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SANTOPRENE® 101-80E100

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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, extrusion, blow molding, thermoforming or vacuum forming. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

- 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	4.4	MPa	ISO 37
Tensile stress at break, perpendicular	9.4	MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	510	%	ISO 527-1/-2 or ISO 37
Brittleness Temperature	-54	°C	ASTM D 746
Shore A hardness, 15s	86		ISO 48-4 / ISO 868
Compression set, 125°C, 70h	58	%	ISO 815
Tear strength, normal	30	kN/m	ISO 34-1

Flammability

Burning rate, Thickness 2 mm	19.6	mm/min	ISO 3795 (FMVSS 302)

Injection

Max. regrind level	20	%
Back pressure	0.52	MPa
Ejection temperature	93	°C

Extrusion

Drying Temperature	82	°C
Drying Time, Dehumidified Dryer	3	h
Melt Temperature Range	200	°C

Characteristics

Processing	Injection Moulding, Extrusion, Blow Moulding, Thermoforming
Delivery form	Pellets

Additional information

Injection molding	Holding pressure should be about 50 to 75% of the actual injection pressure. A high screw RPM (100 to 200) is recommended. Back pressure is not always needed, however, a back pressure of 0.3 to 0.7 MPa may be used to ensure a homogeneous melt and maintain a consistent shot size. A higher back pressure is normally employed when using masterbatches.

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Processing Notes

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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.

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