SANTOPRENE® 251-92W232

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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.

Product information

Resin Identification	TPV	ISO 1043
Part Marking Code	>TPV<	ISO 11469

Typical mechanical properties

Tensile stress at 100% elongation, perpendicular	7.2	MPa	ISO 37
Stress at break, perpendicular	13.9	MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	630	%	ISO 527-1/-2 or ISO 37
Shore A hardness, 15s	98		ISO 48-4 / ISO 868

Thermal properties

RTI, electrical, 1.5mm	90	°C	UL 746B
RTI, electrical, 3.0mm	90	°C	UL 746B
RTI, strength, 1.5mm	85	°C	UL 746B
RTI, strength, 3.0mm	90	°C	UL 746B

Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
UL recognition	yes		UL 94
Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	3	mm	IEC 60695-11-10
UL recognition	yes		UL 94
Oxygen index	26	%	ISO 4589-1/-2
Hot Wire Ignition, 1.5mm	PLC 3	s	UL 746A
Hot Wire Ignition, 3mm	PLC 3	s	UL 746A

Electrical properties

Arc Resistance Performance Level Category	PLC 6	class	UL 746B
High Amperage Arc Ignition Category, 1.5 mm	PLC 0	class	UL 746A

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Physical/Other properties

Density	1290	kg/m³	ISO 1183

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
Min. melt temperature	165	°C
Max. melt temperature	265	°C
Mold Temperature Optimum	50	°C
Min. mould temperature	20	°C
Max. mould temperature	80	°C
Back pressure	0.517	MPa
Ejection temperature	99	°C

Extrusion

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

Additional information

Processing Notes

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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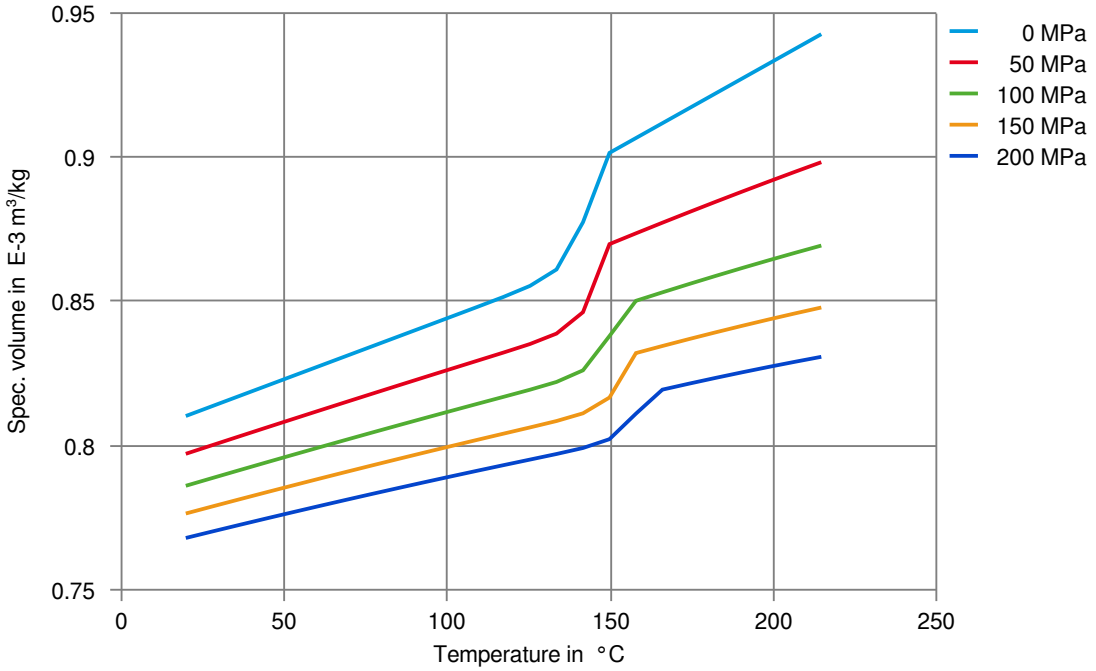
Specific volume-temperature (pvT)



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