

Santoprene™ 3293-40G

Thermoplastic Vulcanizate

Product Description

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.

General

Availability ¹	<ul style="list-style-type: none"> ▪ Africa & Middle East ▪ Asia Pacific 	<ul style="list-style-type: none"> ▪ Europe ▪ Latin America 	<ul style="list-style-type: none"> ▪ North America
Applications	<ul style="list-style-type: none"> ▪ Flexible Production Risers 	<ul style="list-style-type: none"> ▪ Oil & Gas 	
Uses	<ul style="list-style-type: none"> ▪ Insulation 		
Color	<ul style="list-style-type: none"> ▪ Natural Color 		
Form(s)	<ul style="list-style-type: none"> ▪ Pellets 		
Processing Method	<ul style="list-style-type: none"> ▪ Coextrusion ▪ Extrusion 	<ul style="list-style-type: none"> ▪ Injection Molding ▪ Multi Injection Molding 	<ul style="list-style-type: none"> ▪ Profile Extrusion ▪ Sheet Extrusion
Revision Date	<ul style="list-style-type: none"> ▪ 01/18/2021 		

Physical	Typical Value (English)	Typical Value (SI)	Test Based On
Density	0.930 g/cm ³	0.930 g/cm ³	ISO 1183

Hardness	Typical Value (English)	Typical Value (SI)	Test Based On
Shore Hardness Shore D, 15 sec, 73°F (23°C)	39	39	ISO 868

Elastomers	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Stress at 100% - Across Flow (73°F (23°C))	1440 psi	9.90 MPa	ASTM D412
Tensile Stress at 100% - Across Flow (73°F (23°C))	1440 psi	9.90 MPa	ISO 37
Tensile Stress at Break - Across Flow (73°F (23°C))	2610 psi	18.0 MPa	ISO 37
Tensile Strain at Break - Across Flow (73°F (23°C))	480 %	480 %	ISO 37

Thermal	Typical Value (English)	Typical Value (SI)	Test Based On
Thermal Conductivity (77°F (25°C))	1.1 Btu-in/hr/ft ² /°F	0.16 W/m/K	ASTM C518

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Moisture	0.080 %	0.080 %
Suggested Max Re grind	20 %	20 %
Rear Temperature	380 °F	193 °C
Middle Temperature	390 °F	199 °C
Front Temperature	400 °F	204 °C
Nozzle Temperature	410 to 460 °F	210 to 238 °C
Processing (Melt) Temp	420 to 450 °F	216 to 232 °C
Mold Temperature	50 to 125 °F	10 to 52 °C
Injection Rate	Fast	Fast
Back Pressure	50.0 to 100 psi	0.345 to 0.689 MPa
Screw Speed	100 to 200 rpm	100 to 200 rpm
Clamp Tonnage	3.0 to 5.0 tons/in ²	41 to 69 MPa
Cushion	0.125 to 0.250 in	3.18 to 6.35 mm
Screw L/D Ratio	16.0:1.0 to 20.0:1.0	16.0:1.0 to 20.0:1.0
Screw Compression Ratio	2.0:1.0 to 2.5:1.0	2.0:1.0 to 2.5:1.0
Vent Depth	1.0E-3 in	0.025 mm

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Injection Notes

Santoprene™ TPV is incompatible with acetal and PVC. For more information regarding processing and mold design, please consult our Injection Molding Guide.

Extrusion	Typical Value (English)	Typical Value (SI)
Melt Temperature	383 to 437 °F	195 to 225 °C
Die Temperature	383 to 437 °F	195 to 225 °C

Extrusion Notes

Santoprene™ TPV is incompatible with acetal and PVC. For more information regarding processing and die design, please consult our Extrusion Molding Guide.

Aging	Typical Value (English)	Typical Value (SI)	Test Based On
Change in Tensile Strength in Air 302°F (150°C), 168 hr	31 %	31 %	ISO 188
Change in Tensile Strain at Break in Air 302°F (150°C), 168 hr	<ul style="list-style-type: none"> ▪ -34 % ▪ 7.0 	<ul style="list-style-type: none"> ▪ -34 % ▪ 7.0 	ISO 188
Change in Shore Hardness in Air Shore D, 302°F (150°C), 168 hr	3.8	3.8	ISO 188

Additional Information

Where applicable, test results based on fan gated, 2.0 mm injection molded plaques. Tensile strength, elongation and tensile stress are measured across the flow direction. Test results are generated by ExxonMobil test methods that may not fully conform to the ASTM and/or ISO methods. Test methods are available upon request. Compression set at 25% deflection. All products purchased directly from an ExxonMobil affiliate in Europe are REACH compliant. For products not imported into Europe by ExxonMobil, customers should assess their legal responsibilities under REACH.

Legal Statement

This product, including the product name, shall not be used or tested in any medical application without the prior written acknowledgement of ExxonMobil Chemical as to the intended use. For detailed Product Stewardship information, please contact Customer Service.

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Processing Statement

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.

Notes

Typical properties: these are not to be construed as specifications.

¹ Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

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For additional technical, sales and order assistance: www.exxonmobilchemical.com/ContactUs

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