

Estane® 5703 TPU

Thermoplastic Polyurethane Elastomer (Polyester)

Lubrizol Advanced Materials, Inc.

Message:

Type: Estane® 5703 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.
Application:
Primary Use: Adhesive for Inks and Lacquers
Secondary Use: Fabric coating and Magnetic Media Binder

General Information	
Features	Good Abrasion Resistance
	High Elongation
	Low Temperature Flexibility
	Soft
Uses	Adhesives
	Binder
	Coating Applications
	Fabric Coatings
RoHS Compliance	RoHS Compliant
Forms	Pellets
Processing Method	Extrusion
	Extrusion Coating
	Solution Coating

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm ³	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	70		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
--	31.0	MPa	
100% Strain	2.30	MPa	
300% Strain	3.80	MPa	
Tensile Elongation (Break, 0.762 mm)	630	%	ASTM D638
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412
100% Strain	2.30	MPa	
300% Strain	3.80	MPa	

Tensile Strength (Break)	31.0	MPa	ASTM D412
Tensile Elongation (Break)	630	%	ASTM D412
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature ¹	-31.0	°C	DSC
Kofler Melting Temperature	85	°C	ASTM D1525
Ring and Ball Softening Point	179	°C	ASTM E28-92
Brookfield Viscosity ²			
15% T.S. in Cyclohexanone : 23°C	1.60	Pa·s	
15% T.S. in MEK/Toluene : 23°C	0.250	Pa·s	
Adhesion to PET ³	305.9	g/2.5 cm	
Gradient Bar Tack Temperature	91	°C	
Open Time	> 5.0	min	ASTM D4497-94
T-Peel			ASTM D1876
Aluminum Foil	1.8	kN/m	
Mylar Film	3.4	kN/m	
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (204°C)	92.0	Pa·s	ASTM D1084
NOTE			
1.	10°C/min, second heat		
2.	RVT Spindle #2, 20 RPM		
3.	TP-141		

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