

## Lubrizol Advanced Materials Pearlthane® 12T92E Thermoplastic Polyurethane Elastomer

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyurethane, TP , Thermoplastic Polyurethane, Elastomer, Polyester Grade

### Material Notes:

PEARLTHANE® 12T92E is a special polyester-based TPU, supplied in form of translucent, colorless pellets, combining hardness with excellent processability and low temperature performance. This grade has been specially designed for mechanically demanding applications where excellent mechanical properties are required, such as timing belts. Information provided by Merquinsa.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Lubrizol-Advanced-Materials-Pearlthane-12T92E-Thermoplastic-Polyurethane-Elastomer.php](http://www.lookpolymers.com/polymer_Lubrizol-Advanced-Materials-Pearlthane-12T92E-Thermoplastic-Polyurethane-Elastomer.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Melt Flow	10 g/10 min @Load 21.6 kg	10 g/10 min @Load 47.6 lb	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	91	91	ASTM D2240
Tensile Strength, Yield	39.57 MPa	5739 psi	ASTM D412
Elongation at Break	500 %	500 %	ASTM D412
100% Modulus	0.008012 GPa	1.162 ksi	ASTM D412
300% Modulus	0.01663 GPa	2.412 ksi	ASTM D412
Tear Strength	112 kN/m	639 pli	ASTM D624 DIE C
Abrasion	30	30	[mm <sup>3</sup> ]; DIN 53.516

Thermal Properties	Metric	English	Comments
Melting Point	183 - 193 Å°C	361 - 379 Å°F	MQSA 114
Glass Transition Temp, Tg	-40.0 Å°C	-40.0 Å°F	DSC, 50Å°F/min; DIN 51.007

Processing Properties	Metric	English	Comments
Feed Temperature	196 Å°C	385 Å°F	
Nozzle Temperature	210 Å°C	410 Å°F	
Zone 1	191 - 199 Å°C	375 - 390 Å°F	
Zone 2	196 - 210 Å°C	385 - 410 Å°F	

Processing Properties	Metric	English	Comments
Zone 3	199 - 216 Å°C	390 - 420 Å°F	
Zone 4	199 - 221 Å°C	390 - 430 Å°F	
Die Temperature	191 - 210 Å°C	375 - 410 Å°F	
Mold Temperature	35.0 Å°C	95.0 Å°F	
Moisture Content	<= 0.10 %	<= 0.10 %	MQSA 44

## Contact Songhan Plastic Technology Co.,Ltd.

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