



Estane® 58215 TPU

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

Wednesday, November 6, 2019

General Information

Product Description

Type: Estane® 58215 is a 90A aromatic Polyether-Based Thermoplastic Polyurethane (TPU).

Features: Excellent physical properties, hydrolysis resistance and improved temperature resistance. Wide processing window for extrusion.

Uses: Blown and flat die/cast film extrusion, Injection and blow molding.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Latin America	• North America
Features	• Aromatic	• Good Processability	• Hydrolysis Resistant
Uses	• Blow Molding Applications	• Blown Film	• Cast Film
Agency Ratings	• FDA 21 CFR 177.1680	• FDA 21 CFR 177.2600	• NSF STD-61
RoHS Compliance	• RoHS Compliant		
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	1.14		ASTM D792
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance 1000 Cycles, 1000 g, H-18 Wheel	43.0	mg	ASTM D3389
Elastomers	Nominal Value	Unit	Test Method
Tensile Set (200% Strain)	20	%	ASTM D412
Tensile Stress (100% Strain, 0.0300 in)	1310	psi	ASTM D412
Tensile Stress (300% Strain, 0.0300 in)	3320	psi	ASTM D412
Tensile Strength (Break, 0.0300 in)	9500	psi	ASTM D412
Tensile Elongation (Break, 0.0300 in)	450	%	ASTM D412
Tear Strength ² (0.0300 in)	599	lbf/in	ASTM D624
Tear Strength (Split)	170	lbf/in	ASTM D470
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 5 sec)	87 to 93		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-40.0	°F	DSC
Melting Temperature	347	°F	DSC
Kofler Melting Temperature	338	°F	Internal Method
Aging	Nominal Value	Unit	Test Method
Change in Volume (73°F, 24 hr, in Water)	1.8	%	ASTM D471
Optical	Nominal Value	Unit	Test Method
Haze ³	23.0	%	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.	360	°F
Cylinder Zone 2 Temp.	370	°F
Cylinder Zone 3 Temp.	379	°F
Cylinder Zone 4 Temp.	390	°F
Adapter Temperature	399	°F
Melt Temperature	396	°F
Die Temperature	399	°F

Extrusion Notes

Dew Point: -40°C

Screen Pack Recommendation: 20/40/80

Notes

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

² Die C

³ Pressed between glass