

PEARLTHANE® ECO D12T95
Thermoplastic Polyurethane

PROVISIONAL TECHNICAL DATA SHEET

PEARLTHANE® ECO D12T95 is a 95 Shore A , High Performance natural TPU based on *Renewable Sources* for Injection Molding applications. This natural TPU resin features properties similar to standard TPU of same hardness (i.e. excellent mechanical properties and abrasion resistance).

PEARLTHANE® ECO D12T95 contains **32% of renewable material as certified according to ASTM-D6866 (see below)**

APPLICATIONS

PEARLTHANE® ECO D12T95 enhances the performance of a wide range of end use products that ranges from automotive, consumer electronics and sport and leisure applications among others where environmentally-friendly materials can bring value to the end product.

TYPICAL PHYSICAL PROPERTIES

Physical Property	Test Method	Typical Values *
Specific Gravity	ASTM D-792	1.15
Shore Hardness	ASTM D-2240	95 A / 46D
Tensile Strength	ASTM D-412	5366 psi
Elongation @ Break	ASTM D-412	400 %
Modulus @ 100% Elongation	ASTM D-412	1813 psi
Modulus @ 300% Elongation	ASTM D-412	4264 psi
Tear Strength	ASTM D-624 (Die C)	834 lb/in
Abrasion Loss	DIN 53.516	38 mm ³
Moisture Content	MQSA 44	< 0.10 %
Melting Range (MFI=10**)	MQSA 111	374 – 392 °F
Tg (DSC, 10°C / min.)	DIN 51.007	- 36.4 °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

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

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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
Mould:	: Plaque 4.7x4.7x0.08 in

The suggested processing conditions are the following ones:

INJECTION CONDITIONS	
Feed zone	392°F
Compression zone	401°F
Metering zone	410°F
Nozzle	410°F
Mould temperature	95°F

HEALTH AND SAFETY

A safety data sheet on **PEARLTHANE® ECO D12T95** is available, with all information related to safety.

PACKAGING

PEARLTHANE® ECO D12T95 is packaged in heat-sealed, moisture proof PE bags of 25 kg net weight. 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® ECO D12T95** 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