

**SANTOPRENE™ 8211-55 - TPV**
**Product Description**

A soft, colorable, non-hygroscopic 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 recyclable within the manufacturing stream.

**Characteristics**

<b>Applications</b>	Automotive - HVAC Flapper Door Seals, Automotive - Interior, Automotive - Interior Mat, Consumer - Electronics, Consumer - Floor Care, Consumer - Kitchen Tools, Seals and Gaskets, Soft Touch Grips
<b>Uses</b>	Automotive applications, Cell phones, Consumer applications, Flexible grips, Seals
<b>Agency Ratings</b>	UL QMFZ2, UL QMFZ8
<b>UL File Number</b>	E80017
<b>Color</b>	Natural color
<b>Delivery Form</b>	Pellets
<b>Processing</b>	Injection molding, Multi injection molding

<b>Physical properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Density	<b>0.93</b>	g/cm <sup>3</sup>	ASTM D792
Density	<b>930</b>	kg/m <sup>3</sup>	ISO 1183

<b>Hardness</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Shore A hardness-TPE, 15s	<b>59</b>		ISO 868

<b>Mechanical properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Tensile stress at 100%, perpendicular	<b>2.1</b>	MPa	ASTM D412
Tensile stress at 100%, perpendicular	<b>2.1</b>	MPa	ISO 37
Tensile strength at break elast, perpendicular	<b>4.6</b>	MPa	ASTM D412
Tensile stress at break, perpendicular	<b>4.6</b>	MPa	ISO 37
Elongation at break elast, perpendicular	<b>480</b>	%	ASTM D412
Tensile strain at break, perpendicular	<b>480</b>	%	ISO 37
Compression set, 70 °C, 22h, Type 1, Method B	<b>19</b>	%	ASTM D395
Compression set, 70 °C, 22h, Type A	<b>19</b>	%	ISO 815
Compression set, 125 °C, 70h, Type 1, Method B	<b>49</b>	%	ASTM D395
Compression set, 125 °C, 70h, Type A	<b>49</b>	%	ISO 815

<b>Thermal properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Brittleness temperature	<b>-62</b>	°C	ASTM D746
RTI Elec	<b>100</b>	°C	UL 746
RTI Str, 1.1 mm	<b>90</b>	°C	UL 746
RTI Str, 3.0 mm	<b>95</b>	°C	UL 746

<b>Injection</b>	<b>Value</b>	<b>Unit</b>
Necessary low maximum residual moisture content	<b>0.08</b>	%
Suggested maximum regrind	<b>20</b>	%
Rear temperature	<b>177 - 191</b>	°C
Middle temperature	<b>179 - 193</b>	°C
Front temperature	<b>185 - 199</b>	°C
Nozzle temperature	<b>185 - 210</b>	°C
Melt temperature	<b>143 - 216</b>	°C

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Mold temperature	24 - 52	°C
Injection speed	fast	-
Back pressure	0.345 - 0.689	MPa
Screw Speed	100 - 200	RPM
Clamp tonnage	41 - 69	MPa
Cushion	3.18 - 6.35	mm
Screw L/D	20:1/*	-
Screw compression ratio	2.5:1/*	-
Vent depth	0.025	mm

Aging	Value	Unit	Test Standard
Change in Tensile Strength in Air @ 150 C, 168 h	-11	%	ASTM D573
Change in Tensile Strength in Air @ 150 C, 168 h	-11	%	ISO 188
Change in Ultimate Elongation in Air @ 150 C, 168 h	-10	%	ASTM D573
Change in Tensile Strain at Break in Air @ 150 C, 168 h	-10	%	ISO 188
Change in Durometer Hardness in Air @ 150 C, 168 h, Shore A	1	-	ASTM D573
Change in Shore Hardness in Air @ 150 C, 168 h, Shore A	1	-	ISO 188

Flammability	Value	Unit
Flame rating, 1.1 mm	HB	UL 94
Flame rating, 3.0 mm	HB	UL 94

### Other text information

### Processing Notes

Desiccant drying for 3 hours at 80°C (180°F) can be performed if desired. Santoprene™ TPV has a wide temperature processing window from 175 to 230°C (350 to 450°F) and is incompatible with acetal and PVC.

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### General Disclaimer

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