

SANTOPRENE® 3293-40G

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Santoprene® 3293-40G TPV is a hard, brownish thermoplastic vulcanization (TPV) in the thermoplastic elastomer (TPE) family. This material combines good physical properties and thermal insulation 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.

Product information Resin Identification Part Marking Code	TPV >TPV<		ISO 1043 ISO 11469
Typical mechanical properties			
Tensile stress at 100% elongation, perpendicular	9.9	MPa	ISO 37
Tensile stress at break, perpendicular		MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	483	%	ISO 527-1/-2 or ISO 37
Shore D hardness, 15s	39		ISO 48-4 / ISO 868
Physical/Other properties			
Density	030	kg/m³	ISO 1183
Density	930	Kg/III	130 1185
Injection			
Drying Recommended	yes		
Drying Temperature	80	°C	
Drying Time, Dehumidified Dryer	≥3	h	
Processing Moisture Content	≤0.08	%	
Max. regrind level	20	%	
Melt Temperature Optimum	220		
Min. melt temperature	215		
Max. melt temperature	230		
Mold Temperature Optimum		°C	
Min. mould temperature		°C	
Max. mould temperature	50	°C	
Extrusion			
Melt Temperature Range	195 - 225	°C	
Characteristics			

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Processing	Injection Moulding, Multi Injection Moulding, Extrusion, Sheet Extrusion, Coextrusion
Delivery form	Pellets

Additional information

Non Standard Data

Property Name	Condition	Value	Unit	Standard
Change in Tensile Strength	150°C, 168h	31	%	ISO 188

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Change in Tensile Strain at Break	150°C, 168h	-34	%	ISO 188
Change in Shore D Hardness	150°C, 168h	3.8	-	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

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.

Santoprene® TPV has a relatively high melt viscosity at low shear rates. Viscosity decreases as the shear rate increases.

Increasing temperature has little effect on TPV melt viscosity. Smaller gates and higher shear rates keep melt viscosity low and improve melt flow. Please also refer to the injection molding guide.

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