

Technical Data Sheet

Type: Estane® 58881 is an 80A Polyether-Type Thermoplastic Polyurethane.

Features: Excellent low temperature flexibility, and superior abrasion and cut resistance.

Uses: Extrusion – Wire and cable, Hose and tube & General purpose.

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	80 +/- 3	Shore A	ASTM D-2240
Specific Gravity	1.13		ASTM D-792
Tensile Strength	3400 (23.4)	psi (MPa)	ASTM D-412
Ultimate Elongation	710	%	"
Tensile Stress at:			
- 100% Elongation	700 (4.8)	psi (MPa)	ASTM D-412
- 300% Elongation	980 (6.8)	psi (MPa)	"
Tear Strength:			
- Graves	315 (5.6)	lb/in (kg/mm)	ASTM D-624 (die C)
- Trouser	100 (1.8)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.0001 (3.0)	oz (mg)	ASTM D-3389 (H18, 1000g)
T _g (by DSC)	-61 (-52)	°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® 58881 TPU** is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

Material Preparation

- Prior to processing, **Estane® 58881 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® 58881 TPU** can be processed on any conventional extruder.

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Recommended Starting Extrusion Temperature Profile:

	°F/°C	
Zone 1	350/177	Melt Temp. Mid-Range °F/°C
Zone 2	360/182	
Zone 3	370/188	
Zone 4	375/191	
Adapter (5)	375/191	
Die Zone 1 (6)	375/191	
Die Zone 2	365/185	

Estane® 58881 TPU, an 80A 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.

Properties	Value (Metric)	Unit	Test Method
Mechanical Data:			
Flexural Modulus (23 ⁰ C)	2480	psi	ASTM D-790
Compression Set (22hrs; 23 ⁰ C)	18	%	
Compression Set (22hrs; 70 ⁰ C)	61	%	

For further information refer to Lubrizol Advanced Materials processing guides.

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