

## Technical Data Sheet

**Type:** ESTANE® ECO 19T95 NAT 01 is a 95 shore A bio-based polyether Thermoplastic Polyurethane (TPU)

**Features:** Good transparency and UV stabilized TPU

**Uses:** Injection molding

| Physical Properties | Value (Metric) | Unit            | Test Method        |
|---------------------|----------------|-----------------|--------------------|
| Hardness (5 sec)    | 95             | Shore A         | ASTM D-2240        |
| Specific Gravity    | 1.18           |                 | ASTM D-792         |
| Tensile Strength    | 42             | MPa             | ASTM D-412         |
| Ultimate Elongation | 480            | %               | "                  |
| Tensile Stress at:  |                |                 |                    |
| - 100 % Elongation  | 12             | MPa             | ASTM D-412         |
| - 300 % Elongation  | 23             | MPa             | "                  |
| Tear Strength       |                |                 |                    |
| - Graves            | 134            | KN/m            | ASTM D-624 (die C) |
| Abrasion            | 63             | mm <sup>3</sup> | ISO 4649           |
| Bio-base content    | 37             | %               | ASTM D6866-12      |

**Remark:**

- Prior to testing samples were conditioned at 23°C for 48 hours.
- Based on injected plaque (2mm).
- Listed values are "typical (average) values" and should/cannot be applied for specification purposes.

## Supply Form and Standard Packaging

- ESTANE® ECO 19T95 NAT 01 is supplied in pellet form and packaged in 25kgs bags.

## Material Preparation

- Prior to processing, ESTANE® ECO 19T95 NAT 01 must be dried at **176~212°F (80~100°C)** for 2-4 hours.
- It is recommended to dry the material in a desiccant type of dryer. Target dew point should be **-40°C**.
- Depending on the applied processing technique, the maximum moisture level should be 0.05%.

## Material Preparation

- ESTANE® ECO 19T95 NAT 01 can be processed on any conventional injection molding machine.

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**Recommended Starting INJECTION MOLDING Temperature Profile:**

|            | °C  |
|------------|-----|
| Freed zone | 40  |
| Zone 1     | 205 |
| Zone 2     | 210 |
| Zone 3     | 210 |
| Zone 4     | 210 |
| Nozzle     | 205 |

For further information refer to Lubrizol Advanced Materials processing guides.

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