

ExxonMobil Santoprene® 111-45 Thermoplastic Elastomer

Category : Polymer , Thermoplastic , Elastomer, TPE , Thermoplastic Vulcanizate Elastomer (TPV)

Material Notes:

A soft, black, versatile thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material combines good physical properties and chemical resistance for use in a wide range of injection molding applications. This grade of Santoprene TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding. It is polyolefin based and completely recyclable. Recommended for applications requiring excellent flex fatigue resistance. Excellent ozone resistance. Key Features:

Recommended for applications requiring excellent flex fatigue resistance. UL listed: file #QMFZ2.E80017, Plastics - Component; file #QMFZ8.E80017, Plastics Certified For Canada - Component. Although not NSF certified, this product has a Material Supplier Form on file with NSF to facilitate its evaluation for use in applications requiring NSF certification. Excellent ozone resistance. Used in sealing applications. EU and China RoHS compliant. Applications: Automotive - Air Filter Gaskets, HVAC Flapper Door Seals, Motor Brush Holders, Plugs, Bumpers, Grommets, Clips, Seals and Gaskets. Consumer - Electronics and Floor Care. General Purpose Home & Garden. Industrial - Seals and Gaskets. Printers. Uses: Automotive Applications Gaskets Seals Cell Phones Industrial Applications Printer Parts Seals. Availability: Africa & Middle East, Europe, North America, Asia Pacific, Latin America and South America. Information provided by ExxonMobil Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_ExxonMobil-Santoprene-111-45-Thermoplastic-Elastomer.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.960 g/cc	0.960 g/cc	23°C; ASTM D792

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	49	49	2 mm, 15 sec; ISO 868
	50	50	Air at 302°F, 168 hr; ASTM D573
Tensile Strength at Break	2.697 MPa	391.2 psi	Air at 302°F, 168 hr; ASTM D573
	3.50 MPa	508 psi	Across Flow; ASTM D412
Tensile Stress	1.40 MPa	203 psi	Across Flow; ASTM D412
	@Strain 100 %	@Strain 100 %	
Elongation at Break	340 %	340 %	Across Flow; ASTM D412
	428.4 %	428.4 %	Air at 302°F, 168 hr; ASTM D573
Tear Strength	11.0 kN/m	63.0 pli	73°C, Die C; ASTM D624
Compression Set	11 %	11 %	73°F, 22 hr; ASTM D395
	35 %	35 %	257°F, 70 hr; ASTM D395

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
Flammability, UL94	HB	HB	
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.4	2.4	1.98 mm; ASTM D150
Dielectric Strength	27.2 kV/mm	690 kV/in	2.03 mm; ASTM D149

Processing Properties	Metric	English	Comments
Processing Temperature	175 - 230 °C	347 - 446 °F	
Rear Barrel Temperature	177 - 193 °C	350 - 380 °F	
Middle Barrel Temperature	179 - 199 °C	355 - 390 °F	
Front Barrel Temperature	179 - 204 °C	355 - 400 °F	
Nozzle Temperature	191 - 229 °C	375 - 445 °F	
Melt Temperature	193 - 241 °C	380 - 465 °F	Processing
Mold Temperature	10.0 - 51.7 °C	50.0 - 125 °F	Processing
Drying Temperature	82.2 °C	180 °F	
Dry Time	3 hour	3 hour	
Moisture Content	0.080 %	0.080 %	
Back Pressure	0.345 - 0.689 MPa	50.0 - 100 psi	Processing
Clamp Pressure	41.4 - 68.9 MPa	6000 - 10000 psi	
Vent Depth	0.00254 cm	0.00100 in	
Cushion	0.317 - 0.635 cm	0.125 - 0.250 in	
Screw Speed	100 - 200 rpm	100 - 200 rpm	

Descriptive Properties	Value	Comments
Color	Black	
Form	Pellets	
Injection Rate	Fast	
Maximum Regrind %	20	

Descriptive Properties	Value	Comments
Screw L/D Ratio	16:1 - 20:1	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China