

# Santoprene™ 121-55W241

## 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 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"> <li>Used in glass encapsulation applications</li> <li>Used in sealing applications.</li> <li>Recommended for applications requiring superior part surface appearance.</li> <li>Designed to be injected at lower molding temperatures or at lower injection pressures.</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> <li>Europe</li> <li>Latin America</li> <li>North America</li> <li>South America</li> </ul> |
| Applications              | <ul style="list-style-type: none"> <li>Automotive - Glass Encapsulation</li> <li>Automotive - Weather Seals</li> </ul>  |
| Uses                      | <ul style="list-style-type: none"> <li>Automotive Applications</li> <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>  |
| 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> <li>Multi Injection Molding</li> </ul>  |
| Revision Date             | <ul style="list-style-type: none"> <li>03/21/2006</li> </ul>  |

| Physical         | Typical Value (English) | Typical Value (SI)      | Test Based On |
|------------------|-------------------------|-------------------------|---------------|
| Specific Gravity | 0.920                   | 0.920                   | ASTM D792     |
| Density          | 0.920 g/cm <sup>3</sup> | 0.920 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) | 59                      | 59                 |               |

| Elastomers  | Typical Value (English) | Typical Value (SI) | Test Based On |
|---|-------------------------|--------------------|---------------|
| Tensile Stress at 100% - Across Flow (73°F (23°C))    | 290 psi                 | 2.00 MPa           | ASTM D412     |
| Tensile Stress at 100% - Across Flow (73°F (23°C))    | 290 psi                 | 2.00 MPa           | ISO 37        |
| Tensile Strength at Break - Across Flow (73°F (23°C)) | 696 psi                 | 4.80 MPa           | ASTM D412     |
| Tensile Stress at Break - Across Flow (73°F (23°C))   | 696 psi                 | 4.80 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        |

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

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**ExxonMobil Chemical Santoprene™ 121-55W241  
Thermoplastic Vulcanizate**

| Elastomers                     | Typical Value (English) | Typical Value (SI) | Test Based On |
|--------------------------------|-------------------------|--------------------|---------------|
| Compression Set                |                         |                    | ASTM D395B    |
| 73°F (23°C), 70.0 hr, Type 1   | 29 %                    | 29 %               |               |
| 257°F (125°C), 70.0 hr, Type 1 | 56 %                    | 56 %               |               |
| Compression Set                |                         |                    | ISO 815       |
| 73°F (23°C), 70.0 hr, Type A   | 29 %                    | 29 %               |               |
| 257°F (125°C), 70.0 hr, Type A | 56 %                    | 56 %               |               |

| Thermal                 | Typical Value (English) | Typical Value (SI) | Test Based On |
|-------------------------|-------------------------|--------------------|---------------|
| Brittleness Temperature | -81 °F                  | -63 °C             | ASTM D746     |
| Brittleness Temperature | -81 °F                  | -63 °C             | ISO 812       |

**Injection Notes**

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

**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 and Injection Molding 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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