

ExxonMobil Santoprene® 211-45 Thermoplastic Elastomer

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

Material Notes:

A soft, 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 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. Key Features: Recommended for applications requiring excellent flex fatigue resistance. Excellent ozone 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. Used in sealing applications. EU and China RoHS compliant. Applications: Automotive – Grips, Interior Mat, Seals and Gaskets Soft Touch Grips Tubing Uses: Automotive Applications Gaskets 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-211-45-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; ISO 868
	@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
Compression Set	11 %	11 %	73°F, 22 hr; ASTM D395
	35 %	35 %	257°F, 70 hr; ASTM D395

Thermal Properties	Metric	English	Comments
Brittleness Temperature	-62.2 °C	-80.0 °F	ASTM D746
UL RTI, Electrical	100 °C	212 °F	UL 746

Thermal Properties with Impact	90.0 °C Metric	194 °F English	Comments
	@Thickness 1.00 mm	@Thickness 0.0394 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 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.4	2.4	2.03 mm; ASTM D150
Dielectric Strength	30.3 kV/mm	770 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	Natural Color	
Form	Pellets	
Injection Rate	Fast	
Maximum Regrind %	20	
Screw Compression Ratio	2:1 - 2.5:1	
Screw L/D Ratio	16:1 - 20:1	

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