

SANTOPRENE® 591-73W175

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Santoprene® 591-73W175 is a soft, black thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material is designed for thin wall, architectural glazing and sealing applications in industry and consumer segments. This grade of Santoprene® TPV is shear-dependent and can be processed on conventional thermoplastics equipment for extrusion, thermoforming. It is polyolefin based and completely recyclable.

Key Features

- Recommended for glazing and sealing applications in industry and consumer segments.
- Excellent resistance to compression set.
- Designed for extruding thin sections with excellent definition (down to 0.33 mm [0.013"] radius). Long runs with minimal build-up of material on screen packs or narrow sections die sections.

Product information

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

Typical mechanical properties

Tensile stress at 100% elongation, perpendicular	3.61 MPa	ISO 37
Tensile stress at break, perpendicular	8.7 MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	461 %	ISO 527-1/-2 or ISO 37
Shore A hardness, 15s	78	ISO 48-4 / ISO 868
Compression set, 23 °C	33 %	ISO 815
Time	70 h	
Compression set, 125 °C, 70h	46 %	ISO 815

Physical/Other properties

Density	970 kg/m ³	ISO 1183
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Characteristics

Processing	Extrusion, Sheet Extrusion, Coextrusion, Thermoforming
Delivery form	Pellets

Additional information

Non Standard Data

Property Name	Condition	Value	Unit	Standard
Change in Tensile Strength	150 °C, 168h	-1.0	%	ISO 188
Change in Tensile Strain at Break	150 °C, 168h	-8.2	%	ISO 188
Change in Shore A Hardness	150 °C, 168h	0.3	-	ISO 188

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Injection molding

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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

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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. Do not exceed 15% drawdown.