

Technical Data Sheet

Type: Estane® 58271 is a 85A Polyester Thermoplastic Polyurethane (TPU).

Features: Good physical properties, chemical resistance and adhesive properties 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)	85 +/- 3	Shore A	ASTM D-2240
Specific Gravity	1.21		ASTM D-792
Tensile Strength	7500 (51.7)	psi (MPa)	ASTM D-412
Ultimate Elongation	540	%	"
Tensile Stress at:			
- 100% Elongation	800 (5.5)	psi (MPa)	ASTM D-412
- 300% Elongation	1400 (9.7)	psi (MPa)	"
Tear Strength:			
- Graves	450 (8.0)	lb/in	ASTM D-624 (die C)
- Trouser	130 (3.2)	lb/in	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® 58271 TPU is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

Material Preparation

- Prior to processing, Estane® 58271 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® 58271 TPU can be processed on any conventional extruder.

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Recommended Starting Extrusion Temperature Profile:

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

Melt Temp. Mid-Range: 375°F/191°C
Screen Pack Recommendation: 20/40/80

Application Information: High Performance Film & Sheet

Properties	Value (Metric)	Unit	Test Method
Tensile Set (200% elongation)	13	%	ASTM D-412
Kofler Melt Point	239 (115)	°F (°C)	Lubrizol Advanced Materials
Haze (65 mil between glass)	1.1	%	ASTM D-1003
FDA 177.1680 (dry bulk foods)	Complies		
FDA 177.2600 (wet/fatty foods)	Complies		

For further information refer to Lubrizol Advanced Materials processing guides.

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