

# PEARLTHANE® 11T65D

## Thermoplastic Polyurethane Elastomer

PEARLTHANE® 11T65D is a polycaprolactone copolyester based TPU, supplied in form of translucent, colorless pellets, combining very high hardness with excellent mechanical properties. It is especially advisable for use in producing technical parts by injection molding.

### TYPICAL PHYSICAL PROPERTIES

Property	Test Method	Typical Values *
Specific Gravity	ASTM D-792	1.20
Shore Hardness	ASTM D-2240	64 D
Tensile Strength	ASTM D-412	5076 psi.
Elongation @ Break	ASTM D-412	440 %
Modulus @ 100% Elongation	ASTM D-412	3628 psi.
Modulus @ 300% Elongation	ASTM D-412	4496 psi.
Tear Strength	ASTM D-624 (Die C)	1200 lb/in
Abrasion Loss	DIN 53.516	25 mm <sup>3</sup>
Compression Set (70 h. @ 23°C)	ASTM D-395	35 %
Compression Set (24 h. @ 70°C)	ASTM D-395	50 %
Moisture Content	MQSA 44	< 0.1 %
Melting Range (MFI=10**)	MQSA 70 (Kofler)	446 – 455 °F
Tg (DSC, 10°C/min.)	DIN 51.007	- 9 °F

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

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

### WORKING INSTRUCTIONS

It is recommended to dry the material before use, ideally in a desiccant dryer for 1-2 hours, with hot air or vacuum at 210 - 230°F.

#### 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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The suggested processing conditions are as follows:

INJECTION CONDITIONS			
Feed zone	428°F	Injection pressure	1740 psi
Compression zone	437°F	Injection time	4.6 sec
Metering zone	446°F	Holding pressure	720 psi
Nozzle	437°F	Holding time	15 sec
Mold temperature	77°F	Cooling time	35 sec

Screw speed : approx. 140 rpm

### APPLICATIONS

**PEARLTHANE® 11T65D** is especially adequate for the production of shoe heels and top - pieces, as well as technical parts. It is also adequate for the production of compounds for the automotive industry.

### HEALTH AND SAFETY

A safety data sheet on **PEARLTHANE® 11T65D** is available, with all the information related to safety.

### PACKAGING

**PEARLTHANE® 11T65D** 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® 11T65D** should be kept in a cool (60-75°F) 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](http://www.merquinsa.com)