

# Santoprene™ 121-80W175

## Thermoplastic Vulcanizate

### Product Description

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 recyclable within the manufacturing stream.

### Key Features

- Recommended for applications requiring excellent flex fatigue resistance.
- Recommended for applications requiring excellent ozone resistance.
- Designed for improved UV resistance.
- Designed for extruding thin wall sections with excellent definition (down to 0.33 mm [0.013"] radius) and to maximize run length with minimal build-up of material on screen packs or narrow sections of dies.

### General

|                   |                                                               |                                          |                                     |
|-------------------|---------------------------------------------------------------|------------------------------------------|-------------------------------------|
| Applications      | ▪ Automotive - Seals and Gaskets ▪ Automotive - Weather Seals |                                          |                                     |
| Uses              | ▪ Automotive Applications                                     | ▪ Automotive Exterior Trim               | ▪ Outdoor Applications              |
| RoHS Compliance   | ▪ RoHS Compliant                                              |                                          |                                     |
| Color             | ▪ Black                                                       |                                          |                                     |
| Form(s)           | ▪ Pellets                                                     |                                          |                                     |
| Processing Method | ▪ Coextrusion<br>▪ Extrusion                                  | ▪ Profile Extrusion<br>▪ Sheet Extrusion | ▪ Thermoforming<br>▪ Vacuum Forming |

| Physical                   | Typical Value (English) | Typical Value (SI)      | Test Based On |
|----------------------------|-------------------------|-------------------------|---------------|
| Density / Specific Gravity | 0.955                   | 0.955                   | ASTM D792     |
| Density                    | 0.966 g/cm <sup>3</sup> | 0.966 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) | 85                      | 85                 |               |

| Elastomers                                            | Typical Value (English) | Typical Value (SI) | Test Based On |
|-------------------------------------------------------|-------------------------|--------------------|---------------|
| Tensile Stress at 100% - Across Flow (73°F (23°C))    | 643 psi                 | 4.43 MPa           | ASTM D412     |
| Tensile Stress at 100% - Across Flow (73°F (23°C))    | 643 psi                 | 4.43 MPa           | ISO 37        |
| Tensile Strength at Break - Across Flow (73°F (23°C)) | 1320 psi                | 9.13 MPa           | ASTM D412     |
| Tensile Stress at Break - Across Flow (73°F (23°C))   | 1320 psi                | 9.13 MPa           | ISO 37        |
| Elongation at Break - Across Flow (73°F (23°C))       | 470 %                   | 470 %              | ASTM D412     |
| Tensile Strain at Break - Across Flow (73°F (23°C))   | 470 %                   | 470 %              | ISO 37        |

### Extrusion Notes

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

### 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.

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.

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### 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. 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.