

PEARLTHANE® **ECO** D20N55D

Thermoplastic Polyurethane

PROVISIONAL TECHNICAL DATA SHEET

PEARLTHANE® **ECO** D20N55D is a 55 Shore D , High Performance natural TPU based on *Renewable Sources* for Injection Moulding applications. This natural TPU resin features properties similar to standard TPU of same hardness, i.e. excellent mechanical properties and abrasion resistance.

PEARLTHANE® **ECO** D20N55D contains 35% of renewable material.

APPLICATIONS

PEARLTHANE® **ECO** D20N55D enhances the performance of a wide range of end use products that ranges from consumer electronics, footwear 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 *
Density @ 20°C	DIN 53.479	1.18 g/cm ³
Shore Hardness	DIN 53.505	55 D
Tensile Strength	DIN 53.504	38 MPa
Elongation @ Break	DIN 53.504	350 %
Modulus @ 100% Elongation	DIN 53.504	20 MPa
Modulus @ 300% Elongation	DIN 53.504	34 MPa
Tear Strength	DIN 53.515	160 kN/m
Moisture Content	MQSA 44	< 0.10 %
Melting Range (MFI=10**)	MQSA 111	195 – 205 °c
Tg (DSC, 10°C / min.)	DIN 51.007	- 30 ° 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.

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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

The suggested processing conditions are the following ones:

INJECTION CONDITIONS	
Feed zone	200°C
Compression zone	205°C
Metering zone	210°C
Nozzle	210°C
Mould temperature	35°C

HEALTH AND SAFETY

A safety data sheet on **PEARLTHANE® ECO D20N55D** is available, with all information related to safety.

PACKAGING

PEARLTHANE® ECO D20N55D is packaged in heat-sealed, moisture proof PE bags of 25 kg net weight. 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® ECO D20N55D** 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.

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

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

