

## Technical Data Sheet

**Type:** Estane® 58863 is an 85A Polyether-Type Thermoplastic Polyurethane.

**Features:** Good Elasticity – High melt flow for easy processing.

**Uses:** Extrusion – Wire and cable, general extrusion.

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	85 +/- 3	Shore A	ASTM D-2240
Specific Gravity	1.12		ASTM D-792
Tensile Strength	5900 (40.7)	psi (MPa)	ASTM D-412
Ultimate Elongation	600	%	"
<b>Tensile Stress at:</b>			
- 100% Elongation	1000 (6.9)	psi (MPa)	ASTM D-412
- 300% Elongation	1600 (11.0)	psi (MPa)	"
<b>Tear Strength:</b>			
- Graves	380 (6.8)	lb/in (kg/mm)	ASTM D-624 (die C)
- Trouser	130 (2.3)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.0002 (4.5)	oz (mg)	ASTM D-3389 (CS-17, 1000g)
T <sub>g</sub> (by DSC)	-58 (-50)	°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® 58863 TPU** is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

## Material Preparation

- Prior to processing, **Estane® 58863 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%.

## Processing Conditions

- **Estane® 58863 TPU** can be processed on any conventional extruder.

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**Recommended Starting Extrusion Temperature Profile:**

	°F/°C
<b>Zone 1</b>	<b>345/174</b>
<b>Zone 2</b>	<b>355/180</b>
<b>Zone 3</b>	<b>370/188</b>
<b>Zone 4</b>	<b>380/194</b>
<b>Adapter (5)</b>	<b>380/194</b>
<b>Die Zone 1 (6)</b>	<b>375/191</b>
<b>Die Zone 2</b>	<b>365/185</b>

Melt Temp. Mid-Range 375°F/192°C  
Screen Pack Recommendations: 20/40/80/20

**Estane® 58863 TPU, an 85A Polyether-Type, has been developed for superior performance characteristics for wire & cable applications. Among the critical performance parameters are:**

**Toughness** - important for retaining efficient transfer of load over time.

**Superior Chemical & Oil Resistance** - provides best transfer of load and eliminates rubbing and frictional temperature buildup.

**High Performance Film & Sheet**

Properties	Value (Metric)	Unit	Test Method
Mechanical Properties:			
Flexural Modulus (23°C)	5940	psi	ASTM D-790
Compression Set (22 hrs; 23°C)	20	%	
Compression Set (22 hrs; 70°C)	66	%	

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

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