

ExxonMobil Santoprene® 171-64 Thermoplastic Elastomer

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

Material Notes:

A soft, black, specialty thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. It complies with FDA regulations for rubber articles intended for repeated use, as well as those in contact with non-fatty, non-oily foods as closures and sealing gaskets. This grade of Santoprene TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding, extrusion or blow molding. Key Features: This product, in principle, can be used in food contact applications in the USA (FDA). Migration or use limitations may apply. Complies with NSF Standard 51: Food Equipment Materials - Plastics, materials and components used in food equipment. 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. EU and China RoHS compliant. Applications: Consumer: Packaging, Small Appliance, Soft Touch Grips Industrial – Seals and Gaskets Tubing Uses: Filter Flexible Grips Food Containers Kitchenware Non-specific Food Applications Seals White Goods & Small Appliances 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-171-64-Thermoplastic-Elastomer.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.970 g/cc	0.970 g/cc	23°C; ASTM D792

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	69	69	2 mm, 15 sec; ISO 868
	71	71	Air at 302°F, 168 hr; ASTM D573
Tensile Strength at Break	6.189 MPa	897.6 psi	Air at 302°F, 168 hr; ASTM D573
	7.03 MPa	1020 psi	Across Flow; ASTM D412
Tensile Stress	2.60 MPa	377 psi	Across Flow; ASTM D412
	@Strain 100 %	@Strain 100 %	
Elongation at Break	450 %	450 %	Across Flow; ASTM D412
	477 %	477 %	Air at 302°F, 168 hr; ASTM D573
Tear Strength	23.0 kN/m	131 pli	73°F, Die C, Across Flow; ASTM D624
Compression Set	18 %	18 %	158°F, 22 hr; ASTM D395
	44 %	44 %	257°F, 70 hr; ASTM D395

Thermal Properties	Metric	English	Comments
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Thermal Properties	-60.0 °C Metric	-76.0 °F English	ASTM D746 Comments
UL RTI, Electrical	90.0 °C	194 °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	

Processing Properties	Metric	English	Comments
Processing Temperature	175 - 230 °C	347 - 446 °F	
Rear Barrel Temperature	177 °C	350 °F	
Middle Barrel Temperature	182 °C	360 °F	
Front Barrel Temperature	182 °C	360 °F	
Nozzle Temperature	188 - 221 °C	370 - 430 °F	
Die Temperature	199 °C	390 °F	Extrusion
Melt Temperature	196 °C	385 °F	Extrusion
	193 - 232 °C	380 - 450 °F	
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
	5.00 - 20.0 MPa	725 - 2900 psi	

Processing Properties	Metric	English	Comments
Clamp Pressure	41.3 - 68.9 MPa	5000 - 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	
Screw Compression Ratio	2:1 - 2.5:1	
Screw L/D Ratio	16:1 - 20:1	

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