

Technical Data Sheet

Type: Estane® 58237 is a 90A aromatic Polyether-Based Thermoplastic Polyurethane (TPU).

Features: High moisture vapor transmission. Good physical properties and elasticity.

Uses: Blown and flat die/cast film extrusion.

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	90 +/- 3	Shore A	ASTM D-2240
Specific Gravity	1.22		ASTM D-792
Tensile Strength	5000 (34.5)	psi (MPa)	ASTM D-412
Ultimate Elongation	550	%	"
Tensile Stress at:			
- 100% Elongation	900 (6.2)	psi (MPa)	ASTM D-412
- 300% Elongation	2000 (13.8)	psi (MPa)	"
Tear Strength:			
- Graves	450 (8.1)	lb/in (kg/mm)	ASTM D-624 (die C)
- Trouser	120 (2.1)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.0014 (40)	oz (mg)	ASTM D-3389 (H18, 1000g)
T _m (by DSC)	291 (144)	°F (°C)	Lubrizol Advanced Materials
T _g (by DSC)	-11 (-24)	°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® 58237 TPU is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

Material Preparation

- Prior to processing, Estane® 58237 TPU must be dried at 180°F (82°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® 58237 TPU can be processed on any conventional extruder.

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Recommended Starting Extrusion Temperature Profile:

	°F/°C
Zone 1	350/177
Zone 2	360/182
Zone 3	370/188
Zone 4	380/193
Adapter	390/199
Die Zone 1	390/199
Die Zone 2	390/199

Melt Temp. Mid-Range: 385°F/196°C
Screen Pack Recommendation: 20/40/80/20

Application Information: High Moisture Vapor Transmission Grade

Properties	Value (Metric)	Unit	Test Method
MVT: upright cup (23°C, 50%RH)	500	g/m2*24h	ASTM E-96B
MVT: Mocon (38°C, 90%RH)	3000	g/m2*24h	ASTM D-6701
Volume Swell in water (24h@23°C)	40	%	ASTM D-471
Tensile Set (200% elongation)	18	%	ASTM D-412
Kofler Melt Point	311 (155)	°F (°C)	Lubrizol Advanced Materials
FDA 177.1680 (dry bulk foods)	No		
FDA 177.2600 (wet/fatty foods)	No		
NSF 61 Status	Not Tested		

For further information refer to Lubrizol Advanced Materials processing guides.

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