



Estane® D91T86 NAT 01

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

Tuesday, November 5, 2019

General Information

Product Description

Type: Aliphatic polycaprolactone based Thermoplastic Polyurethane (TPU) with a 88 Shore A Hardness.

Features: Translucent resin with excellent colour stability upon UV exposure

Uses: Injection moulding outdoor applications.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Aliphatic	• Good Color Stability	• UV Resistant
Uses	• Outdoor Applications		
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.12		ASTM D792
Density	1.12	g/cm ³	ISO 2781
Moisture Content	< 0.10		
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress			ISO 527-2
--	4930	psi	
100% Strain	870	psi	
300% Strain	1310	psi	
Tensile Strain (Break)	700	%	ISO 527-2
Abrasion Loss	20.0	mm ³	ISO 4649
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (100% Strain)	870	psi	ASTM D412
Tensile Stress (300% Strain)	1310	psi	ASTM D412
Tensile Strength	4930	psi	ASTM D412
Tensile Elongation (Break)	700	%	ASTM D412
Tear Strength ²	628	lbf/in	ASTM D624
Tear Strength ³	628	lbf/in	ISO 34-1
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 3 sec)	88		ASTM D2240
Shore Hardness (Shore A, 3 sec)	88		ISO 868
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	187	°F	ISO 306/A50
Optical	Nominal Value	Unit	Test Method
Haze (78.7 mil)	25.0	%	ASTM D1003

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Processing Information		
Injection	Nominal Value	Unit
Drying Temperature	194	°F
Drying Time	2.0	hr
Dew Point	< -40	°F
Suggested Max Moisture	< 0.020	%
Rear Temperature	338	°F
Middle Temperature	347	°F
Front Temperature	356	°F
Nozzle Temperature	365	°F
Mold Temperature	95	°F

Notes

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

² Die C

³ Method B, Angle