

# Pearlthane® D91T80

Thermoplastic Polyurethane Elastomer

Lubrizol Advanced Materials, Inc.

## Message:

Pearlthane® D91T80 is an aliphatic TPU, supplied in colourless natural pellets. In addition to typical TPU properties like outstanding abrasion loss, our PEARLTHANE® D91T80 offers excellent colour stability upon UV exposure. PEARLTHANE® D91T80 features a low density, fast processing and excellent elasticity properties. It has been specially designed for injection moulding process. Pearlthane® D91T80 is especially recommended for injection moulding applications such as automotive parts and a variety of high performance technical parts where short cycle times and complete UV resistance are required.

General Information			
Features	Low density High elasticity Good UV resistance Fast molding cycle Good color stability aliphatic		
Uses	Engineering accessories Application in Automobile Field		
Agency Ratings	EC 1907/2006 (REACH)		
Appearance	Colorless		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.11	g/cm <sup>3</sup>	ASTM D792
20°C	1.11	g/cm <sup>3</sup>	ISO 2781
Moisture Content		%	Internal method
Abrasion Loss	30.0	mm <sup>3</sup>	ISO 4649
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	84		ASTM D2240, ISO 868
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412, ISO 527
100% strain	4.50	MPa	ASTM D412, ISO 527
300% strain	9.50	MPa	ASTM D412, ISO 527
Tensile Strength (Yield)	35.0	MPa	ASTM D412, ISO 527
Tensile Elongation (Break)	700	%	ASTM D412, ISO 527
Thermal	Nominal Value	Unit	Test Method
Melting Temperature <sup>1</sup>	135 - 145	°C	Internal method

Injection	Nominal Value	Unit
Drying Temperature	80.0 - 90.0	°C
Drying Time	1.0 - 2.0	hr
Rear Temperature	170	°C
Middle Temperature	170	°C
Front Temperature	175	°C
Nozzle Temperature	175	°C
Mold Temperature	35.0	°C
Screw L/D Ratio	23.0:1.0	

#### Injection instructions

Closing force: 30 tonsScrew diameter: 30 mmMaximum hydraulic pressure: 210 barMould: Plaque 120x120x2 mm

#### NOTE

1. Temperature at which MFI = 10 g/10 min @ 21.6 kg.

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#### Recommended distributors for this material

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