and consumer goods, injection molded parts.

Feature: The Isoplast 300U ETPU contains a special UV stabilizer package.

General Information			
Uses	Industrial application		
	Sheet		
	Consumer goods application field		
Appearance	Clear/transparent		
Forms	Particle		
Processing Method	Extrusion		
	Sheet extrusion molding		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.21	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/8.7 kg)	5.0 - 17	g/10 min	
Molding Shrinkage - Flow	0.50 - 0.60	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.15	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 1 sec)	83		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2130	MPa	ISO 527-2/1A/1
Tensile Stress			ISO 527-2/1A/5
Yield	63.0	MPa	ISO 527-2/1A/5
Fracture	64.0	MPa	ISO 527-2/1A/5
Tensile Strain			ISO 527-2/1A/5
Yield	7.0	%	ISO 527-2/1A/5
Fracture	170	%	ISO 527-2/1A/5
Flexural Modulus	1980	MPa	ISO 178
Flexural Stress	85.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ISO 180/1A
-30°C	5.7	kJ/m ²	ISO 180/1A
23°C	8.2	kJ/m ²	ISO 180/1A

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	79.0	°C	ISO 75-2/B
1.8 MPa, not annealed	69.0	°C	ISO 75-2/A
Glass Transition Temperature	90.0	°C	DSC
Vicat Softening Temperature	96.0	°C	ISO 306/A50
Optical	Nominal Value	Unit	Test Method
Transmittance	92.0	%	ASTM D1003
Yellowness Index	15	YI	ASTM D1925
Injection	Nominal Value	Unit	
Drying Temperature	90.0	°C	
Drying Time	4.0 - 6.0	hr	
Dew Point	< -30.0	°C	
Suggested Max Moisture	0.020	%	
Rear Temperature	205 - 215	°C	
Middle Temperature	215 - 225	°C	
Front Temperature	220 - 230	°C	
Nozzle Temperature	225 - 235	°C	
Mold Temperature	65.0 - 85.0	°C	
Injection instructions			
Feed Temperature: 40°CZone 4 Temperature: 225 to 235°C			
Extrusion	Nominal Value	Unit	
Drying Temperature	90.0	°C	
Drying Time	4.0 - 6.0	hr	
Suggested Max Moisture	0.020	%	
Cylinder Zone 1 Temp.	205 - 215	°C	
Cylinder Zone 2 Temp.	210 - 220	°C	
Cylinder Zone 3 Temp.	215 - 225	°C	
Cylinder Zone 4 Temp.	220 - 230	°C	
Adapter Temperature	225 - 235	°C	
Die Temperature	230 - 240	°C	

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