

Technical Data Sheet

Type: Pearlstick® 5703 TPU is a Polyester-Type Thermoplastic Polyurethane (TPU).

Features: Soft compound with high elongation, displays low temperature flexibility and abrasion resistance. It can be processed by means of solution coating, extrusion and melt coating.

Uses: Adhesive for inks and lacquers, fabric coating and magnetic media binder.

Physical Properties	Value (Metric)	Units	Test Method
Specific Gravity	1.19		ASTM D-792
Shore Hardness	70A	Shore A	ASTM D-2240
Mechanical			
Tensile Strength	4500 (31.0)	psi (MPa)	ASTM D-412/D-638
Modulus			ASTM D-412/D-638
- 100% Elongation	330 (2.3)	psi (MPa)	
- 300% Elongation	550 (3.8)	psi (MPa)	
Ultimate Elongation	630	%	ASTM D-412/D-638
Brookfield Viscosity			RVT Spindle #2, 20 RPM, 23°C
- 15% T.S. in THF	250	cps	
- 15% T.S. in Cyclohexanone	1600	cps	
Adhesion to PET	0.7 (0.12)	lb/in (kN/m)	TP-141

- Prior to testing samples were conditioned at 23°C for 48 hours.
- Based on extruded sheet (30 mils) or Injection molded plaques (125 mils).
- Listed values are "typical (average) values" and should/cannot be applied for specification purposes.

Supply Form and Standard Packaging

Pearlstick® 5703 TPU is supplied in pellet form and packaged in 50 lb boxes.

Properties	Value (Metric)	Units*	Test Method
Thermal			
Glass Transition Temperature	-24(-31)	°F(°C)	DSC**
Koefler Softening Point	185(85)	°F(°C)	ASTM D-1525
Adhesive			
Ring and Ball Softening Point	354 (179)	°F(°C)	ASTM E-28-92
Melt Viscosity @ 400°F (204°C)	92000	cps	ASTM D-1084-88
Gradient Bar Tack Temperature	196 (91)	°F(°C)	
Open Time	>300	sec	ASTM D-4497-94
T-peel, Aluminum Foil	10.5 (1.8)	lb/in (kN/m)	ASTM D-1876-72
T-peel, Mylar Film	19.1 (3.4)	lb/in (kN/m)	ASTM D-1876-72

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.



<http://go.lubrizol.com/EP>

STORAGE

Pearlstick™ 5703 must be stored in a cool (15–25°C) and environment prior to being processed. Standard practice of consuming resin on first-in first-out basis should be employed.

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.



<http://go.lubrizol.com/EP>