

## Technical Data Sheet

**Type:** Estane<sup>®</sup> 58277 is a 92A aromatic Polyester-Based Thermoplastic Polyurethane (TPU).

**Features:** Excellent physical properties, good chemical resistance and wide processing window for extrusion.

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

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	92 +/- 3	Shore A	ASTM D-2240
Specific Gravity	1.22		ASTM D-792
Tensile Strength	9000 (62.1)	psi (MPa)	ASTM D-412
Ultimate Elongation	450	%	"
Tensile Stress at:			
- 100 % Elongation	1400 (9.7)	psi (MPa)	ASTM D-412
- 300 % Elongation	4200 (29.0)	psi (MPa)	"
Tear Strength			
Graves	650 (11.6)	lb/in (kg/mm)	ASTM D-624 (die C)
Trouser	190 (3.4)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.00176 (50)	oz (mg)	ASTM D-3389 (H18, 1000g)
T <sub>m</sub> (by DSC)	266 (130)	°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<sup>®</sup> 58277 TPU is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

## Material Preparation

- Prior to processing, Estane<sup>®</sup> 58277 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<sup>®</sup> 58277 TPU can be processed on any conventional extruder.

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**Recommended Starting Extrusion Temperature Profile:**

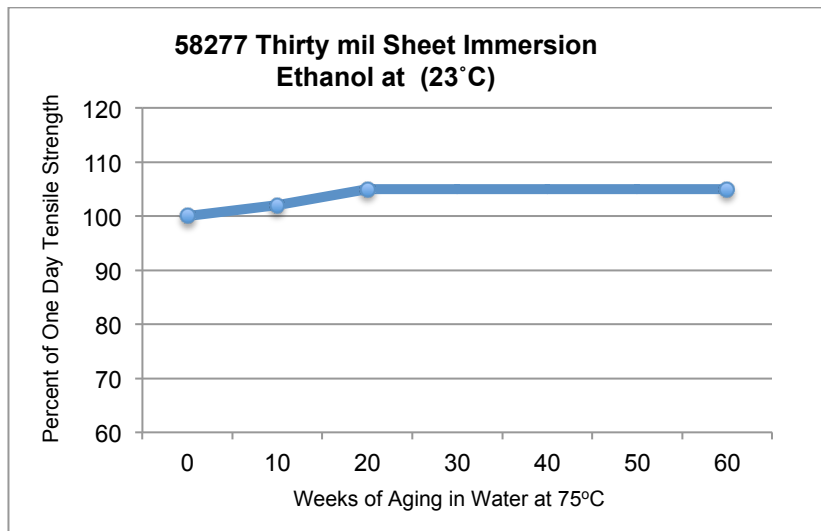
	°F/°C
<b>Zone 1</b>	<b>350/177</b>
<b>Zone 2</b>	<b>360/182</b>
<b>Zone 3</b>	<b>370/188</b>
<b>Zone 4</b>	<b>380/193</b>
<b>Adapter (5)</b>	<b>390/199</b>
<b>Die Zone 1 (6)</b>	<b>390/199</b>
<b>Die Zone 2</b>	<b>390/199</b>

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

**Application Information: High Performances Film & Sheet**

Properties	Value (Metric)	Unit	Test Method
Tensile Set (200% elongation)	20	%	ASTM D-412
Kofler Melt Point	284 (140)	°F (°C)	Lubrizol Advanced Materials
Haze (65 mil between glass)	1.1	%	ASTM D-1003
Volume swell (24h) in Ethanol	12	%	ASTM D-471
FDA 177.1680 (dry bulk foods)	Complies		
FDA 177.2600 (wet/fatty foods)	Complies		

**Sheet Immersion in Ethanol at 23°C**



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

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