

Estane® 2103-90AE TPU

Thermoplastic Polyurethane Elastomer (Polyether)

Lubrizol Advanced Materials, Inc.

Message:

2103-90AE is a thermoplastic polyurethane elastomer.

General Information			
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.14	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (224°C/8.7 kg)	7.0	g/10 min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow	0.40 - 0.60	%	ASTM D955
Transverse flow	0.50 - 0.70	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A	90		ASTM D2240
Shaw D	47		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus (3.20 mm)	65.9	MPa	ASTM D790
Taber Abrasion Resistance (1000 g, H-22 Wheel)	50.0	mg	ASTM D1044
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
50% strain, 3.20mm	6.30	MPa	ASTM D412
100% strain, 3.20mm	9.70	MPa	ASTM D412
300% strain, 3.20mm	17.9	MPa	ASTM D412
Tensile Strength (Break, 3.20 mm)	38.2	MPa	ASTM D412
Tensile Elongation (Break, 3.20 mm)	530	%	ASTM D412
Tensile Elongation at Break (3.20 mm)	60	%	ASTM D412
Tear Strength ¹ (3.20 mm)	133	kN/m	ASTM D624
Compression Set			ASTM D395B
25°C, 22 hr	25	%	ASTM D395B
70°C, 22 hr	40	%	ASTM D395B
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-34.0	°C	DSC
Vicat Softening Temperature	90.6	°C	ASTM D1525 ²
CLTE - Flow	1.6E-4	cm/cm/°C	ASTM D696
Injection	Nominal Value	Unit	

Drying Temperature	88.0 - 104	°C
Processing (Melt) Temp	193 - 210	°C
Mold Temperature	188 - 204	°C

Injection instructions

Air Dew Point: <-40°C

NOTE

1.	C mould
2.	标准 B (120°C/h), 压力1 (10N)

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