SANTOPRENE® 101-73

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, 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
- 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	2.6[1]	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.8[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	3.44	MPa	ISO 37
Stress at break, perpendicular	7.98	MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	478	%	ISO 527-1/-2 or ISO 37
Shore A hardness, 15s	78		ISO 48-4 / ISO 868
Compression set, 70°C, 24h	27	%	ISO 815
Compression set, 125°C, 70h	41	%	ISO 815
Tear strength, normal	25	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
Outdoor suitability	f1		UL 746C

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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	19.9	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	2.5		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/m³	ISO 1183

Injection

Max. regrind level	20	%
Back pressure	0.517	MPa
Ejection temperature	94	°C

Extrusion

Drying Temperature	82	°C
Drying Time, Dehumidified Dryer	3	h
Melt Temperature Range	202	°C

Characteristics

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

Additional information

Non Standard Data

Property Name	Condition	Value	Unit	Standard
Change in Tensile Strength	150 °C, 168h	-8	%	ISO 188
Change in Tensile Strain at Break	150 °C, 168h	-7.7	%	ISO 188
Change in	150 °C, 168h	1.7	-	ISO 188

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Shore A Hardness				

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
BMW	GS93042	
Ford	WSD-M2D380-A1	
General Motors	GMW15813P-TPV-(EPDM+PP)-Type 6	N/A
Hyundai	MS220-05 Type C	
Hyundai	MS220-31 Type A2	
MAN	M3236 A7	
MAN	MAN M3236	SANTOPRENE101-73_MAN M3236_2022-04-01.pdf
Mercedes-Benz	DBL5562	
Renault	FRM 18-27-021 /---, No Spec, Special Part Approval, See Your CE Account Manager.	
Stellantis	55248_02 EMP90	01378_23_00029; MS-AR-100 CGN; Coolant hose celanese TPV1hose-125
Stellantis	B63 0300 / TPV1hose-125	01378_23_00029; MS-AR-100 CGN; Coolant hose celanese TPV1hose-125
VW Group	VW 50123	