

# SANTOPRENE® 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	TPV		ISO 1043
Part Marking Code	>TPV<		ISO 11469
Typical machanical properties			
Typical mechanical properties			
Tensile stress at 100% elongation, perpendicular		MPa	ISO 527-1/-2 or ISO 37
Stress at break, perpendicular		MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	560		ISO 527-1/-2 or ISO 37
Brittleness Temperature	-59	°C	ASTM D 746
Shore A hardness, 15s	85	2/	ISO 48-4 / ISO 868
Compression set, 23°C, 24h	25		ISO 815
Compression set, 125°C, 70h	52	%	ISO 815
Thermal properties			
RTI, electrical, 1.5mm	90	°C	UL 746B
RTI, electrical, 3.0mm		°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.	НВ	class	IEC 60695-11-10
Thickness tested		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
Hot Wire Ignition, 1.5mm	PLC 3	S	UL 746A

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Hot Wire Ignition, 3mm PLC 2 s 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

2.6

PLC 6 class
UL 746B

8 kV/mm
ASTM D 149

PLC 0 class
UL 746A

# Physical/Other properties

Density 970 kg/m<sup>3</sup> ISO 1183

## Injection

#### 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 °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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