

## Technical Data Sheet

**Type:** ESTANE<sup>®</sup> ECO 12T85 is an aromatic high performance natural-based polyester Thermoplastic Polyurethane (TPU)

**Features:** Properties similar to standard TPU of same hardness; excellent mechanical properties and abrasion resistance

**Uses:** Injection molding

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	85±3	Shore A	ISO 868
Specific Gravity	1.15	g/cm <sup>3</sup>	ISO 2781
Tensile Strength	36	MPa	ISO 37
Ultimate Elongation	500	%	
Tensile Stress at:			
- 100 % Elongation	5	MPa	ISO 37
- 300 % Elongation	10	MPa	
Tear Strength			
Graves	90	kN/m	ISO 34B
Abrasion resistance	30	mm <sup>3</sup>	ISO4649
Bio-based content	41	%	ASTM D6866-12

**Remark:**

- Prior to testing samples were conditioned at 23°C for 48 hours
- Listed values are 'typical (average) values' and should/cannot be applied for specification purposes

## Supply Form and Standard Packaging

- ESTANE<sup>®</sup> ECO 12T85 is supplied in pellet form and packaged in 25kg bags.

## Material Preparation

- Prior to processing, ESTANE<sup>®</sup> ECO 12T85 must be dried at **90-100 °C** for 2-4 hours.
- It is recommended to dry the material in a desiccant type dryer. Target dew point should be **-40°C**.
- Depending on the applied processing technique, the maximum moisture level should be 0.02%.

## Material Preparation

- ESTANE<sup>®</sup> ECO 12T85 is injection molded on any conventional molding machine equipped with general purpose screw.
- Typical screw L/D ratio lies between 18 and 23; the optimum compression ratio falls between 2:1 and 2.5:1.

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**Recommended Starting INJECTION MOLDING Temperature Profile:**

	°C
<b>Feed zone</b>	<b>40</b>
<b>Zone 1</b>	<b>190</b>
<b>Zone 2</b>	<b>200</b>
<b>Zone 3</b>	<b>210</b>
<b>Zone 4</b>	<b>210</b>
<b>Nozzle</b>	<b>210</b>

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

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