

## Technical Data Sheet

**Type:** Estane® 58300 is an 82A aromatic Polyether-Based Thermoplastic Polyurethane (TPU).

**Features:** Good physical properties, hydrolysis resistance, low temperature performance and abrasion with a wide processing window for extrusion.

**Uses:** Blown and flat die/cast film extrusion, Injection and blow molding and cable jacketing.

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	82	Shore A	ASTM D-792
Specific Gravity	1.104		ASTM D-2240
Tensile Strength	5500 (37.9)	psi (MPa)	ASTM D-412
Ultimate Elongation	650	%	"
<b>Tensile Stress at:</b>			
- 100% Elongation	700 (4.8)	psi (MPa)	ASTM D-412
- 300% Elongation	1100 (7.6)	psi (MPa)	"
<b>Tear Strength:</b>			
- Graves	400 (7.1)	lb/in (kg/mm)	ASTM D-624 (die C)
- Trouser	130 (2.3)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.0008 (22)	oz (mg)	ASTM D-3389 (H18, 1000g)
T <sub>m</sub> (by DSC)	266 (130)	°F (°C)	Lubrizol Advanced Materials
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® 58300 TPU is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

## Material Preparation

- Prior to processing, Estane® 58300 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® 58300 TPU can be processed on any conventional extruder.

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**Recommended Starting Extrusion Temperature Profile:**

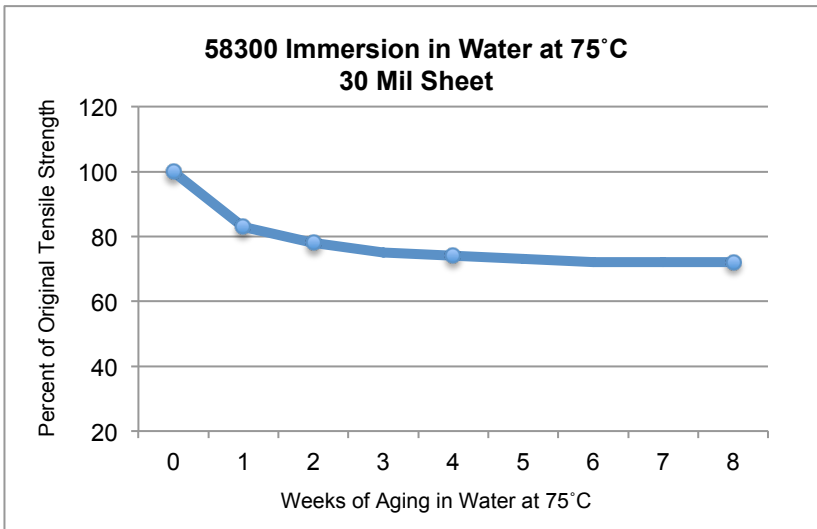
	°F/°C
<b>Zone 1</b>	<b>330/166</b>
<b>Zone 2</b>	<b>340/171</b>
<b>Zone 3</b>	<b>350/177</b>
<b>Zone 4</b>	<b>360/182</b>
<b>Adapter (5)</b>	<b>360/182</b>
<b>Die Zone 1 (6)</b>	<b>360/182</b>
<b>Die Zone 2</b>	<b>360/182</b>

Melt Temp. Mid-Range: 355°F/179°C  
Screen Pack Recommendation: 20/40/80

**Polyether TPU for High Performance Film & Sheet**

Properties	Value (Metric)	Unit	Test Method
Tensile Set (200% elongation)	11	%	ASTM D-412
Kofler Melt Point	257 (125)	°F (°C)	Lubrizol Advanced Materials
Haze (pressed between glass)	7.0	%	ASTM D-1003
Volume Swell in Water (24h/23C)	2.0	%	ASTM D-471
FDA 177.1680 (dry bulk foods)	COMPLIES*		
FDA 177.2600 (wet/fatty foods)	COMPLIES		
NSF 61 Status	LISTED		

\*Only for repeat use articles.



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

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