

Estane® 58123 TPU

Thermoplastic Polyurethane Elastomer (Polyether)

Lubrizol Advanced Materials, Inc.

Message:

Type: Polyether Thermoplastic Polyurethane (TPU)
Special Feature: Moisture Vapor Transmission, with Excellent Low Temperature and Elasticity. Low Moisture Absorption
Processes: Extrusion: Blown, Flat Die Cast Film, Injection and Cable Jacketing

General Information			
Features	Low hygroscopicity		
Uses	Blown Film		
	Cable sheath		
	Wire and cable applications		
	cast film		
Agency Ratings	FDA 21 CFR 177.1680		
	FDA 21 CFR 177.2600		
RoHS Compliance	RoHS compliance		
Appearance	Translucent		
Forms	Particle		
Processing Method	Blow film		
	Wire & Cable Extrusion		
	cast film		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.06	g/cm ³	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	70		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance (1000 Cycles, 1000 g, H-18 Wheel)	17.0	mg	ASTM D3389
Films	Nominal Value	Unit	Test Method
Water Vapor Transmission	420	g/m ² /24 hr	ASTM E96
Water Vapor Transmission - Mocon ¹ (38°C)	3200	g/m ² /24 hr	ASTM D6701
Kofler Melting Temperature	150	°C	Internal method
Elastomers	Nominal Value	Unit	Test Method
Tensile Set (200% Strain)	6	%	ASTM D412
Tensile Stress			ASTM D412
100% strain	3.40	MPa	ASTM D412

300% strain	5.50	MPa	ASTM D412
Tensile Strength (Break)	36.5	MPa	ASTM D412
Tensile Elongation (Break)	730	%	ASTM D412
Tear Strength			
-- ²	66.7	kN/m	ASTM D624
Cracking	20	kN/m	ASTM D470
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-70.0	°C	ASTM D3418
Melting Temperature	135	°C	DSC
Extrusion	Nominal Value	Unit	
Drying Temperature	180	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Cylinder Zone 1 Temp.	171	°C	
Cylinder Zone 2 Temp.	177	°C	
Cylinder Zone 3 Temp.	182	°C	
Cylinder Zone 4 Temp.	188	°C	
Adapter Temperature	193	°C	
Melt Temperature	191	°C	
Die Temperature	193	°C	
Extrusion instructions			
Dew Point: -40°C Screen Pack: 20/40/80 mesh			
NOTE			
1.	90% RH		
2.	C mould		

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