

SANTOPRENE® 251-92W232

A hard, colorable, flame retardant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material has good fluid resistance and contains non-ether brominated flame retardants. It does not contain metal deactivators. 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; file #QMTT2.E86313, Polymeric Materials for Use in Wire, Cable and Flexible Lighting Products Component.
- · Recommended for applications requiring a flame retardant material UL 94 Vertical Flame rated.
- · Recommended for applications requiring excellent flex fatigue resistance.
- · Recommended for applications requiring excellent ozone resistance.

Typical mechanical properties

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Stress at 100% elongation	7.2	MPa	ISO 527-1/-2 or ISO 37
Stress at break	13.9	MPa	ISO 527-1/-2 or ISO 37
Elongation at break	630		ISO 527-1/-2 or ISO 37
Shear Modulus		MPa	ISO 6721
Shore A hardness, 15s	98		ISO 48-4 / ISO 868
Thermal properties			
RTI, electrical, 1.5mm	90	°C	UL 746B
RTI, strength, 1.5mm	85	°C	UL 746B
RTI, strength, 3mm	90	°C	UL 746B
Flammability			
Burning Behav. at thickness h	V-0	class	UL 94
Thickness tested	3	mm	UL 94
UL recognition	yes		UL 94
Oxygen index	26	, -	ISO 4589-1/-2
Hot Wire Ignition, 1.5mm	PLC 3	S	UL 746A
Electrical properties			
Comparative tracking index	PLC 0	PLC	UL 746A
Arc Resistance Performance Level Category	PLC 6	class	UL 746B
Electric Strength, Short Time, 2mm		kV/mm	ASTM D 149
High Amperage Arc Ignition Category, 1.5 mm	PLC 0		UL 746A
High Voltage Arc Tracking Rate	PLC 2	mm/min	UL 746A

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Other properties

 1240 kg/m^3 ISO 1183 Density

Injection

Drying Temperature 82 °C Drying Time, Dehumidified Dryer 3 h **Processing Moisture Content** 0.08 % Max. regrind level 20 % Melt Temperature Optimum 215 °C Max. mould temperature

Internal

10 - 51.7 °C Vent depth 25 µm Back pressure 0.345 - 0.689 MPa Injection speed fast

Extrusion

Drving Temperature 82 °C Drying Time, Dehumidified Dryer 3 h

Processing Texts

Processing Notes

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

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