



Estane® 2103-55D TPU

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

Wednesday, November 6, 2019

General Information

Product Description

2103-55D is a thermoplastic polyurethane elastomer.

Feature: Load bearing capacity

General

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

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.15		ASTM D792
Melt Mass-Flow Rate (224°C/2.16 kg)	15	g/10 min	ASTM D1238
Molding Shrinkage - Flow	5.0E-3 to 9.0E-3	in/in	ASTM D955
Molding Shrinkage - Across Flow	6.0E-3 to 7.0E-3	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus (0.126 in)	24900	psi	ASTM D790
Taber Abrasion Resistance (1000 g, H-22 Wheel)	80.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (50% Strain, 0.126 in)	1940	psi	ASTM D412
Tensile Stress (100% Strain, 0.126 in)	2390	psi	ASTM D412
Tensile Stress (300% Strain, 0.126 in)	4600	psi	ASTM D412
Tensile Strength (Break, 0.126 in)	6400	psi	ASTM D412
Tensile Elongation (Break, 0.126 in)	430	%	ASTM D412
Elongation Set After Break (0.126 in)	30	%	ASTM D412
Tear Strength ² (0.126 in)	902	lbf/in	ASTM D624
Compression Set			ASTM D395B
77°F, 22 hr	25	%	
158°F, 22 hr	30	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A	96		
Shore D	55		
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	219	°F	ASTM D1525 ³
CLTE - Flow	7.2E-5	in/in/°F	ASTM D696

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	190 to 219	°F
Processing (Melt) Temp	410 to 441	°F

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Injection	Nominal Value	Unit
Mold Temperature	61 to 140	°F

Injection 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)