

# SANTOPRENE® 111-45

## SANTOPRENE®

A soft, black, 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

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

### Typical mechanical properties

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

### 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	27 kV/mm	ASTM D 149

### Physical/Other properties

Density	960 kg/m <sup>3</sup>	ISO 1183
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### Injection

Drying Temperature	82 °C
Drying Time, Dehumidified Dryer	3 h
Processing Moisture Content	≤0.08 %
Max. regrind level	20 %
Melt Temperature Optimum	215 °C
Min. melt temperature	165 °C
Max. melt temperature	265 °C
Mold Temperature Optimum	50 °C
Min. mould temperature	20 °C

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Max. mould temperature	80 °C
Back pressure	0.517 MPa
Ejection temperature	90 °C

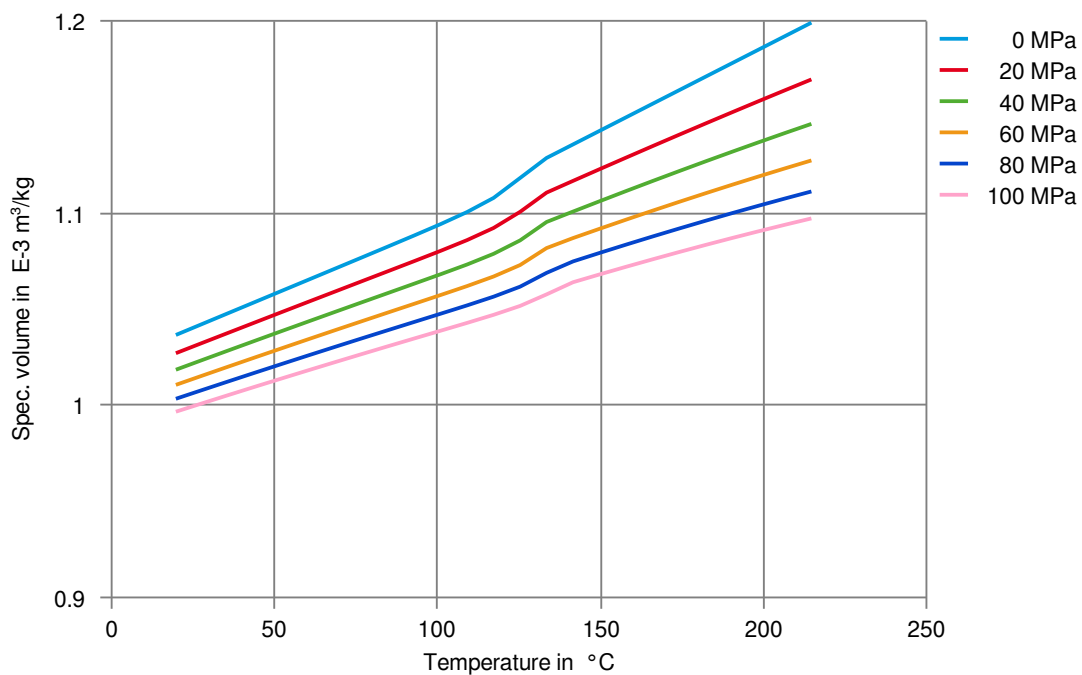
### Additional information

Processing Notes

### Processing Notes

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).

### Specific volume-temperature (pvT)



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