



Estane® 58237 TPU

Lubrizol Advanced Materials, Inc. - Thermoplastic Polyurethane Elastomer (Polyether)

Wednesday, November 6, 2019

General Information

Product Description

Type: Polyether Thermoplastic Polyurethane (TPU)

Special Feature: Moisture Vapor Transmission, with Good Elasticity

Processes: Extrusion: Blown, Flat Die Cast Film

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Uses	• Blown Film	• Cast Film	
RoHS Compliance	• RoHS Compliant		
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Blown Film	• Cast Film	• Extrusion

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.22		ASTM D792
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance 1000 Cycles, 1000 g, H-18 Wheel	40.0	mg	ASTM D3389
Films	Nominal Value	Unit	Test Method
Water Vapor Transmission ^{2,3}	48	g/100 in ² /24 hr	ASTM E96
Water Vapor Transmission Rate - Mocon ⁴ (100°F)	190	g/100 in ² /24 hr	ASTM D6701
Elastomers	Nominal Value	Unit	Test Method
Tensile Set (200% Strain)	18	%	ASTM D412
Tensile Stress (100% Strain, 0.0300 in)	899	psi	ASTM D412
Tensile Stress (300% Strain, 0.0300 in)	2000	psi	ASTM D412
Tensile Strength (Break, 0.0300 in)	5000	psi	ASTM D412
Tensile Elongation (Break, 0.0300 in)	550	%	ASTM D412
Tear Strength ⁵ (0.0300 in)	454	lbf/in	ASTM D624
Tear Strength (Split)	120	lbf/in	ASTM D470
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	90		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-11.2	°F	ASTM D3418
Melting Temperature	291	°F	DSC
Kofler Melting Temperature	275	°F	Internal Method

Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	180	°F

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Extrusion	Nominal Value	Unit
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Cylinder Zone 1 Temp.	351	°F
Cylinder Zone 2 Temp.	360	°F
Cylinder Zone 3 Temp.	370	°F
Cylinder Zone 4 Temp.	379	°F
Adapter Temperature	390	°F
Melt Temperature	385	°F
Die Temperature	390	°F

Extrusion Notes

Screens: 20-40-80 mesh

Dew Point: -40°C

Notes

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

² Procedure BW

³ 23°C, 50% RH

⁴ 90% RH

⁵ Die C