



Estane® 58134 TPU

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

Wednesday, November 6, 2019

General Information

Product Description

Type: Estane® 58134 is a 45D Polyester Thermoplastic Polyurethane (TPU).

Features: Fast cycling, broad temperature performance, and durability

Uses: Injection Molding

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Durable	• Fast Molding Cycle	
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.22		ASTM D792
Molding Shrinkage - Flow			ASTM D955
-- ²	0.013	in/in	
-- ³	9.0E-3	in/in	
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus (73°F)	8560	psi	ASTM D790
Taber Abrasion Resistance			ASTM D3389
1000 Cycles, 1000 g, CS-17 Wheel	62.0	mg	
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (100% Strain, 0.0300 in)	1310	psi	ASTM D412
Tensile Stress (300% Strain, 0.0300 in)	2900	psi	ASTM D412
Tensile Strength (Break, 0.0300 in)	5800	psi	ASTM D412
Tensile Elongation (Break, 0.0300 in)	500	%	ASTM D412
Tear Strength ⁴ (0.0300 in)	728	lbf/in	ASTM D624
Tear Strength (Split)	210	lbf/in	ASTM D470
Compression Set			ASTM D395
73°F, 22 hr	35	%	
158°F, 22 hr	39	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 5 sec)	42 to 48		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-50.8	°F	DSC
Melting Temperature	421	°F	DSC

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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	399	°F
Middle Temperature	410	°F
Front Temperature	424	°F
Nozzle Temperature	430	°F
Processing (Melt) Temp	430	°F
Injection Pressure	10000 to 14900	psi
Injection Rate	Moderate	
Holding Pressure	5080 to 10000	psi
Back Pressure	50.0	psi
Screw Speed	60 to 100	rpm

Injection Notes

Air Dew Point: -40°C

Notes

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

² Disc

³ Flex Bar

⁴ Die C