

## Technical Data Sheet

**Type:** Estane® 58325 is an 85A Polyether-Based Thermoplastic Polyurethane (TPU).

**Features:** High melt strength for thick sheet extrusion.

**Uses:** Blown and Flat Die/Cast Extrusion, Tubing and Profile Extrusion.

| Physical Properties     | Value +/-3  | Unit          | Test Method                 |
|-------------------------|-------------|---------------|-----------------------------|
| Hardness (5 sec)        | 85 +/- 3    | Shore A       | ASTM D-2240                 |
| Specific Gravity        | 1.12        |               | ASTM D-792                  |
| Tensile Strength        | 7500 (51.7) | psi (MPa)     | ASTM D-412                  |
| Ultimate Elongation     | 600         | %             | "                           |
| Tensile Stress at:      |             |               |                             |
| - 100 % Elongation      | 800 (5.5)   | psi (MPa)     | ASTM D-412                  |
| - 300 % Elongation      | 1400 (9.7)  | psi (MPa)     | "                           |
| Tear Strength           |             |               |                             |
| Graves                  | 450 (8.1)   | lb/in (kg/mm) | ASTM D-624 (die C)          |
| Trouser                 | 140 (2.5)   | lb/in (kg/mm) | ASTM D-470                  |
| Taber Loss (1000 rev)   | 0.0022 (63) | oz (mg)       | ASTM D-3389 (H18, 1000g)    |
| T <sub>g</sub> (by DSC) | 268 (131)   | °F (°C)       | Lubrizol Advanced Materials |
| T <sub>g</sub> (by DSC) | -47 (-44)   | °F (°C)       | Lubrizol Advanced Materials |

- Prior to testing samples were conditioned at 23°C for 48 hours.
- Based on extruded sheet (30 mils).
- Listed values are "typical (average) values" and should / cannot be applied for specification purposes.

## Supply Form and Standard Packaging

- Estane® 58325 TPU is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

## Material Preparation

- Prior to processing, Estane® 58325 TPU must be dried at **220°F (104°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® 58325 TPU can be processed on any conventional extruder.

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**Recommended Starting Extrusion Temperature Profile:**

|                    | °F/°C          |
|--------------------|----------------|
| <b>Zone 1</b>      | <b>360/183</b> |
| <b>Zone 2</b>      | <b>370/188</b> |
| <b>Zone 3</b>      | <b>380/194</b> |
| <b>Zone 4</b>      | <b>390/199</b> |
| <b>Adapter (5)</b> | <b>390/199</b> |
| <b>Die Zone 1</b>  | <b>390/199</b> |
| <b>Die Zone 2</b>  | <b>390/199</b> |

Temp. Mid-Range: 385°F/196°C  
Screen Pack Recommendation: 20/40/80/20

**Application Performance Film Polyether**

| Properties                       | Value (Metric) | Unit | Test Method |
|----------------------------------|----------------|------|-------------|
| Tensile Set (200% elongation)    | 10             | %    | ASTM D-412  |
| Volume Swell in Water (24h/23°C) | 1.7            | %    | ASTM D-471  |
| USP Class VI Status              | Not Tested     |      |             |
| FDA 177.1680 (dry bulk foods)    | No             |      |             |
| FDA 177.2600 (wet/fatty foods)   | No             |      |             |
| NSF 61 Status                    | Not Listed     |      |             |

\*For repeat use applications only.

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

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