

ExxonMobil Santoprene® 271-55 Thermoplastic Elastomer

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

Material Notes:

A soft, colorable, 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 or extrusion. It is polyolefin based and completely recyclable. 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. Recommended for applications requiring excellent flex fatigue resistance. EU and China RoHS compliant. Applications: Consumer – FDA Seals and Closures, Packaging, Small Appliance and Soft Touch Grips Seals and Gaskets Uses: Filters Flexible Grips Food Containers Gaskets Kitchenware Living Hinges Non-specific Food Applications Seals Tubing White Goods & Small Appliances 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-271-55-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	59	59	2 mm, 15 sec; ISO 868
	62	62	Air at 302°F, 168 hr; ASTM D573
Tensile Strength at Break	4.835 MPa	701.2 psi	Air at 302°F, 168 hr; ASTM D573
	5.20 MPa	754 psi	Across Flow; ASTM D412
Tensile Stress	2.10 MPa	305 psi	Across Flow; ASTM D412
	@Strain 100 %	@Strain 100 %	
Elongation at Break	390 %	390 %	Across Flow; ASTM D412
	440.7 %	440.7 %	Air at 302°F, 168 hr; ASTM D573
Tear Strength	16.0 kN/m	91.4 pli	73°F, Die C; ASTM D624
Compression Set	22 %	22 %	158°F, 22 hr; ASTM D395
	38 %	38 %	257°F, 70 hr; ASTM D395

Thermal Properties	Metric	English	Comments
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Brittleness Temperature	-60.0 °C	-76.0 °F	ASTM D746
Thermal Properties	Metric	English	Comments

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	Extrusion
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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