

Technical Data Sheet

Type: ESTANE® 54610 is an 85A aromatic Polyester-Based Thermoplastic Polyurethane (TPU). **Features:**

Good physical properties and chemical resistance and wide processing window for calendering. **Uses:** Melt coating/calendering, flat die/cast film extrusion.

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	85 +/- 3	Shore A	ASTM D-2240
Specific Gravity	1.20		ASTM D-792
Tensile Strength	5400 (37.2)	psi (MPa)	ASTM D-412
Ultimate Elongation	620	%	"
Tensile Stress at			
- 100 % Elongation	770 (5.3)	psi (MPa)	ASTM D-412
- 300 % Elongation	1200 (8.3)	psi (MPa)	"
Tear Strength			
Graves	400 (7.2)	lb/in (kg/mm)	ASTM D-624 (die C)
Trouser	150 (2.7)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.0012 (34)	oz (mg)	ASTM D-3389 (H18, 1000g)
T _m (by DSC)	248 (120)	°F (°C)	Lubrizol Advanced Materials
T _g (by DSC)	-13 (-25)	°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® 54610 TPU is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

Material Preparation

- Prior to processing, ESTANE® 54610 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 54610 TPU can be processed on any conventional extruder.

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Recommended Starting Extrusion Temperature Profile:

	°F/°C
Zone 1	340/171
Zone 2	350/177
Zone 3	360/182
Zone 4	370/188
Adapter (5)	370/188
Die Zone 1 (6)	370/188
Die Zone 2	370/188

Melt Temp. Mid-Range: 365°F/185°C
Screen Pack Recommendation: 20/40/80

Application Information: High Performance Film & Sheet

Properties	Value (Metric)	Unit	Test Method
Tensile Set (200% elongation)	11	%	ASTM D-412

For further information refer to Lubrizol Advanced Materials processing guides.

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