

SANTOPRENE® 201-87

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A hard, colorable, 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	1.5 ^[1] %	ISO 294-4, 2577
Moulding shrinkage, normal	0.7 ^[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	7.1 MPa	ISO 37
Stress at break, perpendicular	15 MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	580 %	ISO 527-1/-2 or ISO 37
Brittleness temperature	-54 °C	ISO 974
Shore A hardness, 15s	93	ISO 48-4 / ISO 868
Compression set, 70 °C, 24h	36 %	ISO 815
Compression set, 125 °C, 70h	44 %	ISO 815
Tear strength, normal	48 kN/m	ISO 34-1

Thermal properties

RTI, electrical, 1.5mm	100 °C	UL 746B
RTI, electrical, 3.0mm	100 °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	18.3 mm/min	ISO 3795 (FMVSS 302)
Hot Wire Ignition, 1.5mm	PLC 3 s	UL 746A
Hot Wire Ignition, 3mm	PLC 2 s	UL 746A

Electrical properties

Relative permittivity, 60Hz	2.4	IEC 62631-2-1
Arc Resistance Performance Level Category	PLC 5 class	UL 746B
High Amperage Arc Ignition Category, 1.5 mm	PLC 0 class	UL 746A

Physical/Other properties

Density	960 kg/m ³	ISO 1183
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Injection

Max. regrind level	20 %
Back pressure	0.517 MPa

Extrusion

Drying Temperature	82 °C
Drying Time, Dehumidified Dryer	3 h
Melt Temperature Range	204 °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	-15	%	ISO 188
Change in Tensile Strain at Break	150 °C, 168h	-16	%	ISO 188
Change in Shore A	150 °C, 168h	2	-	ISO 188

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Hardness					
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Processing Notes

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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
Ford	WSD-M2D382-A1
Mercedes-Benz	DBL5562
Stellantis - Chrysler	MS-AR-100 EGN

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colourants or other additives may cause significant variations in data values. Properties of moulded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products.

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