

SANTOPRENE® 121-80

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

Typical mechanical properties

Stress at 100% elongation	4.6 MPa	ISO 527-1/-2 or ISO 37
Stress at break	11 MPa	ISO 527-1/-2 or ISO 37
Elongation at break	560 %	ISO 527-1/-2 or ISO 37
Brittleness Temperature	-59 °C	ASTM D 746
Low temperature brittleness	-59 °C	ISO 812
Shore A hardness, 15s	85	ISO 48-4 / ISO 868
Shore A hardness change, after ageing	7	ISO 48-4 / ISO 868
Compression set at 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, strength, 1.5mm	90 °C	UL 746B
RTI, strength, 3mm	95 °C	UL 746B

Specific Application Suitability

Detergent resistance	f3	UL 749
Detergent resistance	f4	UL 2157
Outdoor suitability	f1	UL 746C

Flammability

Burning Behav. at thickness h	HB class	UL 94
Thickness tested	3 mm	UL 94
UL recognition	yes	UL 94
Hot Wire Ignition, 1mm	PLC 4 s	UL 746A
Hot Wire Ignition, 1.5mm	PLC 3 s	UL 746A
Hot Wire Ignition, 3mm	PLC 2 s	UL 746A

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Electrical properties

Comparative tracking index	PLC 0 PLC	UL 746A
Arc Resistance Performance Level Category	PLC 6 class	UL 746B
Electric Strength, Short Time, 2mm	28 kV/mm	ASTM D 149
High Amperage Arc Ignition Category, 1.5 mm	PLC 0 class	UL 746A
High Voltage Arc Tracking Rate	PLC 1 mm/min	UL 746A

Other properties

Density	970 kg/m³	ISO 1183
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Injection

Drying Temperature	82 °C
Drying Time, Dehumidified Dryer	3 h
Processing Moisture Content	0.08 %
Max. regrind level	20 %
Max. mould temperature	10 - 52 °C
Vent depth	25 µm
Back pressure	0.345 - 0.689 MPa
Injection speed	fast

Extrusion

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

Processing Texts

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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Other Approvals

Other Approvals

OEM	Specification
Stellantis - Chrysler	MS-AR-100 DGN
Ford	WSS-M2D281-B1
GM	GMW15812, Type 7E
Mercedes-Benz Group (Daimler)	DBL 5562
Hyundai	MS220-05, Type M
VW Group	TL 526 41D

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VW Group	VW50123
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