



Estane® 2103-85AE TPU

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

Wednesday, November 6, 2019

General Information

Product Description

2103-85AE is a thermoplastic polyurethane elastomer.

Feature: Film and profile resin

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
Uses	• Asia Pacific	• Latin America	
Forms	• Film		
Processing Method	• Pellets		
	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.14		ASTM D792
Melt Mass-Flow Rate (224°C/8.7 kg)	24	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.0 to 6.0E-3	in/in	ASTM D955
Molding Shrinkage - Across Flow	5.0E-3 to 7.0E-3	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance (1000 g, H-22 Wheel)	5.00	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (50% Strain, 0.126 in)	798	psi	ASTM D412
Tensile Stress (100% Strain, 0.126 in)	1000	psi	ASTM D412
Tensile Stress (300% Strain, 0.126 in)	1750	psi	ASTM D412
Tensile Strength (Break, 0.126 in)	4640	psi	ASTM D412
Tensile Elongation (Break, 0.126 in)	560	%	ASTM D412
Elongation Set After Break (0.126 in)	80	%	ASTM D412
Tear Strength ² (0.126 in)	470	lbf/in	ASTM D624
Compression Set			ASTM D395B
77°F, 22 hr	25	%	
158°F, 22 hr	80	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A	88		
Shore D	48		
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-36.4	°F	DSC
Vicat Softening Temperature	153	°F	ASTM D1525 ³
CLTE - Flow	9.4E-5	in/in/°F	ASTM D696

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	180 to 199	°F

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Injection	Nominal	Value	Unit
Processing (Melt) Temp	370 to 399	°F	
Mold Temperature	61 to 140	°F	
Injection Notes			
Air Dew Point: <-40°C			
Extrusion	Nominal	Value	Unit
Drying Temperature	180 to 199	°F	
Melt Temperature	360 to 390	°F	
Extrusion Notes			
Air Dew Point: <-40°C			

Notes

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

² Die C

³ Rate B (120°C/h), Loading 1 (10 N)