

SANTOPRENE[®] 203-50

SANTOPRENE®

A hard, colorable, 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, blow molding, thermoforming or vacuum forming. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

UL listed: file #QMFZ2.E80017, Plastics - Component; file #QMFZ8.E80017, Plastics Certified For Canada - Component.
Excellent ozone resistance.

Product information Resin Identification Part Marking Code	TPV >TPV<	ISO 1043 ISO 11469
Typical mechanical properties Brittleness Temperature Shore D hardness, 15s Compression set, 70°C, 24h Compression set, 125°C, 70h Tear strength, normal	-28 °C 51 59 % 74 % 96 kN/m	ASTM D 746 ISO 48-4 / ISO 868 ISO 815 ISO 815 ISO 34-1
Thermal properties RTI, electrical, 1.5mm RTI, electrical, 3.0mm RTI, strength, 1.5mm RTI, strength, 3.0mm	85 °C 85 °C 85 °C 85 °C	UL 746B UL 746B UL 746B UL 746B
Specific Application Suitability Detergent resistance Detergent resistance	f3 f4	UL 749 UL 2157
Flammability Burning Behav. at 1.5mm nom. thickn. Thickness tested UL recognition Burning Behav. at thickness h Thickness tested UL recognition Hot Wire Ignition, 1.5mm Hot Wire Ignition, 3mm	HB class 1.5 mm yes HB class 1 mm yes PLC 3 s PLC 1 s	IEC 60695-11-10 IEC 60695-11-10 UL 94 IEC 60695-11-10 IEC 60695-11-10 UL 94 UL 746A UL 746A
Electrical properties Relative permittivity, 60Hz Arc Resistance Performance Level Category Electric Strength, Short Time, 2mm High Amperage Arc Ignition Category, 1.5 mm	2.3 PLC 5 class 35 kV/mm PLC 0 class	IEC 62631-2-1 UL 746B ASTM D 149 UL 746A

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ISO 1183

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Physical/Other properties

Density	950 kg/m³
Injection	
Drying Temperature	82 °C
Drying Time, Dehumidified Dryer	3 h
Processing Moisture Content	≤0.08 %
Max. regrind level	20 %
Min. mould temperature	10 °C
Max. mould temperature	52 °C
Back pressure	0.517 MPa
Extrusion	
Drying Temperature	82 °C
Drying Time, Dehumidified Dryer	3 h
Melt Temperature Range	210 °C

Additional information

Processing Notes

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Desiccant drying for 3 hours at $80 \degree C$ ($180 \degree F$) is recommended. Santoprene® TPV has a wide temperature processing window from 175 to $230\degree C$ (350 to $450\degree F$) and is incompatible with acetal and PVC.

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