

Lubrizol ESTANE® 58309 Ether Based Thermoplastic Polyurethane

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyurethane, TP , Thermoplastic Polyurethane, Elastomer, Ether Grade

Material Notes:

Features: Good Physical Properties and Reduced Surface Tack. Uses: Flat Die/Cast Film and Blown Film Extrusion, Injection

Molding Available in Americas, Europe, Middle East, Africa, India and Asia. Information provided by Lubrizol.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lubrizol-ESTANE-58309-Ether-Based-Thermoplastic-Polyurethane.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.13 g/cc	1.13 g/cc	ASTM D792
Maximum Moisture Content	0.020	0.020	
Linear Mold Shrinkage	0.0014 cm/cm	0.0014 in/in	Injection

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	82 - 88 @ Time 5.00 sec	82 - 88 @ Time 0.00139 hour	ASTM D2240
Tensile Strength	44.8 MPa	6500 psi	ASTM D412
Elongation at Break	570 %	570 %	ASTM D412
100% Modulus	0.00620 GPa	0.899 ksi	ASTM D412
300% Modulus	0.0110 GPa	1.60 ksi	ASTM D412
Flexural Modulus	0.0290 GPa	4.20 ksi	ASTM D790
Tear Strength	22.8 kN/m	130 pli	Trouser; ASTM D470
Graves Tear Strength	78.9 kN/m	450 pli	Die C; ASTM D624
Taber Abrasion, mg/1000 Cycles	21	21	H18, 1000g; ASTM D3389 B
Tensile Set	19 %	19 %	200% elongation; ASTM D412/D638

Thermal Properties	Metric	English	Comments
Melting Point	135 °C	275 °F	
	145 °C	293 °F	Kofler
Glass Transition Temp, Tg	-46.0 °C	-50.8 °F	

Processing Properties	Metric	English	Comments
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Processing Properties	Metric	English	Comments
Middle Barrel Temperature	204 °C	399 °F	Injection
Front Barrel Temperature	216 °C	421 °F	Injection
Nozzle Temperature	216 °C	421 °F	Injection
Zone 1	176 °C	349 °F	Extrusion
Zone 2	183 °C	361 °F	Extrusion
Zone 3	188 °C	370 °F	Extrusion
Zone 4	194 °C	381 °F	Extrusion
Adapter Temperature	194 °C	381 °F	Extrusion
Die Temperature	194 °C	381 °F	Zone 1, Extrusion
	194 °C	381 °F	Zone 2, Extrusion
Melt Temperature	216 °C	421 °F	Injection
Drying Temperature	104 °C	219 °F	
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	
Dew Point	-40.0 °C	-40.0 °F	
Injection Pressure	3000 - 7000 MPa	435000 - 1.02e+6 psi	Injection
Back Pressure	50.0 MPa	7250 psi	Injection
Screw Speed	20 - 50 rpm	20 - 50 rpm	Injection

Descriptive Properties	Value	Comments
Volume Swell in Water	1.7%	24h/23°C, ASTM D471

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