Technical Data Sheet

Type: ESTANE® 58206 is an 85A aromatic Polyester-Based Thermoplastic Polyurethane (TPU).

Features: Good Flexibility at Low Temperatures and Improved Weathering Performance.

Uses: Flat Die/Cast Film Extrusion and Hose/Profile Extrusion, Injection Molding.

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	85 +/- 3	Shore A	ASTM D-2240
Specific Gravity	1.20		ASTM D-792
Tensile Strength	7000 (48.3)	psi (MPa)	ASTM D-412
Ultimate Elongation	550	%	"
Tensile Stress at:			
- 100 % Elongation	800 (5.5)	psi (MPa)	ASTM D-412
- 300 % Elongation	1500 (10.4)	psi (MPa)	"
Tear Strength			
Graves	500 (9.0)	lb/in (kg/mm)	ASTM D-624 (die C)
Trouser	130 (2.3)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.0007 (20)	oz (mg)	ASTM D-3389 (H18, 1000g)
T_m (by DSC)	320 (160)	°F (°C)	Lubrizol Advanced Materials
T_g (by DSC)	-26 (-32)	°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® 58206 TPU** is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

Material Preparation

• Prior to processing, **ESTANE® 58206 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® 58206 TPU** can be processed on any conventional extruder or injection molding machine.

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Recommended Starting Extrusion Temperature Profile:

	°F/°C
Zone 1	350/177
Zone 2	360/183
Zone 3	370/188
Zone 4	380/194
Adapter (5)	380/194
Die Zone 1	380/194
Die Zone 2	380/194

Melt Temp. Mid-Range: 375°F/191°C
Screen Pack Recommendation: 20/40/80

Recommended Starting Injection Molding Temperature Profile:

	°F/°C
Rear	350/177
Middle	370/188
Front	380/193
Nozzle	390/199
Melt Temperature*	390/199

*Melt temperature by pyrometer check of air shot

Fill Rate: Slow to Moderate
Screw RPM: 20-50
Back Pressure: 50 psi
Injection Pressure: 3,000-7,000 psi (21-48 MPa)
Molding Pressure: 2,000-4,000 psi (14-28 MPa)
Mold Shrinkage*: 0.014 in/in (cm/cm)

*Mold shrinkage was determined using ASTM D955 - 4" diameter x .125" thick molded disk. Actual shrinkage will vary with part size, design, and processing conditions. Please contact a Lubrizol Advanced Materials technical representative for more information.

Application Information: High Performance Film Polyester

Properties	Value (Metric)	Unit	Test Method
Tensile Set (200% elongation)	10	%	ASTM D-412
Kofler Melt Point	311 (155)	°F (°C)	Lubrizol Advanced Materials
Volume swell in Jet Fuel JP8	7.7	%	ASTM D-471

For further information refer to Lubrizol Advanced Materials processing guides.

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