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

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
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

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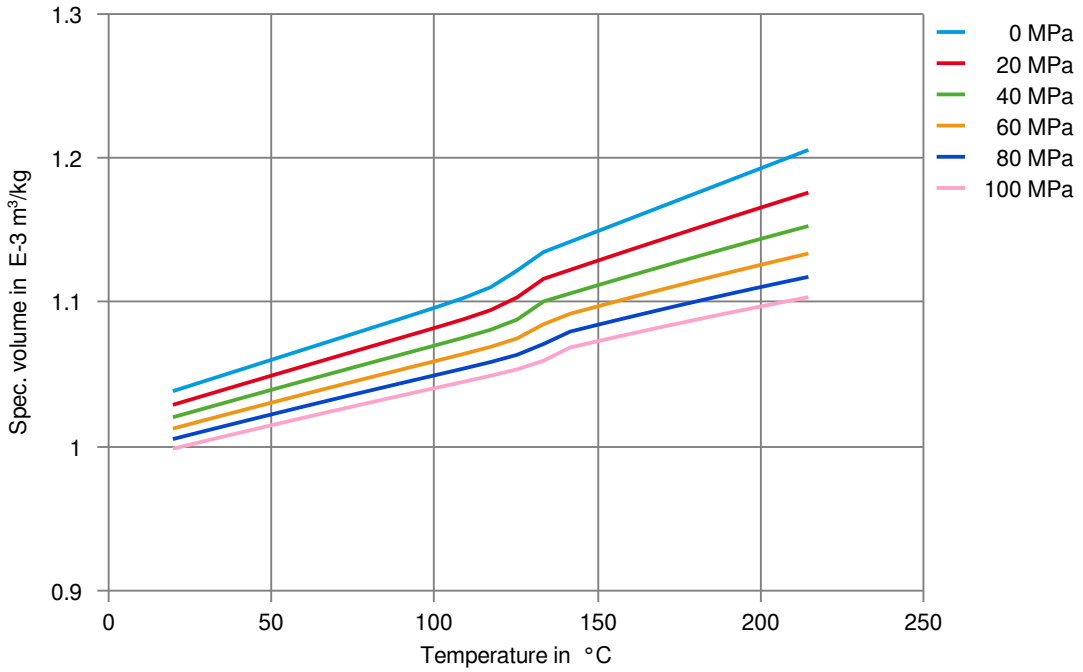
230 °C (350 to 450 °F) and is incompatible with acetal and PVC.

Specific volume-temperature (pvT)



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