

Technical Data Sheet

Type: Estane® 58130 is a 50D Polyester Thermoplastic Polyurethane (TPU).

Features: Fast cycling, broad temperature performance and durability.

Uses: 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	6000 (41)	psi (MPa)	ASTM D-412
Ultimate Elongation	450	%	"
Tensile Stress at:			
- 100% Elongation	1600 (11)	psi (MPa)	ASTM D-412
- 300% Elongation	3500 (24)	psi (MPa)	"
Tear Strength:			
- Graves	790 (14)	lb/in (kg/mm)	ASTM D-624 (die C)
- Trouser	240 (4.3)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.0022 (62)	oz (mg)	ASTM D-3389 (CS-17, 1000g)
T _m (by DSC)	424 (218)	°F (°C)	Lubrizol Advanced Materials
T _g (by DSC)	-40 (-40)	°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® 58130 TPU is available in pellet form and packaged in 50 lb bags or 1000 lb boxes.

Material Preparation

- Prior to processing, Estane® 58130 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%.

Material Preparation

- Estane® 58130 TPU can be processed on any conventional injection molding machine.

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<http://go.lubrizol.com/EP>

Recommended Starting Injection Molding Temperature Profile:

	°F/°C
Rear	400 / 204
Middle	410 / 210
Front	425 / 218
Nozzle	435 / 223
Melt Temperature*	435 / 223

Fill Rate: Moderate

Screw RPM: 60-100

Back Pressure: 50 psi minimum

Injection Pressure: 10,000-15,000 psi (69-103 MPa)

Holding Pressure: 5,000-10,000 psi (35-69 MPa)

Mold Shrinkage*: 0.010 (disk) in/in (cm/cm)
0.007 (flex bar) in/in (cm/cm)

** Mold shrinkage was determined using ASTM D955. Actual shrinkage will vary with part size, design, and processing conditions. Please contact a Lubrizol Advanced Materials technical representative for more information*

Other Properties

Properties	Value (Metric)	Unit	Test Method
Mechanical Data			
Flexural Modulus (23 ⁰ C)	13,000 (90)	psi (MPa)	ASTM D-790
Compression Set 23 ⁰ C / 22 h	34	%	ASTM D395
Compression Set 70 ⁰ C / 22 h	43	%	ASTM D-395

For further information refer to Lubrizol Advanced Materials processing guides.

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