

# SANTOPRENE® 251-70W232

## **SANTOPRENE®**

A soft, 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 or blow molding. 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.
- · 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 Part Marking Code	TPV >TPV<		ISO 1043 ISO 11469
Typical mechanical properties			
Tensile stress at 100% elongation, perpendicular Stress at break, perpendicular Elongation at break, perpendicular Shore A hardness, 15s		MPa MPa %	ISO 527-1/-2 or ISO 37 ISO 527-1/-2 or ISO 37 ISO 527-1/-2 or ISO 37 ISO 48-4 / ISO 868
Thermal properties			
RTI, electrical, 1.5mm RTI, electrical, 3.0mm RTI, strength, 1.5mm RTI, strength, 3.0mm	90 85	°C °C °C	UL 746B UL 746B UL 746B UL 746B
Flammability			
Burning Behav. at 1.5mm nom. thickn. Thickness tested UL recognition Burning Behav. at thickness h Thickness tested UL recognition Oxygen index Hot Wire Ignition, 1.5mm	1.5 yes V-2		IEC 60695-11-10 IEC 60695-11-10 UL 94 IEC 60695-11-10 IEC 60695-11-10 UL 94 ISO 4589-1/-2 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	2.5 PLC 6 31 PLC 0	kV/mm	IEC 62631-2-1 UL 746B ASTM D 149 UL 746A

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#### Physical/Other properties

Density	1270 kg/m <sup>3</sup>	ISO 1183
Bonony	1=10 Ng/	100 1100

## 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	98	°C

#### Extrusion

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

#### Additional information

**Processing Notes** 

#### **Processing Notes**

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

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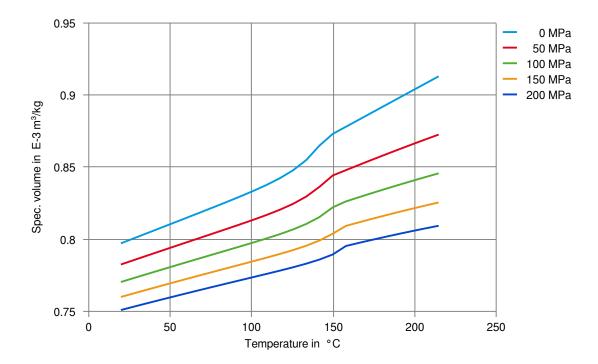
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Specific volume-temperature (pvT)



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