



Estane® 2103-90A TPU

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

Wednesday, November 6, 2019

General Information

Product Description

2103-90A is a thermoplastic polyurethane elastomer.

Feature: Low compression set

General

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

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.14		ASTM D792
Melt Mass-Flow Rate (190°C/8.7 kg)	23	g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.0630 in)	7.0E-3 to 8.0E-3	in/in	ASTM D955
Molding Shrinkage - Across Flow (0.0630 in)	7.0E-3 to 8.0E-3	in/in	ASTM D955

Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus	11000	psi	ASTM D790
Taber Abrasion Resistance 1000 Cycles, 1000 g, CS-17 Wheel	10.0	mg	ASTM D1044

Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (50% Strain)	11000	psi	ASTM D412
Tensile Stress (100% Strain)	1620	psi	ASTM D412
Tensile Stress (300% Strain)	3600	psi	ASTM D412
Tensile Strength (Break)	6500	psi	ASTM D412
Tensile Elongation (Break)	450	%	ASTM D412
Elongation Set After Break	30	%	ASTM D412
Tear Strength ²	759	lbf/in	ASTM D624
Compression Set			ASTM D395B
77°F, 22 hr	25	%	
158°F, 22 hr	28	%	

Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-13.0	°F	DSC
Vicat Softening Temperature	225	°F	ASTM D1525
CLTE - Flow	8.4E-5	in/in/°F	ASTM D696

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	190 to 219	°F
Processing (Melt) Temp	399 to 430	°F
Mold Temperature	61 to 140	°F

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Notes

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

² Die C
