SANTOPRENE® 101-87

A hard, 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 - Component
- Recommended for applications requiring excellent flex fatigue resistance
- Excellent ozone resistance

Typical mechanical properties

Stress at 100% elongation	6.93	MPa	ISO 527-1/-2 or ISO 37
Stress at break	15.6	MPa	ISO 527-1/-2 or ISO 37
Elongation at break	597	%	ISO 527-1/-2 or ISO 37
Shear Modulus	36	MPa	ISO 6721
Brittleness Temperature	-54	°C	ASTM D 746
Low temperature brittleness	-54	°C	ISO 812
Shore A hardness, 15s	94		ISO 48-4 / ISO 868
Shore A hardness change, after ageing	0.9		ISO 48-4 / ISO 868
Compression set at 70°C, 24h	37	%	ISO 815
Compression Set, 125°C, 70h	52	%	ISO 815
Tear strength, normal	51	kN/m	ISO 34-1

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 5	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
High Voltage Arc Tracking Rate	PLC 1	mm/min	UL 746A

Other properties

Density	950	kg/m³	ISO 1183

Injection

Drying Temperature	82	°C	
Drying Time, Dehumidified Dryer	3	h	
Processing Moisture Content	0.08	%	
Max. regrind level	20	%	
Melt Temperature Optimum	215	°C	Internal
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	204	°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.

Other Approvals

Other Approvals

OEM	Specification	Additional Information
Stellantis - Chrysler	MS-AR-100 EGN	
Ford	WSD-M2D382-A1	
GM	GMW15813, Type 8	
Stellantis - FCA Group	55248/02	EMP-90
Mercedes-Benz Group (Daimler)	DBL 5562	

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Mercedes-Benz Group (Daimler)	DBL 5562	LD3002 BLK, Mercedes-Polytec/Biesterfeld-Plugs engine encapsulation-STP101-87
Renault	FRM 18-27-135 /---	
Renault	UB02b	PMR2021
Renault	UM09g	PMR2021
Renault	UB16b	PMR2021
BMW	GS 93042	
Hyundai	MS220-05, Type E	
Stellantis - PSA Group	PMP 01994_10_00139	
VW Group	VW50123	

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