ExxonMobil Santoprene® 101-80 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 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-Air Induction System Ducts, Boots and Bellows for Steering and Suspension, Plugs, Bumpers, Grommets, Clips, Seals, Gaskets and Weather SealsConsumer-Electronic and Floor CareIndustrial – Seals and GasketsTubingUses:Appliance ComponentsConsumer ApplicationsGasketsAutomotive ApplicationsDiaphramsSealsAutomotive Under the HoodElectrical PartsTubingAvailability: Africa & Middle East, Europe, North America, Asia Pacific, Latin America and South AmericaInformation provided by ExxonMobil Chemical

Order this product through the following link:
http://www.lookpolymers.com/polymer_ExxonMobil-Santoprene-101-80-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	86	86	2 mm, 15 sec; ISO 868
	91	91	Air at 302°F, 168 hr; ASTM D573
Tensile Strength at Break	10.5 MPa	1530 psi	Air at 302°F, 168 hr; ASTM D573
	11.1 MPa	1610 psi	Across Flow; ASTM D412
Tensile Stress	4.70 MPa @Strain 100 %	682 psi @Strain 100 %	Across Flow; ASTM D412
Elongation at Break	475 %	475 %	Air at 302°F, 168 hr; ASTM D573
	540 %	540 %	Across Flow; ASTM D412
Tear Strength	35.1 kN/m	200 pli	73°C, Die C; ASTM D624
Compression Set	41 %	41 %	158°F, 22 hr; ASTM D395
	47 %	47 %	257°F, 70 hr; ASTM D395

Thermal Properties	Metric	English	Comments

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	135 °C	275 °F	
Brittleness Temperature	-60.0 °C	-76.0 °F	ASTM D746
UL RTI, Electrical	90.0 °C	194 °F	UL 746
UL RTI, Mechanical with Impact	90.0 °C @Thickness 1.00 mm	194 °F @Thickness 0.0394 in	UL 746
	90.0 °C @Thickness 1.50 mm	194 °F @Thickness 0.0591 in	UL 746
	90.0 °C @Thickness 3.00 mm	194 °F @Thickness 0.118 in	UL 746
Flammability, UL94	HB @Thickness 1.00 mm	HB @Thickness 0.0394 in	
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.6	2.6	1.98 mm; ASTM D150
Dielectric Strength	29.5 kV/mm	750 kV/in	2.03 mm; ASTM D149

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	188 °C	370 °F	
Nozzle Temperature	193 - 232 °C	380 - 450 °F	
Die Temperature	204 °C	400 °F	Extrusion
Melt Temperature	202 °C	395 °F	Extrusion
	199 - 232 °C	390 - 450 °F	Processing
Mold Temperature	10.0 - 51.7 °C	50.0 - 125 °F	Processing

Processing Properties	Metric	English	Comments
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	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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