

Lubrizol Estane® S175A Thermoplastic Polyurethane

Category : Polymer , Thermoplastic , Polyurethane, TP , Thermoplastic Polyurethane (TPUR), Polyester Grade

Material Notes:

Type: Estane® S175A is a Shore 77A, polyester type thermoplastic polyurethane (TPU). FDA approved (21 CFR 177.2600, 177.1680).Uses: Injection Molding, Extrusion.Availability: Americas, Europe, Middle East, Africa, India and AsiaInformation Provided by The Lubrizol Corporation

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lubrizol-Estane-S175A-Thermoplastic-Polyurethane.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D792
Linear Mold Shrinkage	0.025 cm/cm	0.025 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	77	77	ASTM D2240
Tensile Strength, Ultimate	29.4 MPa	4270 psi	ASTM D412
Tensile Strength, Yield	3.43 MPa	498 psi	at 100% elongation; ASTM D412
	6.37 MPa	925 psi	at 300% elongation; ASTM D412
Elongation at Break	800 %	800 %	ASTM D412
Tear Strength	78.5 kN/m	448 pli	Die C; ASTM D624
Abrasion	40	40	mm ³ loss; ISO 4649
Compression Set	15 %	15 %	ASTM D395
	@Temperature 23.0 °C, Time 79200 sec	@Temperature 73.4 °F, Time 22.0 hour	
	30 %	30 %	ASTM D395
	@Temperature 70.0 °C, Time 79200 sec	@Temperature 158 °F, Time 22.0 hour	

Thermal Properties	Metric	English	Comments
Vicat Softening Point	84.0 °C	183 °F	ASTM D1525

Processing Properties	Metric	English	Comments
Feed Temperature	170 - 185 °C	338 - 365 °F	
Nozzle Temperature	180 - 195 °C	356 - 383 °F	

Processing Properties	Metric	English	Comments
Drying Temperature	70.0 - 80.0 °C	158 - 176 °F	
Dry Time	4.00 - 5.00 hour	4.00 - 5.00 hour	
Injection Pressure	8.27 - 13.8 MPa	1200 - 2000 psi	
Hold Pressure	5.52 - 9.65 MPa	800 - 1400 psi	
Back Pressure	0.207 - 0.552 MPa	30.0 - 80.0 psi	
Cycle Time - Injection	30 - 40 sec	30 - 40 sec	
Screw Speed	160 - 200 rpm	160 - 200 rpm	

Descriptive Properties	Value	Comments
Injection time (s)	10-15	
Metering Zone	175-190°C	

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