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.

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.