

## Technical Data Sheet

**Type:** ESTANE® 58237 is a 90A aromatic Polyether-Based Thermoplastic Polyurethane (TPU).

**Features:** High moisture vapor transmission. Good physical properties and elasticity.

**Uses:** Blown and flat die/cast film extrusion.

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	90 +/- 3	Shore A	ASTM D-2240
Specific Gravity	1.22		ASTM D-792
Tensile Strength	5000 (34.5)	psi (MPa)	ASTM D-412
Ultimate Elongation	550	%	"
<b>Tensile Stress at:</b>			
- 100% Elongation	900 (6.2)	psi (MPa)	ASTM D-412
- 300% Elongation	2000 (13.8)	psi (MPa)	"
<b>Tear Strength:</b>			
- Graves	450 (8.1)	lb/in (kg/mm)	ASTM D-624 (die C)
- Trouser	120 (2.1)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.0014 (40)	oz (mg)	ASTM D-3389 (H18, 1000g)
T <sub>m</sub> (by DSC)	291 (144)	°F (°C)	Lubrizol Advanced Materials
T <sub>g</sub> (by DSC)	-11 (-24)	°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® 58237 TPU is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

## Material Preparation

- Prior to processing, ESTANE® 58237 TPU must be dried at **180°F (82°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® 58237 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</b>	<b>390/199</b>
<b>Die Zone 1</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: 20/40/80/20

**Application Information: High Moisture Vapor Transmission Grade**

Properties	Value (Metric)	Unit	Test Method
MVT: upright cup (23°C, 50%RH)	500	g/m2*24h	ASTM E-96B
MVT: Mocon (38°C, 90%RH)	3000	g/m2*24h	ASTM D-6701
Volume Swell in water (24h@23°C)	40	%	ASTM D-471
Tensile Set (200% elongation)	18	%	ASTM D-412
Kofler Melt Point	311 (155)	°F (°C)	Lubrizol Advanced Materials

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

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