Estane® 58202 TPU

Technical Data Sheet

Type: Estane® 58202 is an 85A Polyether-Type Thermoplastic Polyurethane (TPU).

Features: Halogenated flame retardant compound with good low temperature properties and cut resistance.

Uses: Extrusion – wire and cable jacketing and general extrusion where flame retardant properties are required.

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	85 +/- 3	Shore A	ASTM D-2240
Specific Gravity	1.25		ASTM D-792
Tensile Strength	4000 (27.6)	psi (MPa)	ASTM D-412
Ultimate Elongation	650	%	"
Tensile Stress at:			
- 100 % Elongation	800 (5.5)	psi (MPa)	ASTM D-412
- 300 % Elongation	1050 (7.2)	psi (MPa)	"
Tear Strength			
Graves	360 (6.4)	lb/in (kg/mm)	ASTM D-624 (die C)
Trouser	105 (1.9)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.005 (155)	oz (mg)	ASTM D-3389 (H-18, 1000g)
T_m (by DSC)	310 (155)	°F (°C)	Lubrizol Advanced Materials
T_g (by DSC)	-49 (-45)	°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® 58202 TPU** is supplied in pellet form and packaged in 50 lb bags or 1000 lb boxes.

Material Preparation

• Prior to processing, **Estane® 58202 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%.

Processing Conditions

• **Estane® 58202 TPU** can be processed on any conventional extruder.

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained. The information often is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance or reproducibility. Formulations presented may not have been tested for stability and should be used only as a suggested starting point. Because of the variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the applications disclosed. Full-scale testing and end product performance are the responsibility of the user. Lubrizol Advanced Materials, Inc. shall not be liable for and the customer assumes all risk and liability for any use or handling of any material beyond Lubrizol Advanced Materials, Inc.'s direct control. The SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendation nor as an inducement to practice any patented invention without permission of the patent owner.

© 2018 The Lubrizol Corporation.
All rights reserved. All marks are the property of The Lubrizol Corporation.

Recommended Starting Extrusion Temperature Profile:

	°F/°C
Zone 1	**345/174**
Zone 2	**355/179**
Zone 3	**365/185**
Zone 4	**370/188**
Adapter (5)	**370/188**
Die Zone 1 (6)	**370/188**
Die Zone 2	**370/188**

Melt Temp. Mid-Range 360°F/182°C
Screen Pack Recommendations: 20/40

Estane® 58202 TPU, an 85A Polyether-Type, has been developed for superior performance characteristics for wire & cable applications. Among the critical performance parameters are:

- **Toughness** – important for retaining efficient transfer of load over time.
- **Superior Chemical & Oil Resistance -** provides best transfer of load and eliminates rubbing and frictional temperature buildup.
- **Flame Retardant**

Properties	Value (Metric)	Unit	Test Method
UL Flame Rating	V-0	-	UL-94
LOI	32	%	ASTM D-2863

For further information refer to Lubrizol Advanced Materials processing guides.

The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained. The information often is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance or reproducibility. Formulations presented may not have been tested for stability and should be used only as a suggested starting point. Because of the variations in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the applications disclosed. Full-scale testing and end product performance are the responsibility of the user. Lubrizol Advanced Materials, Inc. shall not be liable for and the customer assumes all risk and liability for any use or handling of any material beyond Lubrizol Advanced Materials, Inc.'s direct control. The SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendation nor as an inducement to practice any patented invention without permission of the patent owner.

© 2018 The Lubrizol Corporation.
All rights reserved. All marks are the property of The Lubrizol Corporation.