

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 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 ³	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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