

SANTOPRENE[®] 8211-65

SANTOPRENE®

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 or blow molding. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

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

Product information

Resin Identification Part Marking Code	TPV >TPV<		ISO 1043 ISO 11469
Rheological properties			
Moulding shrinkage, parallel	2.1 ^[1]	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.9 ^[1]	%	ISO 294-4, 2577
[1]: 2.0 mm thickness, min. 24 hours after molding, per test method	TPE-X0080		
Typical mechanical properties			
Tensile stress at 100% elongation, perpendicular	2.5	MPa	ISO 37
Tensile stress at break, perpendicular	5.5	MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	510	%	ISO 527-1/-2 or ISO 37
Brittleness Temperature	-63		ASTM D 746
Low temperature brittleness		°C	ISO 812
Shore A hardness, 15s	70		ISO 48-4 / ISO 868
Compression set, 70°C, 24h	29		ISO 815
Compression set, 125°C, 70h	55	%	ISO 815
Thermal properties			
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	1.1	mm	IEC 60695-11-10
UL recognition	yes		UL 94



ISO 1183

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Physical/Other properties

Density	930	kg/m³
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

Processing	Injection Moulding, Multi Injection Moulding, Blow Moulding
Delivery form	Pellets
Special characteristics	High Flow

Additional information

Auditional information					
Non Standard Data	Property Name	Condition	Value	Unit	Standard
	Change in Tensile Strength	150°C, 168h	-11	%	ISO 188
	Change in Tensile Strain at Break	150°C, 168h	-18	%	ISO 188
	Change in Shore A Hardness	150°C, 168h	-2	-	ISO 188
Injection molding	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	Processing Notes				

Desiccant drying for 3 hours at 80 $^\circ$ C (180 $^\circ$ F) is recommended. Santoprene® TPV has a wide temperature processing window from 175 to 230 $^\circ$ C (350 to

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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.

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.

Automotive

OEM	STANDARD
MAN	M 3236 A-6
Mercedes-Benz	DBL5562
VW Group	VW 50123
VW Group	VW 50180

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