

Technical Data Sheet

Type: Estane[®] 58244 is a 90A Polyether-Type Thermoplastic Polyurethane (TPU).

Features: Non-Halogenated flame retardant compound.

Uses: Extrusion – wire and cable and general extrusion where flame retardant properties are required.

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	90 +/- 3	Shore A	ASTM D-2240
Specific Gravity	1.19		ASTM D-792
Tensile Strength	2000 (13.8)	psi (MPa)	ASTM D-412
Ultimate Elongation	600	%	"
Tensile Stress at:			
- 100% Elongation	1000 (6.9)	psi (MPa)	ASTM D-412
- 300% Elongation	1100 (7.6)	psi (MPa)	"
Tear Strength:			
- Graves	330 (5.9)	lb/in (kg/mm)	ASTM D-624 (die C)
- Trouser	125 (2.2)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.012 (350)	oz (mg)	ASTM D-3389 (H-18, 1000g)

- 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[®] 58244 TPU is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

Material Preparation

- Prior to processing, Estane[®] 58244 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[®] 58244 TPU can be processed on any conventional extruder.

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Recommended Starting Extrusion Temperature Profile:

	°F/°C
Zone 1	360/182
Zone 2	370/188
Zone 3	380/194
Zone 4	385/196
Adapter	385/196
Die Zone 1	380/194
Die Zone 2	370/188

*Melt Temp. Mid-Range 375°F/190°C

Estane® 58244 TPU, a 90A Polyether-Type has been developed for superior performance characteristics for wire & cable applications. Among the critical performance parameters are:

- **Toughness** – important for retaining efficient transfer of load over time.
- **Superior Chemical & Oil Resistance** - provides best transfer of load and eliminates rubbing and frictional temperature buildup.
- **Flame Retardant or Matting** - prevents rub off of material which can propagate into belt failure.

Application Information: High Performance Film Polyester

Properties	Value (Metric)	Unit	Test Method
UL Flame Rating	V-0	-	UL-94
LOI	28	%	ASTM D-2863
Smoke Index	24		NES 711

For further information refer to Lubrizol Advanced Materials processing guides.

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