

# Santoprene™ 121-67W175

## Thermoplastic Vulcanizate

Product Description	Key Features
A soft, black, UV resistant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material combines good physical properties and chemical resistance, and is designed for thin wall or complex profile extrusion applications. This grade of Santoprene TPV is shear-dependent and can be processed on conventional thermoplastics equipment for extrusion, thermoforming or vacuum forming. It is polyolefin based and completely recyclable.	<ul style="list-style-type: none"> <li>Recommended for applications requiring excellent flex fatigue resistance.</li> <li>Excellent ozone resistance.</li> <li>Designed for improved UV resistance.</li> <li>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 die sections.</li> <li>EU and China RoHS compliant.</li> </ul>

General			
Availability <sup>1</sup>	<ul style="list-style-type: none"> <li>Africa &amp; Middle East</li> <li>Asia Pacific</li> </ul>	<ul style="list-style-type: none"> <li>Europe</li> <li>Latin America</li> </ul>	<ul style="list-style-type: none"> <li>North America</li> <li>South America</li> </ul>
Applications	<ul style="list-style-type: none"> <li>Automotive - Interior Mat</li> </ul>	<ul style="list-style-type: none"> <li>Automotive - Seals and Gaskets</li> </ul>	<ul style="list-style-type: none"> <li>Automotive - Weather Seals</li> </ul>
Uses	<ul style="list-style-type: none"> <li>Automotive Applications</li> </ul>	<ul style="list-style-type: none"> <li>Automotive Exterior Trim</li> </ul>	
Agency Ratings	<ul style="list-style-type: none"> <li>EU Annex XVII of Regulation (EC) No 1907/2006</li> </ul>		
RoHS Compliance	<ul style="list-style-type: none"> <li>RoHS Compliant</li> </ul>		
Automotive Specifications	<ul style="list-style-type: none"> <li>CHRYSLER MS-AR100 BGV</li> <li>FORD WSS-M2D379-B1</li> </ul>	<ul style="list-style-type: none"> <li>GM GMP.E/P.029</li> <li>GM GMW15812, Type 5</li> </ul>	
Color	<ul style="list-style-type: none"> <li>Black</li> </ul>		
Form(s)	<ul style="list-style-type: none"> <li>Pellets</li> </ul>		
Processing Method	<ul style="list-style-type: none"> <li>Coextrusion</li> <li>Extrusion</li> </ul>	<ul style="list-style-type: none"> <li>Profile Extrusion</li> <li>Sheet Extrusion</li> </ul>	<ul style="list-style-type: none"> <li>Thermoforming</li> <li>Vacuum Forming</li> </ul>
Revision Date	<ul style="list-style-type: none"> <li>11/11/2011</li> </ul>		

Physical	Typical Value (English)	Typical Value (SI)	Test Based On
Specific Gravity	0.970	0.970	ASTM D792
Density	0.970 g/cm <sup>3</sup>	0.970 g/cm <sup>3</sup>	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)	72	72	

Elastomers	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Stress at 100% - Across Flow (73°F (23°C))	435 psi	3.00 MPa	ASTM D412
Tensile Stress at 100% - Across Flow (73°F (23°C))	435 psi	3.00 MPa	ISO 37
Tensile Strength at Break - Across Flow (73°F (23°C))	1070 psi	7.40 MPa	ASTM D412
Tensile Stress at Break - Across Flow (73°F (23°C))	1070 psi	7.40 MPa	ISO 37
Elongation at Break - Across Flow (73°F (23°C))	450 %	450 %	ASTM D412

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

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**ExxonMobil Chemical Santoprene™ 121-67W175**  
**Thermoplastic Vulcanizate**

<b>Elastomers</b>	<b>Typical Value (English)</b>	<b>Typical Value (SI)</b>	<b>Test Based On</b>
Tensile Strain at Break - Across Flow (73°F (23°C))	450 %	450 %	ISO 37
Tear Strength - Across Flow (73°F (23°C), Die C)	126 lbf/in	22.0 kN/m	ASTM D624
Tear Strength - Across Flow 73°F (23°C), Method Bb, Angle (Nicked)	130 lbf/in	22 kN/m	ISO 34-1
Compression Set 158°F (70°C), 22.0 hr, Type 1	30 %	30 %	ASTM D395B
257°F (125°C), 70.0 hr, Type 1	41 %	41 %	
Compression Set 158°F (70°C), 22.0 hr, Type A	30 %	30 %	ISO 815
257°F (125°C), 70.0 hr, Type A	41 %	41 %	

<b>Thermal</b>	<b>Typical Value (English)</b>	<b>Typical Value (SI)</b>	<b>Test Based On</b>
Brittleness Temperature	-76 °F	-60 °C	ASTM D746
Brittleness Temperature	-76 °F	-60 °C	ISO 812

<b>Electrical</b>	<b>Typical Value (English)</b>	<b>Typical Value (SI)</b>	<b>Test Based On</b>
Dielectric Strength 73°F (23°C), 0.0800 in (2.03 mm)	670 V/mil	26 kV/mm	ASTM D149
Dielectric Constant 73°F (23°C), 0.0760 in (1.93 mm)	2.60	2.60	ASTM D150
Dielectric Constant 73°F (23°C), 0.0760 in (1.93 mm)	2.60	2.60	IEC 60250

<b>Extrusion</b>	<b>Typical Value (English)</b>	<b>Typical Value (SI)</b>
Drying Temperature	180 °F	82.2 °C
Drying Time	3.0 hr	3.0 hr
Melt Temperature	350 to 400 °F	177 to 204 °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.

<b>Aging</b>	<b>Typical Value (English)</b>	<b>Typical Value (SI)</b>	<b>Test Based On</b>
Change in Tensile Strength in Air 302°F (150°C), 168 hr	-10 %	-10 %	ASTM D573
Change in Tensile Strength in Air 302°F (150°C), 168 hr	-10 %	-10 %	ISO 188
Change in Ultimate Elongation in Air 302°F (150°C), 168 hr	-1.0 %	-1.0 %	ASTM D573
Change in Tensile Strain at Break in Air 302°F (150°C), 168 hr	-1.0 %	-1.0 %	ISO 188
Change in Durometer Hardness in Air Shore A, 302°F (150°C), 168 hr	4.0	4.0	ASTM D573
Change in Shore Hardness in Air Shore A, 302°F (150°C), 168 hr	4.0	4.0	ISO 188

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# ExxonMobil Chemical Santoprene™ 121-67W175 Thermoplastic Vulcanizate

Aging	Typical Value (English)	Typical Value (SI)	Test Based On
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. Do not exceed 15% drawdown. For more information, please consult our Material Safety Data Sheet and Extrusion Guide.

## Notes

<sup>1</sup> 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:

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