

Technical Data Sheet

Type: Pearlthane® ECO D12T85 is a high performance bio-based thermoplastic polyurethane.

With ca. 46% bio-based content.

Main Application: Injection Moulding

Special Features: Properties similar to standard TPU of same hardness, excellent mechanical properties and abrasion resistance.

Physical Properties*	Value (Metric)	Unit	Test Method
Hardness	A/1 : 85	Shore A/D	ISO 868
Specific Gravity	1.15	g/cm ³	ISO 2781
Tensile Strength	35	MPa	ISO 527-2/5A/500
Ultimate Elongation	400	%	ISO 527-2/5A/500
Tensile Stress at			
50 % Elongation		MPa	ISO 527-2/5A/500
100 % Elongation	6	MPa	ISO 527-2/5A/500
300 % Elongation	22	MPa	ISO 527-2/5A/500
Tear Strength Unnicked		kN/m	ISO 34-1B
Abrasion Resistance	20	mm ³	ISO 4649-A
Compression Set			
22h @ 100°C		%	ASTM D395B
70h @ 70°C		%	ASTM D395B
22h @ 70°C		%	ASTM D395B
Vicat Softening Point		°C	ISO 306 (A50)

*Based on moulded plaques.

Listed values are "typical (average) values" and should/can not be applied for specification purposes.

See reverse side for processing information.

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Material Preparation

Prior to processing, Pearlthane® ECO D12T85 must be dried at 80°C during 2 hours. It is recommended to dry the material in a dehumidifying-type dryer. Target dew point to be below -30°C, preferably -40°C.

Recommended Injection Moulding Temperature Profile:

	°C
Feed zone	40
Zone 1	195
Zone 2	200
Zone 3	210
Zone 4	210
Nozzle	210

For further information, refer to Lubrizol Advanced Materials processing guides.

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