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SANTOPRENE® 101-55

A soft, 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 or extrusion. 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

Typical mechanical properties

Stress at 100% elongation	1.88	MPa	ISO 527-1/-2 or ISO 37
Stress at break	5.01	MPa	ISO 527-1/-2 or ISO 37
Elongation at break	420	%	ISO 527-1/-2 or ISO 37
Shear Modulus	4.8	MPa	ISO 6721
Brittleness temperature	-60	°C	ISO 974
Brittleness Temperature	-60	°C	ASTM D 746
Shore A hardness, 15s	60		ISO 48-4 / ISO 868
Shore A hardness change, after ageing	-1		ISO 48-4 / ISO 868
Compression set at 70°C, 24h	23	%	ISO 815
Compression Set, 125°C, 70h	35	%	ISO 815
Tear strength, normal	17.9	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

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 3	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	27	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	960	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	196	°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 AGN	
Ford	WSD-M2D378-A1	
GM	GMW15813, Type 4	
Stellantis - FCA Group	55248/02	EMP-60
Mercedes-Benz Group (Daimler)	DBL 5562	

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Renault	FRM 18-27-029 /--A	
Hyundai	MS220-05, Type A	
VW Group	VW50123	

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