



# Estane® 58212 TPU

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

Wednesday, November 6, 2019

## General Information

### Product Description

Type: Estane® 58212 is a 95A Polyether-type thermoplastic polyurethane (TPU) compound.

Features: Excellent clarity and UV stable with good melt strength. Pre-drying: 2 hours at 104°C (220°F) in dehumidifying hopper dryer

Uses: Extrusion: Cable jacket, hose/tube, profile and film and sheet

### General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	
Features	• Good Melt Strength	• High Clarity	• UV Resistant
	• Cable Jacketing	• Profiles	
Uses	• Film	• Sheet	• Wire & Cable Applications
	• Hose	• Tubing	
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Extrusion	• Profile Extrusion	• Wire & Cable Extrusion
	• Film Extrusion	• Sheet Extrusion	

## ASTM & ISO Properties<sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.16		ASTM D792
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
--	7500	psi	
100% Strain	1960	psi	
300% Strain	4580	psi	
Tensile Elongation (Break)	400	%	ASTM D638
Flexural Modulus (73°F)	11000	psi	ASTM D790
Taber Abrasion Resistance			ASTM D3389
1000 Cycles, 1000 g, CS-17 Wheel	5.00	mg	
Modulus of Rigidity			ASTM D1053
-58°F	53026	psi	
-40°F	31009	psi	
-4°F	5990	psi	
32°F	2002	psi	
73°F	1218	psi	
Elastomers	Nominal Value	Unit	Test Method
Tensile Set (200% Strain)	20	%	ASTM D412
Tensile Stress (100% Strain)	1960	psi	ASTM D412
Tensile Stress (300% Strain)	4580	psi	ASTM D412
Tensile Strength (Break)	7500	psi	ASTM D412
Tensile Elongation (Break)	400	%	ASTM D412

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Elastomers	Nominal Value	Unit	Test Method
Tear Strength <sup>2</sup>	675	lbf/in	ASTM D624
Tear Strength (Split)	170	lbf/in	ASTM D470
Compression Set			ASTM D395
73°F, 22 hr	36	%	
158°F, 22 hr	61	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A	92 to 98		
Shore D	43 to 49		
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature <sup>3</sup>	-13.0	°F	DSC
Vicat Softening Temperature	239	°F	ASTM D1525

## Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	220	°F
Drying Time	2.0	hr
Suggested Max Moisture	0.030	%
Cylinder Zone 1 Temp.	360 to 370	°F
Cylinder Zone 2 Temp.	370 to 390	°F
Cylinder Zone 3 Temp.	379 to 399	°F
Cylinder Zone 4 Temp.	390 to 410	°F
Adapter Temperature	399 to 421	°F
Die Temperature	379 to 410	°F

## Extrusion Notes

- Screens: 20-40-80-20 mesh
- Feed Throat Cooling: Yes
- Screw Cooling: No
- Screw Speed: 15 to 70 rpm

## Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Die C

<sup>3</sup> 10°C/min