Celanese
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SANTOPRENE® 9101-85E

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

- 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	3.9	MPa	ISO 37
Tensile stress at break, perpendicular	9	MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	553	%	ISO 527-1/-2 or ISO 37
Shore A hardness, 15s	83		ISO 48-4 / ISO 868
Compression set, 70°C, 24h	38	%	ISO 815
Compression set, 125°C, 70h	50	%	ISO 815
Tear strength, normal	35	kN/m	ISO 34-1

Physical/Other properties

Density	943	kg/m³	ISO 1183

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
Delivery form	Pellets

Additional information

Non Standard Data

Long Term Heat Aging Data

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Property Name	Condition	Value	Unit	Standard
Change in Tensile Strength	125°C, 168h	-5	%	ISO 188
Change in Tensile Strain at Break	125°C, 168h	-12	%	ISO 188
Change in Shore A Hardness	125°C, 168h	0	-	ISO 188

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.
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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