

Technical Data Sheet

Type: Estane® 58246 is a 50D aromatic Polyester-Type Thermoplastic Polyurethane (TPU).

Features: High stiffness grade with excellent chemical and oil resistance.

Uses: Flat Die/Cast Film Extrusion and Injection Molding.

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	50 +/- 3	Shore D	ASTM D-2240
Specific Gravity	1.23		ASTM D-792
Tensile Strength	9300 (64.1)	psi (MPa)	ASTM D-412
Ultimate Elongation	420	%	"
Tensile Stress at:			
- 100% Elongation	1800 (12.4)	psi (MPa)	ASTM D-412
- 300% Elongation	5200 (30.7)	psi (MPa)	"
Tear Strength:			
- Graves	800 (14.3)	lb/in (kg/mm)	ASTM D-624 (die C)
- Trouser	180 (3.2)	lb/in (kg/mm)	ASTM D-470
T _m (by DSC)	338 (170)	°F (°C)	Lubrizol Advanced Materials
T _g (by DSC)	-4 (-20)	°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® 58246 TPU is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

Material Preparation

- Prior to processing, Estane® 58246 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® 58246 TPU can be processed on any conventional extruder.

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Recommended Starting Extrusion Temperature Profile:

	°F/°C
Zone 1	390/199
Zone 2	400/204
Zone 3	410/210
Zone 4	420/216
Adapter (5)	430/221
Die Zone 1 (6)	430/221
Die Zone 2	430/221

Melt Temp. Mid-Range: 425°F/218°C
Screen Pack Recommendation: 20/40/80/20

Application Information: High Performance Film Polyester

Properties	Value (Metric)	Unit	Test Method
Tensile Set (200% elongation)	12	%	ASTM D-412
Kofler Melt Point	320 (160)	°F (°C)	Lubrizol Advanced Materials
USP Class VI Status	Not tested		
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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