

SANTOPRENE® 101-55

SANTOPRENE®

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

Typical mechanical properties

Tensile stress at 100% elongation, perpendicular	1.88 MPa	ISO 527-1/-2 or 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

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
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

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

Drying Temperature	82 °C
Drying Time, Dehumidified Dryer	3 h
Processing Moisture Content	≤0.08 %
Max. regrind level	20 %
Melt Temperature Optimum	215 °C
Min. melt temperature	165 °C
Max. melt temperature	265 °C
Mold Temperature Optimum	50 °C
Min. mould temperature	20 °C
Max. mould temperature	80 °C
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

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 Hardness	150 °C, 168h	-1	-	ISO 188

Processing Notes

Processing Notes

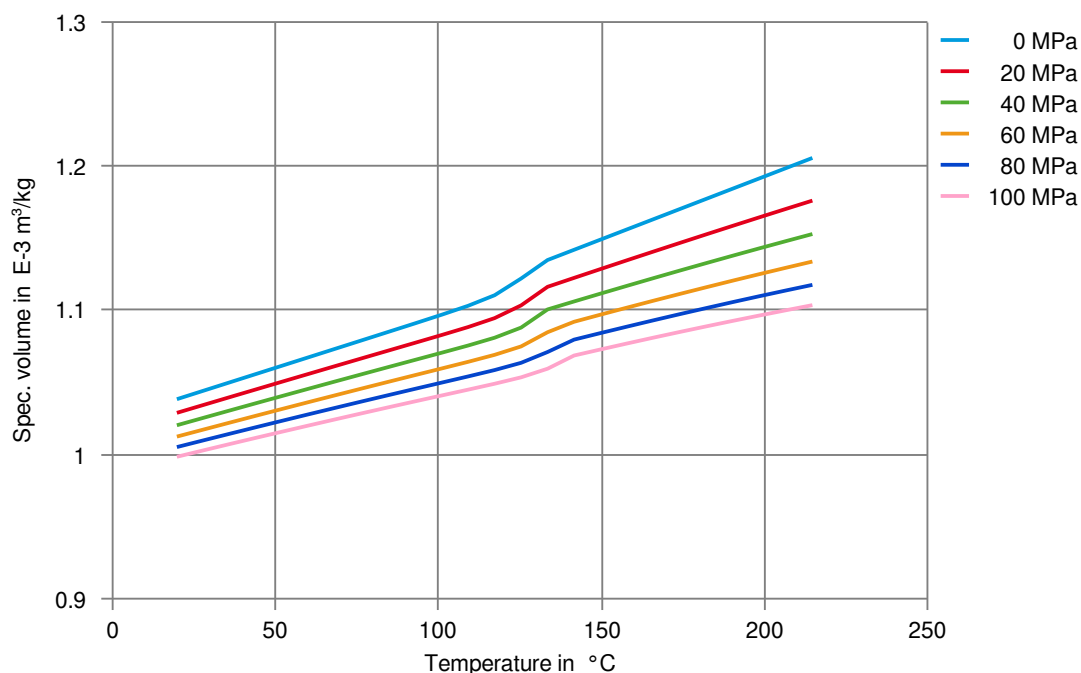
Desiccant drying for 3 hours at 80 °C (180 °F) is recommended.
 Santoprene® TPV has a wide temperature processing window from 175 to

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230°C (350 to 450°F) and is incompatible with acetal and PVC.

Specific volume-temperature (pvT)



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