

# SANTOPRENE® 101-80

## **SANTOPRENE®**

A soft, black, 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; file #QMTT2.E86313, Polymeric Materials for Use in Wire, Cable and Flexible Lighting Products -

- Recommended for applications requiring excellent flex fatigue resistance
- · 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	4.61 MPa	ISO 37
Stress at break, perpendicular	10.4 MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	526 %	ISO 527-1/-2 or ISO 37
Brittleness Temperature Shore A hardness, 15s	-60 °C 87	ASTM D 746
Compression set, 70°C, 24h	36 %	ISO 48-4 / ISO 868 ISO 815
Compression set, 125°C, 70h	52 %	ISO 815
Tear strength, normal	33 kN/m	ISO 34-1
Thermal properties		
RTI, electrical, 1.5mm	90 °C	UL 746B
RTI, electrical, 3.0mm	90 °C	UL 746B
RTI, strength, 1.5mm	90 °C	UL 746B
RTI, strength, 3.0mm	95 °C	UL 746B
Specific Application Suitability		
Continuous Upper Temperature Resistance, 1000h	135 °C	SAE J2236
Detergent resistance	f3	UL 749
Detergent resistance	f4	UL 2157
Outdoor suitability	f1	UL 746C
Flammability		
Burning Behav. at 1.5mm nom. thickn.	HB class	IEC 60695-11-10
Thickness tested	1.5 mm	IEC 60695-11-10
UL recognition	yes	UL 94
Burning Behav. at thickness h	HB class	IEC 60695-11-10
Thickness tested	1 mm	IEC 60695-11-10
UL recognition	yes	UL 94
Burning rate, Thickness 2 mm	19.6 mm/mii	n ISO 3795 (FMVSS 302)

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Hot Wire Ignition, 1.5mm	PLC 3 s	UL 746A
Hot Wire Ignition, 3mm	PLC 2 s	UL 746A

## **Electrical properties**

Relative permittivity, 60Hz	2.6	IEC 62631-2-1
Arc Resistance Performance Level Category	PLC 6 class	UL 746B
Electric Strength, Short Time, 2mm	30 kV/mm	ASTM D 149
High Amperage Arc Ignition Category, 1.5 mm	PLC 0 class	UL 746A

## Physical/Other properties

Density	960 kg/m <sup>3</sup>	ISO 1183

# Injection

Max. regrind level	20	%
Back pressure	0.517	MPa
Ejection temperature	93	°C

#### Extrusion

Drying Temperature	82 °C
Drying Time, Dehumidified Dryer	3 h
Melt Temperature Range	202 °C

#### Additional information

Processing Notes Processing Notes

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

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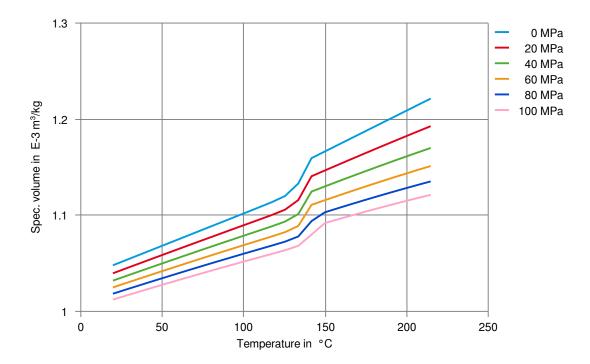
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Specific volume-temperature (pvT)



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