

SANTOPRENE® 101-55

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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

Product information

Resin Identification	TPV	ISO 1043
Part Marking Code	>TPV<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	3.7 ^[1] %	ISO 294-4, 2577
Moulding shrinkage, normal	0.9 ^[1] %	ISO 294-4, 2577

[1]: 2.0 mm thickness, min. 24 hours after molding, per test method TPE-X0080

Typical mechanical properties

Tensile stress at 100% elongation, perpendicular	1.88 MPa	ISO 37
Stress at break, perpendicular	5.01 MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	420 %	ISO 527-1/-2 or ISO 37
Brittleness temperature	-60 °C	ISO 974
Shore A hardness, 15s	60	ISO 48-4 / ISO 868
Compression set, 70 °C, 24h	23 %	ISO 815
Compression set, 125 °C, 70h	35 %	ISO 815
Tear strength, normal	18 kN/m	ISO 34-1

Thermal properties

RTI, electrical, 1.5mm	90 °C	UL 746B
RTI, electrical, 3.0mm	90 °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

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Flammability

Burning Behav. at 1.5mm nom. thickn.	HB class	IEC 60695-11-10
Thickness tested	1.5 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
Burning rate, Thickness 2 mm	24 mm/min	ISO 3795 (FMVSS 302)
Hot Wire Ignition, 1.5mm	PLC 3 s	UL 746A
Hot Wire Ignition, 3mm	PLC 3 s	UL 746A

Electrical properties

Relative permittivity, 60Hz	2.4	IEC 62631-2-1
Arc Resistance Performance Level Category	PLC 6 class	UL 746B
High Amperage Arc Ignition Category, 1.5 mm	PLC 0 class	UL 746A

Physical/Other properties

Density	970 kg/m ³	ISO 1183
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Injection

Max. regrind level	20 %
Back pressure	0.517 MPa
Ejection temperature	89 °C

Extrusion

Drying Temperature	82 °C
Drying Time, Dehumidified Dryer	3 h
Melt Temperature Range	196 °C

Characteristics

Processing	Injection Moulding, Multi Injection Moulding, Extrusion, Sheet Extrusion, Coextrusion
Delivery form	Pellets

Additional information

Non Standard Data

Property Name	Condition	Value	Unit	Standard
Change in Tensile Strength	150 °C, 168h	-15	%	ISO 188
Change in Tensile Strain at Break	150 °C, 168h	13	%	ISO 188
Change in Shore A	150 °C, 168h	-1	-	ISO 188

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Hardness				
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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.

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
Ford	WSD-M2D378-A1	
General Motors	GMW15813P-TPV-(EPDM+PP)-Type 4	N/A
Hyundai	MS220-05 Type A	
Mercedes-Benz	DBL5562	
Renault	FRM 18-27-029 /--A, No Spec, Special Part Approval, See Your CE Account Manager.	
Stellantis	55248_02 EMP60	01378_20_04386 MS-AR-100 AGN;61/212E/212M/11/J4/M1/
Stellantis	B62 0300 / 61/212E/212M/11/J4/M1/Q2/R0	01378_20_04386; MS-AR-100 AGN; 61/212E/212M/11/J4/M1/Q2/R0
VW Group	VW 50123	