

Estane® AG 8451 TPU

Thermoplastic Polyurethane Elastomer (Polyether)

Lubrizol Advanced Materials, Inc.

Message:

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 Information			
Features	Aliphatic		
	Good Processability		
Uses	Adhesives		
	Film		
	Laminates		
	Optical Applications		
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.08	g/cm ³	ASTM D792
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ¹			ASTM D412
100% Strain	3.45	MPa	
200% Strain	8.27	MPa	
300% Strain	13.8	MPa	
Tensile Strength ² (Break)	48.3	MPa	ASTM D412
Tensile Elongation ³ (Break)	480	%	ASTM D412
Tear Strength ⁴	56.0	kN/m	ASTM D624
Compression Set			ASTM D395
22°C, 22 hr	23	%	
70°C, 22 hr	95	%	
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-60.0	°C	DSC
CLTE - Flow	2.0E-4	cm/cm/°C	Internal Method
TMA			Internal Method
Peak	88	°C	
Range	65 to 130	°C	
Optical	Nominal Value	Unit	Test Method
Refractive Index ⁵	1.496		ASTM D542
Transmittance ⁶ (1270 µm)	85.0 to 95.0	%	ASTM D1003

Haze ⁷ (1270 μm)	0.0 to 0.30	%	ASTM D1003
Yellowness Index ⁸ (1.27 mm)	< 1.0	YI	ASTM D1925
NOTE			
1.	510 mm/min		
2.	510 mm/min		
3.	510 mm/min		
4.	Die C		
5.	Between two pieces of 1/8 inch glass		
6.	Between two pieces of 1/8 inch glass		
7.	Between two pieces of 1/8 inch glass		
8.	Between two pieces of 1/8 inch glass		

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