



Estane® 58271 TPU

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

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General Information

Product Description

Type: Polyester Thermoplastic Polyurethane (TPU)

Special Feature: Good physical properties with chemical resistance and adhesive properties. Wide extrusion processing window

Processes: Extrusion: Blown, Flat Die Cast Film, Injection and Blow Molding

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Chemical Resistant	• Good Adhesion	• Good Processability
Uses	• Blow Molding Applications	• Blown Film	• Cast Film
Agency Ratings	• FDA 21 CFR 177.1680	• FDA 21 CFR 177.2600	
RoHS Compliance	• RoHS Compliant		
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Blow Molding • Blown Film	• Cast Film • Extrusion	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.21		ASTM D792
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance 1000 Cycles, 1000 g, H-18 Wheel	34.0	mg	ASTM D3389
Elastomers	Nominal Value	Unit	Test Method
Tensile Set (200% Strain)	13	%	ASTM D412
Tensile Stress (100% Strain, 0.0300 in)	798	psi	ASTM D412
Tensile Stress (300% Strain, 0.0300 in)	1410	psi	ASTM D412
Tensile Strength (Break, 0.0300 in)	7500	psi	ASTM D412
Tensile Elongation (Break, 0.0300 in)	540	%	ASTM D412
Tear Strength ² (0.0300 in)	448	lbf/in	ASTM D624
Tear Strength (Split)	130	lbf/in	ASTM D470
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	85		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-13.0	°F	ASTM D3418
Melting Temperature	248	°F	DSC
Kofler Melting Temperature	239	°F	Internal Method
Optical	Nominal Value	Unit	Test Method
Haze ³ (65.0 mil)	1.10	%	ASTM D1003

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Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	219	°F
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	379	°F
Melt Temperature	376	°F
Die Temperature	379	°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 Die C

³ between glass