

# PEARLTHANE® 11T85

Thermoplastic Polyurethane Elastomer

PEARLTHANE® 11T85 is a polycaprolactone copolyester based TPU, supplied in form of translucent, colourless pellets, offering adequate hardness, excellent mechanical properties and easy processing. Ideally used for injection moulding.

## TYPICAL PHYSICAL PROPERTIES

Property	Test Method	Typical Values *
Density @ 20°C	DIN 53.479	1.16 g/cm <sup>3</sup>
Shore Hardness	DIN 53.505	86 A
Tensile Strength	DIN 53.504	40 MPa
Elongation @ Break	DIN 53.504	640 %
Modulus @ 100% Elongation	DIN 53.504	6 MPa
Modulus @ 300% Elongation	DIN 53.504	10 MPa
Tear Strength	DIN 53.515	90 kN/m
Abrasion Loss	DIN 53.516	20 mm <sup>3</sup>
Compression Set (70 h. @ 23°C)	ASTM D395B	25 %
Compression Set (24 h. @ 70°C)	ASTM D395B	35 %
Moisture Content	MQSA 44	< 0.1 %
Melting Range (MFI=10**)	MQSA 111	178 – 188 °C
Tg (DSC, 10°C/min.)	DIN 51.007	- 45° C

\* These are typical values & should not be used for establishing specifications.

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

## WORKING INSTRUCTIONS

For optimum results, previous drying of the product during 1-2 hours at 100-110° 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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The suggested processing conditions are as follows:

**INJECTION CONDITIONS**

Feed zone	195°C	Injection pressure	100 bar
Compression zone	200°C	Injection time	2.8 sec
Metering zone	210°C	Holding pressure	60 bar
Nozzle	210°C	Holding time	15 sec
Mould temperature	35°C	Cooling time	10 sec

*Screw speed : approx. 105 rpm.*

**APPLICATIONS**

**PEARLTHANE® 11T85** when processed by injection moulding, can be used for making shoe soles, screens (mining ind.), automotive parts, etc.

**HEALTH AND SAFETY**

A safety data sheet on **PEARLTHANE® 11T85** is available, with all the information related to safety.

**PACKAGING**

**PEARLTHANE® 11T85** 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-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® 11T85** should be kept in a cool (15-25°C) and dry environment prior to being processed. Standard practice of consuming resin on first-in first-out basis should be employed.

Our **TECHNICAL SERVICE** will answer any inquiries about our product and its applications.