

SANTOPRENE[®] 8271-65

SANTOPRENE®

A soft, colorable, specialty, non-hygroscopic thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. It is designed for use in non fatty food contact applications. This grade of Santoprene[™] TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding or blow molding. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

• This product, in principle, can be used in food contact applications in the USA (FDA). Migration or use limitations may apply.

Certified by NSF to NSF/ANSI Standard 51: Food Equipment Materials - Plastics, materials and components used in food equipment.

- UL listed: file #QMFZ2.E80017, Plastics Component; file #QMFZ8.E80017, Plastics Certified For Canada Component.
- · Recommended for applications requiring excellent flex fatigue resistance.
- Non-hygroscopic product; requires little to no drying before processing.
- · Neutral, easy coloring formulation.

Product information

Resin Identification Part Marking Code	TPV >TPV<		ISO 1043 ISO 11469
Typical mechanical properties			
Tensile stress at 100% elongation, perpendicular Tensile stress at break, perpendicular Elongation at break, perpendicular Brittleness Temperature Low temperature brittleness Shore A hardness, 15s Compression set, 70°C, 24h	6.5 470 -63 -63 69	°C °C	ISO 37 ISO 527-1/-2 or ISO 37 ISO 527-1/-2 or ISO 37 ASTM D 746 ISO 812 ISO 48-4 / ISO 868 ISO 815
Thermal properties			
RTI, electrical, 1.5mm RTI, electrical, 3.0mm RTI, strength, 1.5mm RTI, strength, 3.0mm	100 85	°C °C °C °C	UL 746B UL 746B UL 746B UL 746B
Flammability			
Burning Behav. at thickness h Thickness tested UL recognition	HB 1.1 yes		IEC 60695-11-10 IEC 60695-11-10 UL 94
Physical/Other properties			
Density	950	kg/m³	ISO 1183



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Injection

Drying Recommended	yes
Drying Temperature	80 °C
Drying Time, Dehumidified Dryer	≥3 h
Processing Moisture Content	≤0.08 %
Max. regrind level	20 %
Melt Temperature Optimum	200 °C
Min. melt temperature	185 °C
Max. melt temperature	215 °C
Mold Temperature Optimum	35 °C
Min. mould temperature	20 °C
Max. mould temperature	50 °C

Characteristics

Pr	oces	ssing

Delivery form

Injection Moulding, Multi Injection Moulding, Blow Moulding

Pellets

Additional information

Non Standard Data

Property Name	Condition	Value	Unit	Standard
Change in Tensile Strength	150°C, 168h	-1	%	ISO 188
Change in Tensile Strain at Break	150°C, 168h	-23	%	ISO 188
Change in Shore A Hardness	150°C, 168h	3	-	ISO 188

Injection molding

Processing Notes

Holding pressure should be about 50 to 75% of the actual injection pressure. A high screw RPM (100 to 200) is recommended.

Back pressure is not always needed, however, a back pressure of 0.3 to 0.7 MPa may be used to ensure a homogeneous melt and maintain a consistent shot size. A higher back pressure is normally employed when using masterbatches.

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.

Santoprene® TPV has a relatively high melt viscosity at low shear rates. Viscosity decreases as the shear rate increases.

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Increasing temperature has little effect on TPV melt viscosity. Smaller gates and higher shear rates keep melt viscosity low and improve melt flow. Please also refer to the injection molding guide.

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