

Santoprene™ 201-80

Thermoplastic Vulcanizate

Product Description	Key Features
A soft, colorable, 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 completely recyclable.	<ul style="list-style-type: none"> UL listed: file #QMFZ2.E80017, Plastics - Component; file #QMFZ8.E80017, Plastics Certified For Canada - Component. Recommended for applications requiring excellent flex fatigue resistance. Excellent ozone resistance. EU Directive 2002/95/EC (RoHS) compliant.

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 South America
Applications	<ul style="list-style-type: none"> Automotive - Plugs, Bumpers, Grommets, Clips Automotive - Seals and Gaskets 	<ul style="list-style-type: none"> Industrial - Seals and Gaskets Soft Touch Grips 	<ul style="list-style-type: none"> Tubing
Uses	<ul style="list-style-type: none"> Appliance Components Automotive Applications Automotive Under the Hood 	<ul style="list-style-type: none"> Consumer Applications Diaphragms Electrical Parts 	<ul style="list-style-type: none"> Gaskets Seals Tubing
Agency Ratings	<ul style="list-style-type: none"> EU 2003/11/EC 	<ul style="list-style-type: none"> UL QMFZ2 	<ul style="list-style-type: none"> UL QMFZ8
RoHS Compliance	<ul style="list-style-type: none"> RoHS Compliant 		
Automotive Specifications	<ul style="list-style-type: none"> CHRYSLER MS-AR100 DGN FORD WSD-M2D381-A1 	<ul style="list-style-type: none"> GM GMP.E/P.004 TRW TMS-P-10,492 	
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"> Blow Molding Coextrusion Extrusion Extrusion Blow Molding 	<ul style="list-style-type: none"> Injection Blow Molding Injection Molding Multi Injection Molding Profile Extrusion 	<ul style="list-style-type: none"> Sheet Extrusion Thermoforming Vacuum Forming
Revision Date	<ul style="list-style-type: none"> 11/27/2007 		

Physical	Typical Value (English)	Typical Value (SI)	Test Used On
Specific Gravity	0.960	0.960	ASTM D792
Density	0.960 g/cm ³	0.960 g/cm ³	ISO 1183

Hardness	Typical Value (English)	Typical Value (SI)	Test Used On
Shore Hardness			ISO 868
Shore A, 15 sec, 73°F (23°C), 0.0787 in (2.00 mm)	86	86	

Elastomers	Typical Value (English)	Typical Value (SI)	Test Used On
Tensile Stress at 100% - Across Flow (73°F (23°C))	682 psi	4.70 MPa	ASTM D12
Tensile Stress at 100% - Across Flow (73°F (23°C))	682 psi	4.70 MPa	ISO 3
Tensile Strength at Break - Across Flow (73°F (23°C))	1610 psi	11.1 MPa	ASTM D12
Tensile Stress at Break - Across Flow (73°F (23°C))	1610 psi	11.1 MPa	ISO 3

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

© 2010 ExxonMobil. To the extent the user is entitled to disclose and distribute this document, the user may forward, distribute, and/or photocopy this document only if unaltered and complete, including all of its headers, footers, disclaimers, and other information. You may not copy this document to a public site. ExxonMobil does not guarantee the typical (or other) values. Analysis may be performed on representative samples and not the actual product shipped. The information in this document relates only to the named product or materials when not in combination with any other product or materials. We based the information on data believed to be reliable on the date compiled, but we do not represent, warrant, or otherwise guarantee, expressly or impliedly, the merchantability, fitness for a particular purpose, suitability, accuracy, reliability, or completeness of this information or the products, materials, or processes described. The user is solely responsible for all determinations regarding any use of material or product and any process in its territories of interest. We expressly disclaim liability for any loss, damage, or injury directly or indirectly suffered or incurred as a result of or related to anyone using or relying on any of the information in this document. There is no endorsement of any product or process, and we expressly disclaim any contrary implication. The terms, "we", "our", "ExxonMobil Chemical", or "ExxonMobil" are used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliates they directly or indirectly steward. ExxonMobil, the ExxonMobil Logo, the Interlocking "X" Device, and all other product names used herein are trademarks of ExxonMobil unless indicated otherwise.

**ExxonMobil Chemical Santoprene™ 201-80
Thermoplastic Vulcanizate**

Elastomers	Typical Value (English)	Typical Value (SI)	Test used On
Elongation at Break - Across Flow (73°F (23°C))	540 %	540 %	ASTM D412
Tensile Strain at Break - Across Flow (73°F (23°C))	540 %	540 %	ISO 37
Tear Strength - Across Flow (73°F (23°C), Die C)	200 lbf/in	35.0 kN/m	ASTM D624
Tear Strength - Across Flow (73°F (23°C), Method Bb, Angle (Nicked))	200 lbf/in	35 kN/m	ISO 34-1
Compression Set			ASTM D95B
158°F (70°C), 22.0 hr, Type 1	41 %	41 %	
257°F (125°C), 70.0 hr, Type 1	47 %	47 %	
Compression Set			ISO 8
158°F (70°C), 22.0 hr, Type A	41 %	41 %	
257°F (125°C), 70.0 hr, Type A	47 %	47 %	

Thermal	Typical Value (English)	Typical Value (SI)	Test used On
Brittleness Temperature	-76 °F	-60 °C	ASTM D746
Brittleness Temperature	-76 °F	-60 °C	ISO 812

Electrical	Typical Value (English)	Typical Value (SI)	Test used On
Dielectric Strength (0.0800 in (2.03 mm))	930 V/mil	37 kV/mm	ASTM D149
Dielectric Constant			ASTM D150
73°F (23°C), 0.0780 in (1.98 mm)	2.30	2.30	
Dielectric Constant			IEC 60250
73°F (23°C), 0.0780 in (1.98 mm)	2.30	2.30	

Injection	Typical Value (English)	Typical Value (SI)	Test used On
Drying Temperature	180 °F	82.2 °C	
Drying Time	3.0 hr	3.0 hr	
Suggested Max Moisture	0.080 %	0.080 %	
Suggested Max Re grind	20 %	20 %	
Rear Temperature	350 °F	177 °C	
Middle Temperature	360 °F	182 °C	
Front Temperature	370 °F	188 °C	
Nozzle Temperature	380 to 450 °F	193 to 232 °C	
Processing (Melt) Temp	390 to 450 °F	199 to 232 °C	
Mold Temperature	50.0 to 125 °F	10.0 to 51.7 °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	0.0010 in	0.025 mm	

Injection Notes

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

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

© 2010 ExxonMobil. To the extent the user is entitled to disclose and distribute this document, the user may forward, distribute, and/or photocopy this copyrighted document only if unaltered and complete, including all of its headers, footers, disclaimers, and other information. You may not copy this document to a Web site. ExxonMobil does not guarantee the typical (or other) values. Analysis may be performed on representative samples and not the actual product shipped. The information in this document relates only to the named product or materials when not in combination with any other product or materials. We based the information on data believed to be reliable on the date compiled, but we do not represent, warrant, or otherwise guarantee, expressly or impliedly, the merchantability, fitness for a particular purpose, suitability, accuracy, reliability, or completeness of this information or the products, materials, or processes described. The user is solely responsible for all determinations regarding any use of material or product and any process in its territories of interest. We expressly disclaim liability for any loss, damage, or injury directly or indirectly suffered or incurred as a result of or related to anyone using or relying on any of the information in this document. There is no endorsement of any product or process, and we expressly disclaim any contrary implication. The terms, "we", "our", "ExxonMobil Chemical", or "ExxonMobil" are used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliates they directly or indirectly steward. ExxonMobil, the ExxonMobil Logo, the Interlocking "X" Device, and all other product names used herein are trademarks of ExxonMobil unless indicated otherwise.

ExxonMobil Chemical Santoprene™ 201-80 Thermoplastic Vulcanizate

Extrusion	Typical Value (English)	Typical Value (SI)
Drying Temperature	180 °F	82.2 °C
Drying Time	3.0 hr	3.0 hr
Melt Temperature	395 °F	202 °C
Die Temperature	400 °F	204 °C
Back Pressure	725 to 2900 psi	5.00 to 20.0 MPa

Extrusion Notes

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

Aging	Typical Value (English)	Typical Value (SI)	Test used On
Change in Tensile Strength in Air 302°F (150°C), 168 hr	-5.0 %	-5.0 %	ASTM D573
Change in Tensile Strength in Air 302°F (150°C), 168 hr	-5.0 %	-5.0 %	ISO 138
Change in Ultimate Elongation in Air 302°F (150°C), 168 hr	-12 %	-12 %	ASTM D573
Change in Tensile Strain at Break in Air 302°F (150°C), 168 hr	-12 %	-12 %	ISO 138
Change in Durometer Hardness in Air Shore A, 302°F (150°C), 168 hr	5.0	5.0	ASTM D73
Change in Shore Hardness in Air Shore A, 302°F (150°C), 168 hr	5.0	5.0	ISO 1
Continuous Upper Temperature Resistance	275 °F	135 °C	SAE J2236

Additional Information

Values are for injection molded plaques, fan-gated, 102.0 mm x 152.0 mm x 2.0 mm (4.000" x 6.000" x 0.080").
Tensile strength, elongation and tensile stress are measured across the flow direction - ISO type 1, ASTM die C.
Compression set at 25% deflection.

Legal Statement

For detailed Product Stewardship information, please contact Customer Service.

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.

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. For more information, please consult our Material Safety Data Sheet, Injection Molding Guide, Extrusion Guide and Blow Molding Guide.

Notes

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.

For additional technical, sales and order assistance:

Worldwide and the Americas
ExxonMobil Chemical Company
13501 Katy Freeway
Houston, TX 77079-1398
USA

Asia Pacific
ExxonMobil Chemical Singapore Pte. Ltd.
1 HarbourFront Place
#06-00 HarbourFront Tower One
Singapore 098633

Europe, Middle East and Africa

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

© 2010 ExxonMobil. To the extent the user is entitled to disclose and distribute this document, the user may forward, distribute, and/or photocopy this copyrighted document only if unaltered and complete, including all of its headers, footers, disclaimers, and other information. You may not copy this document to a Web site. ExxonMobil does not guarantee the typical (or other) values. Analysis may be performed on representative samples and not the actual product shipped. The information in this document relates only to the named product or materials when not in combination with any other product or materials. We based the information on data believed to be reliable on the date compiled, but we do not represent, warrant, or otherwise guarantee, expressly or impliedly, the merchantability, fitness for a particular purpose, suitability, accuracy, reliability, or completeness of this information or the products, materials, or processes described. The user is solely responsible for all determinations regarding any use of material or product and any process in its territories of interest. We expressly disclaim liability for any loss, damage, or injury directly or indirectly suffered or incurred as a result of or related to anyone using or relying on any of the information in this document. There is no endorsement of any product or process, and we expressly disclaim any contrary implication. The terms, "we", "our", "ExxonMobil Chemical", or "ExxonMobil" are used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliates they directly or indirectly steward. ExxonMobil, the ExxonMobil Logo, the Interlocking "X" Device, and all other product names used herein are trademarks of ExxonMobil unless indicated otherwise.

**ExxonMobil Chemical Santoprene™ 201-80
Thermoplastic Vulcanizate**

1-281-870-6050

66-2163-8444

ExxonMobil Chemical Europe
Hermeslaan 2
1831 Machelen, Belgium
420-239-016-274

[contact us](#)

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

© 2010 ExxonMobil. To the extent the user is entitled to disclose and distribute this document, the user may forward, distribute, and/or photocopy this copyrighted document only if unaltered and complete, including all of its headers, footers, disclaimers, and other information. You may not copy this document to a Web site. ExxonMobil does not guarantee the typical (or other) values. Analysis may be performed on representative samples and not the actual product shipped. The information in this document relates only to the named product or materials when not in combination with any other product or materials. We based the information on data believed to be reliable on the date compiled, but we do not represent, warrant, or otherwise guarantee, expressly or impliedly, the merchantability, fitness for a particular purpose, suitability, accuracy, reliability, or completeness of this information or the products, materials, or processes described. The user is solely responsible for all determinations regarding any use of material or product and any process in its territories of interest. We expressly disclaim liability for any loss, damage, or injury directly or indirectly suffered or incurred as a result of or related to anyone using or relying on any of the information in this document. There is no endorsement of any product or process, and we expressly disclaim any contrary implication. The terms, "we", "our", "ExxonMobil Chemical", or "ExxonMobil" are used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliates they directly or indirectly steward. ExxonMobil, the ExxonMobil Logo, the Interlocking "X" Device, and all other product names used herein are trademarks of ExxonMobil unless indicated otherwise.