



Estane® 58206 TPU

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

Wednesday, November 6, 2019

General Information

Product Description

Type: Estane® 58206 is an 85A aromatic Polyester-Based Thermoplastic Polyurethane (TPU).

Features: Good Flexibility at Low Temperatures and Improved Weathering Performance.

Uses: Flat Die/Cast Film Extrusion and Hose/Profile Extrusion, Injection Molding.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Aromatic	• Good Weather Resistance	• Low Temperature Flexibility
Uses	• Blown Film • Cast Film	• Hose • Profiles	
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Cast Film • Extrusion	• Injection Molding • Profile Extrusion	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20		ASTM D792
Molding Shrinkage - Across Flow	0.014	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance 1000 Cycles, 1000 g, H-18 Wheel	20.0	mg	ASTM D3389
Elastomers	Nominal Value	Unit	Test Method
Tensile Set (200% Strain)	10	%	ASTM D412
Tensile Stress (100% Strain, 0.0300 in)	798	psi	ASTM D412
Tensile Stress (300% Strain, 0.0300 in)	1510	psi	ASTM D412
Tensile Strength (Break, 0.0300 in)	7010	psi	ASTM D412
Tensile Elongation (Break, 0.0300 in)	550	%	ASTM D412
Tear Strength ² (0.0300 in)	504	lbf/in	ASTM D624
Tear Strength (Split)	130	lbf/in	ASTM D470
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 5 sec)	82 to 88		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-25.6	°F	DSC
Melting Temperature	320	°F	DSC
Kofler Melting Temperature	311	°F	Internal Method
Aging	Nominal Value	Unit	Test Method
Change in Volume (in Jet Fuel JP8)	7.7	%	ASTM D471

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	219	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Rear Temperature	351	°F
Middle Temperature	370	°F
Front Temperature	379	°F
Nozzle Temperature	390	°F
Processing (Melt) Temp	390	°F
Injection Pressure	3050 to 6960	psi
Injection Rate	Slow-Moderate	
Holding Pressure	2030 to 4060	psi
Back Pressure	50.0	psi
Screw Speed	20 to 50	rpm

Injection Notes

Air Dew Point: -40°C

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.	361	°F
Cylinder Zone 3 Temp.	370	°F
Cylinder Zone 4 Temp.	381	°F
Adapter Temperature	381	°F
Melt Temperature	376	°F
Die Temperature	381	°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