

ExxonMobil Santoprene® 201-87 Thermoplastic Elastomer

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

Material Notes:

A hard, colorable, 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 applications. This grade of Santoprene TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding, extrusion or blow molding. It is polyolefin based and completely recyclable. Key Features: 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. Recommended for applications requiring excellent flex fatigue resistance. Excellent ozone resistance. EU and China RoHS compliant. Applications: Automotive-Boots and Bellows for Steering and Suspension Uses: Appliance Components Automotive Applications Automotive Under the Hood Consumer Applications Diaphragms Electrical Parts Living Hinges Tubing Availability: Africa & Middle East, Europe, North America, Asia Pacific, Latin America and South America Information provided by Advanced Elastomer Systems

Order this product through the following link:

http://www.lookpolymers.com/polymer_ExxonMobil-Santoprene-201-87-Thermoplastic-Elastomer.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.960 g/cc	0.960 g/cc	23°C; ASTM D792
Maximum Moisture Content	0.080	0.080	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	93	93	2 mm, 15 sec; ISO 868
	95	95	in Air 150°C, 168 hr; ASTM D573
Tensile Strength at Break	14.9 MPa	2160 psi	in Air 150°C, 168 hr; ASTM D573
	17.6 MPa	2550 psi	Across Flow; ASTM D412
Tensile Stress	7.10 MPa	1030 psi	Across Flow; ASTM D412
	@Strain 100 %	@Strain 100 %	
Elongation at Break	487.2 %	487.2 %	in Air 150°C, 168 hr; ASTM D573
	580 %	580 %	Across Flow; ASTM D412
Tear Strength	54.0 kN/m	308 pli	73°F, Die C; ASTM D624
Compression Set	36 %	36 %	158°F, 22 hr; ASTM D395
	44 %	44 %	257°F, 70 hr; ASTM D395

Thermal Properties	Metric	English	Comments
Brittleness Temperature	-53.9 °C	-65.0 °F	ASTM D746
UL RTI, Electrical	100 °C	212 °F	UL 746
UL RTI, Mechanical with Impact	90.0 °C	194 °F	UL 746
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	90.0 °C	194 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	95.0 °C	203 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	HB	HB	
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	HB	HB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.4	2.4	ASTM D150
	@Thickness 2.03 mm	@Thickness 0.0799 in	
Dielectric Strength	32.3 kV/mm	820 kV/in	ASTM D149
	@Thickness 2.03 mm	@Thickness 0.0799 in	

Processing Properties	Metric	English	Comments
Processing Temperature	175 - 230 °C	347 - 446 °F	
Rear Barrel Temperature	182 °C	360 °F	
Middle Barrel Temperature	188 °C	370 °F	
Front Barrel Temperature	193 °C	379 °F	
Nozzle Temperature	199 - 235 °C	390 - 455 °F	
Die Temperature	210 °C	410 °F	
Melt Temperature	204 °C	399 °F	Extrusion
	204 - 232 °C	399 - 450 °F	Processing

Processing Properties	Metric	English	Comments
Mold Temperature	10.0 - 51.7 °C	50.0 - 125 °F	
Drying Temperature	82.2 °C	180 °F	
Dry Time	3.00 hour	3.00 hour	
Back Pressure	0.345 - 0.689 MPa	50.0 - 99.9 psi	Injection
	5.00 - 20.0 MPa	725 - 2900 psi	Extrusion
Clamp Pressure	41.0 - 69.0 MPa	5950 - 10000 psi	
Vent Depth	0.00254 cm	0.00100 in	
Cushion	0.125 - 0.250 cm	0.0492 - 0.0984 in	
Screw Speed	100 - 200 rpm	100 - 200 rpm	

Descriptive Properties	Value	Comments
Color	Natural Color	
Form	Pellets	
Injection Rate	Fast	
Screw Compression Ratio	2:1 - 2.5:1	
Screw L/D Ratio	16:1 - 20:1	
Suggested Max Re grind	20%	

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