

Technical Data Sheet

Type: Estane® 58252 is a 70A Polyether Thermoplastic Polyurethane (TPU).

Features: Formulated to have one of the highest MVT values within the thermoplastic polyurethane class. It is also among the softest grades. Extruded or solution cast films of Estane 58252 TPU are non-porous and have very high moisture vapor transmission rates.

Uses: Intended for cast film and solution coating applications.

Physical Properties	Value (Metric)	Typical Values*	
		SI Units	English Units
Specific Gravity	ASTM D792	1.20	1.20
Shore Hardness	ASTM D2240	70A/22D	70A/22D
Tensile Strength	ASTM D-412/D-638	19.3 MPa	2800 psi
Modulus:			
- 100 % Elongation	ASTM D-412/D-638	2.8 MPa	410 psi
- 200 % Elongation	ASTM D-412/D-638	3.6 MPa	520 psi
- 300 % Elongation	ASTM D-412/D-638	4.7 MPa	680 psi
- 400 % Elongation	ASTM D-412/D-638	6.7 MPa	950 psi
- 500 % Elongation	ASTM D-412/D-638	9.0 MPa	1300 psi
Ultimate Elongation	ASTM D-412/D-638	800%	800%
Tensile Set @ 200% Elongation	ASTM D-412	7%	7%
Graves Tear	ASTM D-624, Die C	47.3 kN/m	270 lb/in
Trouser Tear	ASTM D-470	68.3 kN/m	390 lb/in
Taber Abrasion, H-18 wheel, 1000g load	ASTM D-3389-94	140 mg/1000 cycles	140 mg/1000 cycles
Vicat Softening Point	ASTM D-1525	47°C	117°F
DSC: Glass Transition (2 nd heat)		-28°C	-18°F
DSC: Melting Temperature		130°C	266°F

*These are typical values and should not be used for establishing specifications. Contact your representative for availability and commercialization status.

**Tensile/modulus, tensile set, trouser tear determined on 30 mil extruder strips. Other tests conducted on 75 mil molded sheet pressed from extruded strips.

Moisture Vapor Transmission Data*

Procedure	Test Method	Temperature	Relative Humidity	MVT g/m ² /day
Upright Cup, Water	ASTM E-96B	23°C	50%	850
Upright Cup, Desiccant	MOCON	23°C	100%	

Handling Considerations

Properties of all thermoplastic polyurethane products in the molten state are adversely affected by moisture. Although Estane TPU compound are dry when packaged, trace amounts of moisture can be absorbed during storage and handling. For best results, always dry the material 12 hours at 55°C (131°F) in a dehumidifying hopper dryer.

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