

# SANTOPRENE<sup>®</sup> 121-80

## **SANTOPRENE®**

A soft, black, UV resistant 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
- · Recommended for applications requiring excellent flex fatigue resistance
- Excellent ozone resistance
- Designed for improved UV 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 Brittleness Temperature Shore A hardness, 15s Compression set, 23°C, 24h Compression set, 125°C, 70h	4.6 11 560 -59 85 25 52	% °C %	ISO 37 ISO 527-1/-2 or ISO 37 ISO 527-1/-2 or ISO 37 ASTM D 746 ISO 48-4 / ISO 868 ISO 815 ISO 815
Thermal properties			
RTI, electrical, 1.5mm RTI, electrical, 3.0mm RTI, strength, 1.5mm RTI, strength, 3.0mm	90 90	0° 0° 0°	UL 746B UL 746B UL 746B UL 746B
Specific Application Suitability			
Continuous Upper Temperature Resistance, 1000h Detergent resistance Detergent resistance Outdoor suitability	135 f3 f4 f1	°C	SAE J2236 UL 749 UL 2157 UL 746C
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	1.5 yes	class mm class mm s	IEC 60695-11-10 IEC 60695-11-10 UL 94 IEC 60695-11-10 IEC 60695-11-10 UL 94 UL 746A

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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	28 kV/mm PLC 0 class	ASTM D 149 UL 746A
High Amperage Arc Ignition Category, 1.5 mm	FLC 0 Class	UL 740A
Physical/Other properties		
Density	970 kg/m <sup>3</sup>	ISO 1183
Injection		
Drying Temperature	82 °C	
Drying Time, Dehumidified Dryer	3 h	
Processing Moisture Content	≤0.08 %	
Max. regrind level	20 % 10 °C	
Min. mould temperature Max. mould temperature	52 °C	
Back pressure	0.517 MPa	
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  $80 \degree C$  ( $180 \degree F$ ) 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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