PEARLTHANE® 11T93

Thermoplastic Polyurethane Elastomer

PEARLTHANE® 11T93 is a polycaprolactone copolyester based TPU, supplied in form of translucent, colorless pellets, offering adequate hardness as well as excellent mechanical properties and an extreme fast cycling time. It is specially designed for injection molding applications, exhibiting a fast cycle time.

TYPICAL PHYSICAL PROPERTIES

Physical Property	Test Method	Typical Values *
Specific Gravity	ASTM D-792	1.16
Shore Hardness	ASTM D-2240	93 A
Tensile Strength	ASTM D-412	5801 psi.
Elongation @ Break	ASTM D-412	500 %
Modulus @ 100% Elongation	ASTM D-412	1305 psi.
Modulus @ 300% Elongation	ASTM D-412	2465 psi.
Tear Strength	ASTM D-624 (Die C)	685 lb/in
Abrasion Loss	DIN 53.516	25 mm^3
Compression Set (70 h. @ 73ºF)	ASTM D-395	25 %
Compression Set (24h. @ 158ºF)	ASTM D-395	34 %
Moisture Content	MQSA 44	< 0.1 %
Melting Range *(MFI = 10**)*	MQSA 111	386 ºF – 404 ºF
Tg *(DSC, 50ºF/10min)*	DIN 51.007	- 53 ºF

** These are typical values & should not be used for establishing specifications.*
*** Temperature at which MFI=10 g/10 min at 21.6 kg*

WORKING INSTRUCTIONS

For optimum results, previous drying of the product during 1-2 hours at 210 - 230º F is advisable, in a hot air circulatory, vacuum or desiccant-air dryer.

INJECTION MOLDING

Based on an injection molding equipment with the following characteristics:

Closing force:	: 30 tons
Screw diameter:	: 1.02 in
L/D ratio:	: 23
Maximum hydraulic pressure:	: 3050 psi.
Mold:	: Plaque 4.7x4.7x0.08 in.

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Registered in Barcelona Trade Register under Tax Identification Number B08530305, volume 31186, folio 106, page B-30777, entry 12.

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The suggested processing conditions are as follows:

INJECTION CONDITIONS			
Feed zone	385ºF	Injection pressure	1450 psi
Compression zone	390ºF	Injection time	2.9 sec
Metering zone	410ºF	Holding pressure	725 psi
Nozzle	410ºF	Holding time	15 sec
Mold temperature	95ºF	Cooling time	22 sec

Screw speed : approx. 70 rpm.

APPLICATIONS

PEARLTHANE® 11T93 is recommended for injection molding applications such as: automotive parts, seals and gaskets, shoe soles and a variety of high performance technical parts.

HEALTH AND SAFETY

A safety data sheet on **PEARLTHANE® 11T93** is available, with all the information related to safety.

PACKAGING

PEARLTHANE® 11T93 is packaged in heat-sealed, moisture proof multi–layer bags of 25 Kg net weight made of PE/Aluminium/PE. Bags are shipped on pallets of 750 Kg. Additionally, PE/Al/PE-lined cardboard gaylords of 700 Kg net weight are available.

STORAGE

Material received from Merquinsa should be inspected to assure the containers are not damaged during transportation before being stored prior to use. **PEARLTHANE® 11T93** should be kept in a cool (60-75ºF) and dry environment prior to being processed. Standard practice of consuming resin on first-in first-out basis should be employed.

For more information, please feel free to contact us at **www.merquinsa.com**

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