

Technical Data Sheet

Type: Estane® ETE 55DS3 is a 55D aromatic Polyester-Based Thermoplastic Polyurethane (TPU).

Feature: Hard TPU with wide extrusion processing window and melt stability, low temperature flexibility, high transparency and excellent chemical resistance.

Uses: Extrusion: Hose and Tube, Extrusion: Profile, Cable Jacket; Injection molding: Various.

Physical Properties	Value (Metric Units)	Unit	Test Method
Hardness (5 sec)	55 +/- 3	Shore D	ASTM D-2240
Specific Gravity	1.23		ASTM D-792
Tensile Strength	10300 (71.0)	psi (MPa)	ASTM D-412
Ultimate Elongation	440	%	"
Tensile Stress at:			
- 100 % Elongation	2100 (14.5)	psi (MPa)	ASTM D-412
- 300 % Elongation	4800 (33.1)	psi (MPa)	"
Tear Strength			
Graves	880 (154.0)	lb/in (kg/mm)	ASTM D-624 (die C)
Trouser	205 (36.0)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.00200 (58)	oz (mg)	ASTM D-3389 (H18, 1000g)
T _m (by DSC)	356 (180)	°F (°C)	Lubrizol Advanced Materials
T _g (by DSC)	-38 (-39)	°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® ETE 55DS3 TPU is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

Material Preparation

- Prior to processing, Estane® ETE 55DS3 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 **-40°C**.
- Depending on the applied processing technique, the maximum moisture level should be 0.02%.

Processing Conditions

- Estane® ETE 55DS3 TPU was extruded 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	400/204
Zone 4	410/210
Adapter	415/213
Die Zone 1	410/210
Die Zone 2	410/210

Melt Temp. Mid-Range: 400°F/204°C
Screen Pack Recommendation: 20/40/80/20

For further information refer to Lubrizol Advanced Materials processing guides.

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