

Estane® 2103-90AEL TPU

Thermoplastic Polyurethane Elastomer (Polyether)

Lubrizol Advanced Materials, Inc.

Message:

2103-90AEL is a thermoplastic polyurethane elastomer.

Feature: Film resin for injection blow molding

General Information			
Uses	Films		
Forms	Particle		
Processing Method	Injection blowing molding		
	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)	1.2	g/10 min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow	0.40 - 0.50	%	ASTM D955
Transverse flow	0.50 - 0.80	%	ASTM D955

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	92		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	6.90	MPa	ASTM D412
100% strain, 3.20mm	9.70	MPa	ASTM D412
300% strain, 3.20mm	20.3	MPa	ASTM D412
Tensile Strength (Break, 3.20 mm)	38.9	MPa	ASTM D412
Tensile Elongation (Break, 3.20 mm)	480	%	ASTM D412
Tensile Elongation at Break (3.20 mm)	60	%	ASTM D412
Tear Strength ¹ (3.20 mm)	94.6	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	-27.0	°C	DSC
Vicat Softening Temperature	102	°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	16.0 - 60.0	°C
Injection instructions		
Air Dew Point: <-40°C		
Extrusion	Nominal Value	Unit
Drying Temperature	88.0 - 104	°C
Melt Temperature	188 - 204	°C
Extrusion 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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