



Estane® 2103-80AEN TPU

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

Wednesday, November 6, 2019

General Information

Product Description

2103-80AEN is a thermoplastic polyurethane elastomer.

Feature: NSF Standard 61 certified, FDA compliance

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	
Agency Ratings	• FDA Unspecified Rating		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.13		ASTM D792
Melt Mass-Flow Rate (224°C/8.7 kg)	20	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)	20.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (50% Strain, 0.126 in)	551	psi	ASTM D412
Tensile Stress (100% Strain, 0.126 in)	870	psi	ASTM D412
Tensile Stress (300% Strain, 0.126 in)	1600	psi	ASTM D412
Tensile Strength (Break, 0.126 in)	4190	psi	ASTM D412
Tensile Elongation (Break, 0.126 in)	650	%	ASTM D412
Elongation Set After Break (0.126 in)	40	%	ASTM D412
Tear Strength ² (0.126 in)	500	lbf/in	ASTM D624
Compression Set			ASTM D395B
77°F, 22 hr	30	%	
158°F, 22 hr	75	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	83		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-49.0	°F	DSC
Vicat Softening Temperature	162	°F	ASTM D1525 ³
CLTE - Flow	9.5E-5	in/in/°F	ASTM D696

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	180 to 199	°F
Processing (Melt) Temp	370 to 399	°F
Mold Temperature	61 to 140	°F

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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)