

Estane® 58300 TPU

Thermoplastic Polyurethane Elastomer (Polyether)

Lubrizol Advanced Materials, Inc.

Message:

Type: Polyether Thermoplastic Polyurethane (TPU)
Special Feature: Moisture Vapor Transmission, with Excellent Hydrolysis Resistance, Low Temperature and Wide Process Window
Processes: Extrusion: Blown, Flat Die Cast Film, Injection and Cable Jacketing

General Information			
Features	Workability, good		
	Hydrolysis resistance		
Uses	Blown Film		
	Cable sheath		
	Wire and cable applications		
	cast film		
Agency Ratings	FDA 21 CFR 177.1680		
	FDA 21 CFR 177.2600		
	NSF 61		
RoHS Compliance	RoHS compliance		
Appearance	Translucent		
Forms	Particle		
Processing Method	Blow film		
	Wire & Cable Extrusion		
	Extrusion		
	cast film		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.10	g/cm ³	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	82		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance (1000 Cycles, 1000 g, H-18 Wheel)	22.0	mg	ASTM D3389
Films	Nominal Value	Unit	Test Method
Water Vapor Transmission	450	g/m ² /24 hr	ASTM E96
Water Vapor Transmission - Mocon ¹ (38°C, 25.4 µm)	1800	g/m ² /24 hr	ASTM D6701

Kofler Melting Temperature	125	°C	Internal method
Elastomers	Nominal Value	Unit	Test Method
Tensile Set (200% Strain)	11	%	ASTM D412
Tensile Stress			ASTM D412
100% strain, 0.762mm	4.80	MPa	ASTM D412
300% strain, 0.762mm	7.60	MPa	ASTM D412
Tensile Strength (Break, 0.762 mm)	37.9	MPa	ASTM D412
Tensile Elongation (Break, 0.762 mm)	650	%	ASTM D412
Tear Strength			
0.762 mm ²	69.6	kN/m	ASTM D624
Cracking	23	kN/m	ASTM D470
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-50.0	°C	ASTM D3418
Melting Temperature	130	°C	DSC
Extrusion	Nominal Value	Unit	
Drying Temperature	104	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Cylinder Zone 1 Temp.	166	°C	
Cylinder Zone 2 Temp.	171	°C	
Cylinder Zone 3 Temp.	177	°C	
Cylinder Zone 4 Temp.	182	°C	
Adapter Temperature	182	°C	
Melt Temperature	179	°C	
Die Temperature	182	°C	
Extrusion instructions			
Screens: 20-40-80 meshDew Point: -40°C			
NOTE			
1.	90% RH		
2.	C mould		

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