

SANTOPRENE® 121-50M100

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A soft, black, UV resistant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material combines good physical properties and chemical resistance for use in difficult injection molding applications. This grade of Santoprene® TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

- Designed for fast, easy injection molding, especially for complex part geometries
- Used in sealing applications
- Recommended for applications requiring improved part surface appearance
- Designed to be injected at lower molding temperatures or at lower injection pressures
- UL listed: file #QMFZ2.E80017, Plastics - Component; file #QMFZ8.E80017, Plastics Certified For Canada - Component

Product information

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

Typical mechanical properties

Tensile stress at 100% elongation, perpendicular	1.8 MPa	ISO 37
Tensile stress at break, perpendicular	4.39 MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	465 %	ISO 527-1/-2 or ISO 37
Brittleness Temperature	-60 °C	ASTM D 746
Low temperature brittleness	-60 °C	ISO 812
Shore A hardness, 15s	56	ISO 48-4 / ISO 868
Compression set, 70 °C, 24h	31 %	ISO 815
Compression set, 125 °C, 70h	42 %	ISO 815
Initial Tear Resist., Die C	15 kN/m	ISO 34-1

Flammability

Burning Behav. at thickness h	HB class	IEC 60695-11-10
Thickness tested	1.1 mm	IEC 60695-11-10
UL recognition	yes	UL 94
Burning rate, Thickness 2 mm	32.2 mm/min	ISO 3795 (FMVSS 302)

Physical/Other properties

Density	915 kg/m ³	ISO 1183
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Injection

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

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Characteristics

Processing	Injection Moulding, Multi Injection Moulding
Delivery form	Pellets
Special characteristics	U.V. stabilised or stable to weather, High Flow

Additional information

Non Standard Data

Property Name	Condition	Value	Unit	Standard
Change in Tensile Strength	150 °C, 168h	-20	%	ISO 188
Change in Tensile Strain at Break	150 °C, 168h	-3	%	ISO 188
Change in Shore A Hardness	150 °C, 168h	0	-	ISO 188

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.