



Estane® AG 8451 TPU

Lubrizol Advanced Materials, Inc. - Thermoplastic Polyurethane Elastomer (Polyether)

Wednesday, November 6, 2019

General Information

Product Description

Type: Estane® AG 8451 is a polyether based aliphatic (TPU) specifically formulated to be used as an adhesive interlayer film. AG-8451 is an excellent general purpose polymer for all optical aliphatic applications.

Features: This polymer works over a broad range of processing temperatures with excellent laminating results.

Uses: Adhesive interlayer for glass-clad polycarbonate without a surface primer

General

Material Status	• Commercial: Active	
Availability	• Latin America	• North America
Features	• Aliphatic	• Good Processability
Uses	• Adhesives	• Laminates
Forms	• Film	• Optical Applications
	• Pellets	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.08		ASTM D792
Elastomers			
Tensile Stress ² (100% Strain)	500	psi	ASTM D412
Tensile Stress ² (200% Strain)	1200	psi	ASTM D412
Tensile Stress ² (300% Strain)	2000	psi	ASTM D412
Tensile Strength ² (Break)	7000	psi	ASTM D412
Tensile Elongation ² (Break)	480	%	ASTM D412
Tear Strength ³	320	lbf/in	ASTM D624
Compression Set			ASTM D395
72°F, 22 hr	23	%	
158°F, 22 hr	95	%	
Thermal			
Glass Transition Temperature	-76.0	°F	DSC
CLTE - Flow	1.1E-4	in/in/°F	Internal Method
TMA			Internal Method
Peak	190	°F	
Range	149 to 266	°F	
Optical			
Refractive Index ⁴	1.496		ASTM D542
Transmittance ⁴ (50.0 mil)	85.0 to 95.0	%	ASTM D1003
Haze ⁴ (50.0 mil)	0.00 to 0.300	%	ASTM D1003
Yellowness Index ⁴ (0.0500 in)	< 1.0	YI	ASTM D1925

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Notes

¹ Typical properties: these are not to be construed as specifications.

² 20 in/min

³ Die C

⁴ Between two pieces of 1/8 inch glass