



## Santoprene 241-55

Santoprene 241-55 is a soft, colorable, specialty thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. It is designed for use in plumbing applications requiring potable water contact and also for food processing equipment. This grade of Santoprene TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding or extrusion. It is polyolefin based and recyclable within the manufacturing stream.

### Key Features

- Complies with NSF Standard 51: Food Equipment Materials – Plastics, materials and components used in food equipment.
- Certified by NSF to NSF/ANSI Standard 61: Drinking Water System Components – Health Effects.
- UL listed: file #QMFZ2.E80017, Plastics – Component; file #QM FZ8.E80017, Plastics Certified For Canada – Component.
- Recommended for applications requiring excellent flex fatigue resistance.

Physical	Typical Value (English)	Typical Value (SI)	Test Based On
Density / Specific Gravity	0.960	0.960	ASTM D792
Density	0.960 g/cm <sup>3</sup>	0.960 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)	59	59	

Thermal	Typical Value (English)	Typical Value (SI)	Test Based On
RTI Elec	212°F	100°C	UL 746
RTI Str	194°F	90.0C	UL 746

Elastomers	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Stress at 100% Across Flow (73°F 23°C)	247 psi	1.70 MPa	ASTM D412
Tensile Stress at 100% Across Flow (73°F 23°C)	247 psi	1.70 MPa	ASTM D412
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Gasket Factors	
Availability	- Africa & Middle East - Asia Pacific - Europe - Latin America - North America
Applications	- Plumbing (Potable Water Seals and Gaskets) - Tubing
Uses	- Pumping Parts
Agency Ratings	- NSF STD-51 - NSF STD-61 - UL QMFZ2 - UL QMFZ8
RoHS Compliance	- RoHS Compliant
UL File Number	- E80017
Color	- Natural Color
Form(s)	- Pellets
Processing Method	- Coextrusion - Extrusion - Injection Molding - Multi Injection Molding - Profile Extrusion - Sheet Extrusion
Revision Date	- 06/20/2014

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Electrical	Typical Value (English)	Typical Value (SI)	Test Based On
Comparative Tracking Index (CTI)	PLC 0	PLC 0	UL 746
High Amp Arc Ignition (HAI)	PLC 0	PLC 0	UL 746
High Voltage Arc Resistance to Ignition (HVAR)	PLC 6	PLC 6	UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 3	PLC 3	UL 746
Hot-wire Ignition (HWI)	PLC 2	PLC 2	UL 746

Extrusion	Typical Value (English)	Typical Value (SI)
Drying Temp	180°F	82°C
Drying Time	3.0 hr	3.0 hr
Melt Temp	385°F	196°C
Die Temp	390°F	199°C
Back Pressure	725 to 2900 psi	5.00 to 20.0 MPa

Flammability	Typical Value (English)	Typical Value (SI)	Test Based On
Flame Rating			UL 94
0.04 in (1.0mm)	HB	HB	
0.06 in (1.5mm)	HB	HB	
0.12 in (3.0mm)	HB	HB	

Injection	Typical Value (English)	Typical Value (SI)
Drying Temp	180°F	82°C
Drying Time	3.0 hr	3.0 hr
Suggested Max Moisture	0.080%	0.080%
Suggested Max Regrind	20%	20%
Rear Temp	350°F	177°C
Middle Temp	360°F	182°C
Front Temp	360°F	182°C
Nozzle Temp	370°F to 430°F	188°C 221°C
Processing (Melt) Temp	380°F to 450°F	193°C 232°C
Mold Temp	50°F to 125°F	10°C 52°C
Injection Rate	Fast	Fast
Back Pressure	50.0 to 200 psi	Fast
Screw Speed	100 to 200 rpm	100 to 200 rpm
Clamp Tonnage	3.0 to 5.0 tons/in <sup>2</sup>	41 to 69 MPa
Cushion	0.125 to 0.250 in	3.18 to 6.35 mm
Screw L/D Ratio	16.0:1.0 to 20.0:1.0	16.0:1.0 to 20.0:1.0
Screw Compression Ratio	2.0:1.0 to 2.5:1.0	2.0:1.0 to 2.5:1.0
Vent Depth	1.0E-3 in	0.025 mm

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