PEARLTHANE® 11T93

Thermoplastic Polyurethane Elastomer

PEARLTHANE® 11T93 is a polycaprolactone copolyester based TPU, supplied in form of translucent, colourless or slightly yellowish pellets, combining hardness with excellent mechanical properties, including a low compression set value. It is specially designed for injection moulding, exhibiting a fast cycle time.

TYPICAL PHYSICAL PROPERTIES

Physical Property	Test Method	Typical Values *
Density @ 20ºC	DIN 53.479	1.16 gr/cm^3
Shore Hardness	DIN 53.505	93 A
Tensile Strength	DIN 53.504	40 MPa
Elongation @ Break	DIN 53.504	500 %
Modulus @ 100% Elongation	DIN 53.504	9 MPa
Modulus @ 300% Elongation	DIN 53.504	17 MPa
Tear Strength	DIN 53.515	120 kN/m
Abrasion Loss	DIN 53.516	25 mm^3
Compression Set (70 h. @ 23ºC)	ASTM D395B	25 %
Compression Set (24 h. @ 70ºC)	ASTM D395B	34 %
Moisture Content	MQSA 44	< 0.05 %
Melting Range *(MFI=10**)*	MQSA 111	197-207 ºC
Tg *(DSC, 10 ºC / min)*	MQSA 44	- 47 º C

** 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 100-110º C is advisable, in a hot air circulatory, vacuum or desiccant-air dryer.

INJECTION MOULDING

Based on an injection moulding equipment with the following characteristics:

Closing force:	: 30 tons
Screw diameter:	: 26 mm
L/D ratio:	: 23
Maximum hydraulic pressure:	: 210 bar
Mould:	: Plaque 120x120x2 mm

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E-mail: info@merquinsa.com http://www.merquinsa.com
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 the following ones:

INJECTION CONDITIONS			
Feed zone	195ºC	Injection pressure	100 bar
Compression zone	200ºC	Injection time	2.9 sec
Metering zone	210ºC	Holding pressure	50 bar
Nozzle	210ºC	Holding time	15 sec
Mould temperature	35ºC	Cooling time	22 sec

Screw speed : approx. 70 rpm.

APPLICATIONS

PEARLTHANE® 11T93 is especially recommended for injection moulding 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 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 (15-25ºC) 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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