Lubrizol
Engineered Polymers

Estane® 58315 TPU

Type: Estane® 58315 is an 85A aromatic Polyether-Based Thermoplastic Polyurethane (TPU).

Features: Very good physical properties, hydrolysis resistance, low temperature performance and abrasion. Wide processing window for extrusion.

Uses: Blown and flat die/cast film extrusion, Injection molding and cable jacketing.

Physical Properties	Value (Metric)	Unit	Test Method
Hardness (5 sec)	85 +/- 3	Shore A	ASTM D-2240
Specific Gravity	1.12		ASTM D-792
Tensile Strength	7000 (48.3)	psi (MPa)	ASTM D-412
Ultimate Elongation	570	%	"
Tensile Stress at:			
- 100 % Elongation	900 (6.2)	psi (MPa)	ASTM D-412
- 300 % Elongation	1500 (10.3)	psi (MPa)	"
Tear Strength			
Graves	490 (8.7)	lb/in (kg/mm)	ASTM D-624 (die C)
Trouser	150 (2.7)	lb/in (kg/mm)	ASTM D-470
Taber Loss (1000 rev)	0.00130 (37)	oz (mg)	ASTM D-3389 (H18, 1000g)
T_m (by DSC)	275 (135)	°F (°C)	Lubrizol Advanced Materials
T_g (by DSC)	-58 (-50)	°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® 58315 TPU** is supplied in pellet form and packaged in 50 lb bags or 1500 lb boxes.

Material Preparation

• Prior to processing, **Estane® 58315 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® 58315 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.

Lubrizol Advanced Materials, Inc. / 9911 Brecksville Road, Cleveland, Ohio 44141-3247 / 216.447.5000
© 2014 The Lubrizol Corporation. All rights reserved. All marks are the property of The Lubrizol Corporation • www.lubrizol.com/engineeredpolymers

Lubrizol

Recommended Starting Extrusion Temperature Profile:

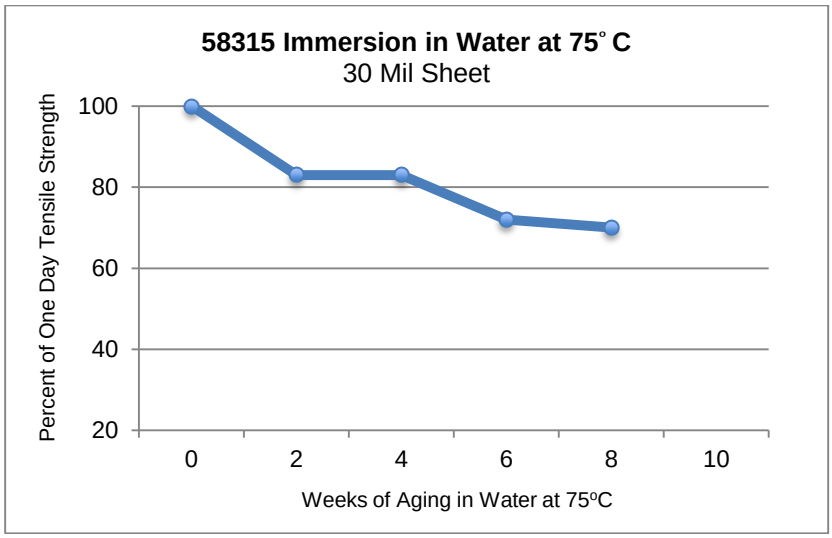
	°F/°C
Zone 1	**340/171**
Zone 2	**350/177**
Zone 3	**360/182**
Zone 4	**370/188**
Adapter (5)	**370/188**
Die Zone 1(6)	**370/188**
Die Zone 2	**370/188**

Melt Temp. Mid-Range: 365°F/185°C
Screen Pack Recommendation: 20/40/80

High Performance Film & Sheet

Application Properties	Value (Metric)	Unit	Test Method
Tensile Set (200% elongation)	14	%	ASTM D-412
Kofler Melt Point	293 (145)	°F (°C)	Lubrizol Advanced Materials
Haze (pressed between glass)	1.8	%	ASTM D-1003
Volume Swell in Water (24h/23°C)	1.7	%	ASTM D-471
FDA 177.1680 (dry bulk foods)	Complies*		
FDA 177.2600 (wet/fatty foods)	Complies		
NSF 61 Status	Listed		

*For repeat use applications only.



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.

Lubrizol Advanced Materials, Inc. / 9911 Brecksville Road, Cleveland, Ohio 44141-3247 / 216.447.5000
© 2014 The Lubrizol Corporation. All rights reserved. All marks are the property of The Lubrizol Corporation • www.lubrizol.com/engineeredpolymers