

SANTOPRENE® 211-45

SANTOPRENE®

A soft, colorable, versatile thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material combines good physical properties and chemical resistance for use in a wide range of 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 recyclable within the manufacturing stream.

Key Features

- Recommended for applications requiring excellent flex fatigue resistance.
- Excellent ozone resistance.
- UL listed: file #QMFZ2.E80017, Plastics - Component; file #QMFZ8.E80017, Plastics Certified For Canada - Component.
- Used in sealing applications.

Product information

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|----------------------|-------|-----------|
| Resin Identification | TPV | ISO 1043 |
| Part Marking Code | >TPV< | ISO 11469 |

Typical mechanical properties

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|--|---------|------------------------|
| Tensile stress at 100% elongation, perpendicular | 1.4 MPa | ISO 527-1/-2 or ISO 37 |
| Stress at break, perpendicular | 3.5 MPa | ISO 527-1/-2 or ISO 37 |
| Elongation at break, perpendicular | 340 % | ISO 527-1/-2 or ISO 37 |
| Brittleness Temperature | -62 °C | ASTM D 746 |
| Shore A hardness, 15s | 49 | ISO 48-4 / ISO 868 |
| Compression set, 23 °C, 24h | 11 % | ISO 815 |

Thermal properties

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|------------------------|--------|---------|
| RTI, electrical, 1.5mm | 100 °C | UL 746B |
| RTI, electrical, 3.0mm | 100 °C | UL 746B |
| RTI, strength, 1.5mm | 90 °C | UL 746B |
| RTI, strength, 3.0mm | 95 °C | UL 746B |

Flammability

| | | |
|-------------------------------|----------|-----------------|
| Burning Behav. at thickness h | HB class | IEC 60695-11-10 |
| Thickness tested | 1 mm | IEC 60695-11-10 |
| UL recognition | yes | UL 94 |

Electrical properties

| | | |
|------------------------------------|----------|---------------|
| Relative permittivity, 60Hz | 2.4 | IEC 62631-2-1 |
| Electric Strength, Short Time, 2mm | 30 kV/mm | ASTM D 149 |

Physical/Other properties

| | | |
|---------|-----------------------|----------|
| Density | 960 kg/m ³ | ISO 1183 |
|---------|-----------------------|----------|

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Injection

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|---------------------------------|-----------|
| Drying Temperature | 82 °C |
| Drying Time, Dehumidified Dryer | 3 h |
| Processing Moisture Content | ≤0.08 % |
| Max. regrind level | 20 % |
| Min. mould temperature | 10 °C |
| Max. mould temperature | 52 °C |
| Back pressure | 0.517 MPa |

Additional information

Processing Notes

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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. An SPI/SPE #3 finish is recommended (do not polish).