

# Santoprene™ 591-55W175

## Thermoplastic Vulcanizate

### Product Description

Santoprene™ 591-55W175 is a soft, black thermoplastic Vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material is designed for thin wall, architectural glazing and sealing application in the industry and consumer segments, and it has excellent resistance to compression set. This grade of Santoprene™ TPV is shear-dependent and can be processed on conventional thermoplastics equipment for extrusion, thermoforming. It is designed for extruding thin sections with excellent definition (down to 0.33 mm [0.013"] radius) and long runs with minimal build-up of material on screen packs or narrow die sections. It is polyolefin based and completely recyclable.

### 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> </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> </ul>
Revision Date	<ul style="list-style-type: none"> <li>▪ 01/28/2021</li> </ul>		

Physical	Typical Value (English)	Typical Value (SI)	Test Based On
Density / Specific Gravity	0.970	0.970	ASTM D792

Hardness	Typical Value (English)	Typical Value (SI)	Test Based On
Shore Hardness			ISO 868
Shore A, 15 sec, 73°F (23°C)	62	62	

Elastomers	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Stress at 100% - Across Flow (73°F (23°C))	302 psi	2.08 MPa	ASTM D412
Tensile Strength at Break - Across Flow (73°F (23°C))	773 psi	5.33 MPa	ASTM D412
Elongation at Break - Across Flow (73°F (23°C))	440 %	440 %	ASTM D412
Compression Set			ASTM D395B
212°F (100°C), 22 hr, Type 1	27 %	27 %	
257°F (125°C), 70 hr, Type 1	43 %	43 %	

### 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	-21 %	-21 %	ASTM D573
Change in Durometer Hardness in Air Shore A, 302°F (150°C), 168 hr	-3.0	-3.0	ASTM D573

### 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.

### 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. 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. Do not exceed 15% drawdown. For more information, please consult our Safety Data Sheet and Extrusion Guide.

### Notes

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

<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: [www.exxonmobilchemical.com/ContactUs](http://www.exxonmobilchemical.com/ContactUs)

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