

Santoprene™ 8211-55

Thermoplastic Vulcanizate

Product Description	Key Features
A soft, colorable, non-hygroscopic thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material combines good physical properties and chemical resistance for use in difficult injection molding applications. This grade of Santoprene TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding. It is polyolefin based and completely recyclable.	<ul style="list-style-type: none"> • Non-hygroscopic product, requires little to no drying before processing. • Neutral, easy coloring formulation. • Recommended for applications requiring excellent ozone resistance. • Used in sealing applications. • Recommended for applications requiring excellent flex fatigue resistance. • UL listed: file #QMFZ2.E80017, Plastics - Component; file #QMFZ8.E80017, Plastics Certified For Canada - Component. • EU and China 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 - Grips • Automotive - HVAC Flapper Door Seals • Automotive - Interior • Automotive - Interior Mat 	<ul style="list-style-type: none"> • Automotive - Weather Seals • Consumer - Electronics • Consumer - Floor Care • Consumer - Kitchen Tools 	<ul style="list-style-type: none"> • Consumer - Soft Touch Grips • Consumer Applications • Seals and Gaskets
Uses	<ul style="list-style-type: none"> • Automotive Applications • Cell Phones 	<ul style="list-style-type: none"> • Consumer Applications • Flexible Grips 	<ul style="list-style-type: none"> • Seals
Agency Ratings	<ul style="list-style-type: none"> • EU Annex XVII of Regulation (EC) No 1907/2006 	<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 		
UL File Number	<ul style="list-style-type: none"> • E80017 		
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"> • Injection Molding 	<ul style="list-style-type: none"> • Multi Injection Molding 	
Revision Date	<ul style="list-style-type: none"> • 07/13/2011 		

Physical	Typical Value (English)	Typical Value (SI)	Test Based On
Specific Gravity	0.930	0.930	ASTM D792
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			ISO 868
Shore A, 15 sec, 73°F (23°C), 0.0787 in (2.00 mm)	59	59	

Elastomers	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Stress at 100% - Across Flow (73°F (23°C))	305 psi	2.10 MPa	ASTM D412
Tensile Stress at 100% - Across Flow (73°F (23°C))	305 psi	2.10 MPa	ISO 37

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

©2012 ExxonMobil. ExxonMobil, the ExxonMobil logo, the interlocking "X" device and other product or service names used herein are trademarks of ExxonMobil, unless indicated otherwise. This document may not be distributed, displayed, copied or altered without ExxonMobil's prior written authorization. To the extent ExxonMobil authorizes distributing, displaying and/or copying of this document, the user may do so only if the document is unaltered and complete, including all of its headers, footers, disclaimers and other information. You may not copy this document to or reproduce it in whole or in part on a website. ExxonMobil does not guarantee the typical (or other) values. Any data included herein is based upon analysis of 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, freedom from patent infringement, 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. This document is not an endorsement of any non-ExxonMobil product or process, and we expressly disclaim any contrary implication. The terms "we," "our," "ExxonMobil Chemical" and "ExxonMobil" are each used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliate either directly or indirectly stewarded.

ExxonMobil Chemical Santoprene™ 8211-55
Thermoplastic Vulcanizate

Elastomers	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Strength at Break - Across Flow (73°F (23°C))	667 psi	4.60 MPa	ASTM D412
Tensile Stress at Break - Across Flow (73°F (23°C))	667 psi	4.60 MPa	ISO 37
Elongation at Break - Across Flow (73°F (23°C))	480 %	480 %	ASTM D412
Tensile Strain at Break - Across Flow (73°F (23°C))	480 %	480 %	ISO 37
Compression Set			ASTM D395B
158°F (70°C), 22.0 hr, Type 1	19 %	19 %	
257°F (125°C), 70.0 hr, Type 1	49 %	49 %	
Compression Set			ISO 815
158°F (70°C), 22.0 hr, Type A	19 %	19 %	
257°F (125°C), 70.0 hr, Type A	49 %	49 %	

Thermal	Typical Value (English)	Typical Value (SI)	Test Based On
Brittleness Temperature	-80 °F	-62 °C	ASTM D746
Brittleness Temperature	-80 °F	-62 °C	ISO 812
RTI Elec	212 °F	100 °C	UL 746
RTI Str			UL 746
0.0433 in (1.10 mm)	194 °F	90.0 °C	
0.118 in (3.00 mm)	203 °F	95.0 °C	

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Moisture	0.080 %	0.080 %
Suggested Max Re grind	20 %	20 %
Rear Temperature	350 to 375 °F	177 to 191 °C
Middle Temperature	355 to 380 °F	179 to 193 °C
Front Temperature	365 to 390 °F	185 to 199 °C
Nozzle Temperature	365 to 410 °F	185 to 210 °C
Processing (Melt) Temp	290 to 420 °F	143 to 216 °C
Mold Temperature	75.0 to 125 °F	23.9 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.

Aging	Typical Value (English)	Typical Value (SI)	Test Based On
Change in Tensile Strength in Air			ASTM D573
302°F (150°C), 168 hr	-11 %	-11 %	

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

©2012 ExxonMobil. ExxonMobil, the ExxonMobil logo, the interlocking "X" device and other product or service names used herein are trademarks of ExxonMobil, unless indicated otherwise. This document may not be distributed, displayed, copied or altered without ExxonMobil's prior written authorization. To the extent ExxonMobil authorizes distributing, displaying and/or copying of this document, the user may do so only if the document is unaltered and complete, including all of its headers, footers, disclaimers and other information. You may not copy this document to or reproduce it in whole or in part on a website. ExxonMobil does not guarantee the typical (or other) values. Any data included herein is based upon analysis of 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, freedom from patent infringement, 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. This document is not an endorsement of any non-ExxonMobil product or process, and we expressly disclaim any contrary implication. The terms "we," "our," "ExxonMobil Chemical" and "ExxonMobil" are each used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliate either directly or indirectly stewarded.

**ExxonMobil Chemical Santoprene™ 8211-55
Thermoplastic Vulcanizate**

Aging	Typical Value (English)	Typical Value (SI)	Test Based On
Change in Tensile Strength in Air 302°F (150°C), 168 hr	-11 %	-11 %	ISO 188
Change in Ultimate Elongation in Air 302°F (150°C), 168 hr	-10 %	-10 %	ASTM D573
Change in Tensile Strain at Break in Air 302°F (150°C), 168 hr	-10 %	-10 %	ISO 188
Change in Durometer Hardness in Air Shore A, 302°F (150°C), 168 hr	1.0	1.0	ASTM D573
Change in Shore Hardness in Air Shore A, 302°F (150°C), 168 hr	1.0	1.0	ISO 188

Flammability	Typical Value (English)	Typical Value (SI)	Test Based On
Flame Rating			UL 94
0.0433 in (1.10 mm)	HB	HB	
0.118 in (3.00 mm)	HB	HB	

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.
Not recommended for hot oil.

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) can be performed if desired. 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 and Injection 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
1-281-870-6050

Asia Pacific

ExxonMobil Chemical Asia Pacific
1 HarbourFront Place
#06-00 HarbourFront Tower One
Singapore 098633
+86-21-24173999

Europe, Middle East and Africa

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

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

©2012 ExxonMobil. ExxonMobil, the ExxonMobil logo, the interlocking "X" device and other product or service names used herein are trademarks of ExxonMobil, unless indicated otherwise. This document may not be distributed, displayed, copied or altered without ExxonMobil's prior written authorization. To the extent ExxonMobil authorizes distributing, displaying and/or copying of this document, the user may do so only if the document is unaltered and complete, including all of its headers, footers, disclaimers and other information. You may not copy this document to or reproduce it in whole or in part on a website. ExxonMobil does not guarantee the typical (or other) values. Any data included herein is based upon analysis of 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, freedom from patent infringement, 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. This document is not an endorsement of any non-ExxonMobil product or process, and we expressly disclaim any contrary implication. The terms "we," "our," "ExxonMobil Chemical" and "ExxonMobil" are each used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliate either directly or indirectly stewarded.