

# Santoprene™ 121-40B260

## Thermoplastic Vulcanizate

### Product Description

A soft black thermoplastic vulcanizate (TPV) combining a low coefficient of friction with good bonding to TPV and EPDM rubber, in particular EPDM sponge profiles. This Santoprene grade offers easy processability due to a high shear thinning behavior for injection molding of complex geometries and excellent surface aesthetics, without surface bleeding after heat aging. Santoprene 121-40B260 TPV has been designed for soft corner molding and end caps of automotive dense and sponge weatherseals.

### Key Features

- Specially formulated to replace thermoset EPDM rubber in automotive door-seal corner molding applications
- Designed for shorter processing cycle time compared to thermoset EPDM rubber
- Adheres to vulcanized EPDM rubber and TPV (dense and sponge)
- Built-in low COF properties
- Good flowability with excellent surface aspect

### 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>
Applications	<ul style="list-style-type: none"> <li>▪ Automotive - Corner Molding and End Caps</li> </ul>	<ul style="list-style-type: none"> <li>▪ Automotive - Weather Seals</li> </ul>	
Uses	<ul style="list-style-type: none"> <li>▪ Outdoor Applications</li> </ul>		
RoHS Compliance	<ul style="list-style-type: none"> <li>▪ RoHS Compliant</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>▪ Injection Molding</li> </ul>	<ul style="list-style-type: none"> <li>▪ Multi Injection Molding</li> </ul>	
Revision Date	<ul style="list-style-type: none"> <li>▪ 10/16/2017</li> </ul>		

Physical	Typical Value (English)	Typical Value (SI)	Test Based On
Density	0.900 g/cm <sup>3</sup>	0.900 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)	43	43	

Elastomers	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Stress at 100% - Across Flow (73°F (23°C))	160 psi	1.10 MPa	ASTM D412
Tensile Stress at 100% - Across Flow (73°F (23°C))	160 psi	1.10 MPa	ISO 37
Tensile Strength at Break - Across Flow (73°F (23°C))	435 psi	3.00 MPa	ASTM D412
Tensile Stress at Break - Across Flow (73°F (23°C))	435 psi	3.00 MPa	ISO 37
Elongation at Break - Across Flow (73°F (23°C))	420 %	420 %	ASTM D412
Tensile Strain at Break - Across Flow (73°F (23°C))	420 %	420 %	ISO 37
Compression Set			ASTM D395B
158°F (70°C), 22 hr, Type 1	37 %	37 %	
Compression Set			ISO 815
158°F (70°C), 22 hr, Type A	37 %	37 %	



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### Injection Notes

Santoprene is incompatible with acetal and PVC.

To obtain a good bonding on EPDM sponge profile, the injection speed should be fast, at very high temperature in a warm mold.

In order to prevent a deformation of the sponge profile, the injection pressure should be moderate, keeping the holding pressure low.

The EPDM profile should be perfectly positioned in the mold, and maintained without deformation, to insure a maximum of surface interaction with the melt.

Cooling time should be longer than a typical TPV, to initiate recrystallization at contact interface.

### Additional Information

Where applicable, test results based on fan gated, injection molded plaques.

Tensile strength, elongation and tensile stress are measured across the flow direction - ISO type 1, ASTM die C.

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. For more information, please consult our Safety Data Sheet, Injection Molding Guide and Technical Literature (TL) on "Injection Molding of Corners and End Caps to EPDM Weatherseals".

### 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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