

Advanced Elastomer Systems Santoprene® 251-80 Thermoplastic Rubber (discontinued **)

Category : Polymer , Thermoplastic , Elastomer, TPE , Thermoplastic Elastomer, Melt-Processible Rubber

Material Notes:

A colorable thermoplastic flame retardant elastomer with good fluid resistance, formulated to replace thermoset elastomers such as EPDM, polychloroprene, and chlorosulfonated polyethylene. It can be processed using injection molding, extrusion, blow molding or other melt processing techniques. Key Features: Dielectric constant 2.44, dielectric strength at 3.17 mm (125 mil), 19.6 kV/mm (500 v/mil); UL Yellow Card listed (1.4 mm [55 mil]); UL 94 flame rating 1.4 mm (55 mil): V-O; Limiting oxygen index, 25%; Excellent flex fatigue resistance; Excellent ozone resistance. Additional processing comments: This thermoplastic rubber is a shear-dependent material that can be processed on conventional thermoplastic equipment for injection molding, extrusion, or blow molding. For extrusion, a general purpose screw with a compression ratio of 2.5 to 3.0 is recommended. Material can be recycled. SANTOPRENE rubber is incompatible with acetal and PVC. Values below are for injection molded plaques, side gated, 82.6 mm x 117.5 mm x 3.0 mm. Tensile properties measured across flow. Data provided by Advanced Elastomer Systems. Advanced Elastomer Systems is now a part of ExxonMobil. This grade was removed from the Advanced Elastomers Systems standard product line before the ExxonMobil acquisition.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Advanced-Elastomer-Systems-Santoprene-251-80-Thermoplastic-Rubber-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.24 g/cc	0.0448 lb/in ³	TPE-0105 (ASTM D792)

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	80	80	5 Second; TPE-0169 (ASTM D 2240)
Tensile Strength, Ultimate	7.20 MPa	1040 psi	TPE-0153 (ASTM D 412)
Elongation at Break	410 %	410 %	TPE-0153 (ASTM D 412)
100% Modulus	0.00320 GPa	0.464 ksi	TPE-0153 (ASTM D 412)
Graves Tear Strength	9.30 kN/m	53.1 pli	TPE-0056 (ASTM D 624)
	@Temperature 100 °C	@Temperature 212 °F	
	23.6 kN/m	135 pli	TPE-0056 (ASTM D 624)
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compression Set	27 %	27 %	23°C, 168 hrs.; TPE-0016 (ASTM D 412)
	46 %	46 %	168 hrs.; TPE-0016 (ASTM D 412)
	@Temperature 100 °C	@Temperature 212 °F	
Tensile Set	10 %	10 %	23°C, 168 hrs.; TPE-0053 (ASTM D 412)

Thermal Properties	Metric	English	Comments
Brittleness Temperature	<= -56.0 °C	<= -68.8 °F	TPE-0089 (ASTM D 746)
Flammability, UL94	V-0 @Thickness 1.40 mm	V-0 @Thickness 0.0551 in	UL 94 V-0

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.44	2.44	Frequency not specified
Dielectric Strength	19.6 kV/mm @Thickness 3.17 mm	498 kV/in @Thickness 0.125 in	

Processing Properties	Metric	English	Comments
Processing Temperature	177 - 232 °C	351 - 450 °F	
Drying Temperature	82.0 °C	180 °F	Desiccant drying for 3 hours recommended
Dry Time	3 hour	3 hour	

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