

ExxonMobil Santoprene® 121-73W175 Thermoplastic Elastomer

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

Material Notes:

A soft, black, UV resistant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material combines good physical properties and chemical resistance, and is designed for thin wall or complex profile extrusion applications. This grade of Santoprene TPV is shear-dependent and can be processed on conventional thermoplastics equipment for extrusion. It is polyolefin based and completely recyclable. Key Features: Recommended for applications requiring excellent flex fatigue resistance. Excellent ozone resistance. Designed for improved UV resistance. Compliant to EU Directive 2003/11/EC regarding marketing and use of certain dangerous substances and preparations, specifically pentabromodiphenyl ether or octabromodiphenyl ether. Designed for extruding thin sections with excellent definition (down to 0.33 mm [0.013"] radius). Long runs with minimal build-up of material on screen packs or narrow die sections. EU and China RoHS compliant. Applications: Automotive- Seals, Gaskets and Weather Seals Uses: Automotive Applications Automotive Exterior Trim Availability: Africa & Middle East, Europe, North America, Asia Pacific, Latin America and South America Information provided by ExxonMobil Chemical

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	78	78	Air at 302°F, 168 hr; ASTM D573
	83	83	2 mm, 15 sec; ISO 868
Tensile Strength at Break	8.031 MPa 8.83	1165 psi	Air at 302°F, 168 hr; ASTM D573
	MPa	1280 psi	Across Flow; ASTM D412
Tensile Stress	3.50 MPa	508 psi	Across Flow; ASTM D412
	@Strain 100 %	@Strain 100 %	
Elongation at Break	450.8 %	450.8 %	Air at 302°F, 168 hr; ASTM D573 Across
	460 %	460 %	Flow; ASTM D412
Tear Strength	24.0 kN/m	137 pli	73°F, Die C, Across Flow; ASTM D624
Compression Set	33 %	33 %	158°F, 22 hr; ASTM D395
	42 %	42 %	257°F, 70 hr; ASTM D395

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	135 °C	275 °F	

Thermal Properties	Metric °C	English °F	Comments
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	2.7	2.7	1.98 mm; ASTM D150
Dielectric Strength	27.2 kV/mm	690 kV/in	2.03 mm; ASTM D149

Processing Properties	Metric	English	Comments
Processing Temperature	175 - 230 °C	347 - 446 °F	
Die Temperature	204 °C	400 °F	Extrusion
Melt Temperature	177 - 204 °C	350 - 400 °F	Extrusion
Drying Temperature	82.2 °C	180 °F	
Dry Time	3 hour	3 hour	
Back Pressure	5.00 - 20.0 MPa	725 - 2900 psi	Extrusion

Descriptive Properties	Value	Comments
Change in Mass in IRM 903 Oil at 257°F for 70 hr	45	
Color	Black	
Form	Pellets	