Santoprene® 8271-55

Thermoplastic Vulcanizate

Celanese Corporation

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Technical Data

Product Description

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 SantopreneÂ®Â 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 FeaturesÂ· This product, in principle, can be used in food contact applications in the USA (FDA). Migration or use limitations may apply.Â· Certified by NSF to NSF/ANSI Standard 51: Food Equipment Materials - Plastics, materials and components used in food equipment.Â· UL listed: file #QMFZ2.E80017, Plastics - Component; file #QMFZ8.E80017, Plastics Certified For Canada - Component.Â· Recommended for applications requiring excellent flex fatigue resistance.Â· Non-hygroscopic product; requires little to no drying before processing.Â· Neutral, easy coloring formulation.

General

Material Status	• Commercial: Active		
Literature [1]	• Technical Datasheet		
UL Yellow Card [2]	• E80017-250570		
Search for UL Yellow Card	• Celanese Corporation • Santoprene®		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Uses	• Appliances • Blow Molding Applications • Flexible Grips • Food Containers • Gaskets	• Kitchenware • Living Hinges • Non-specific Food Applications • Packaging • Seals	• Soft Touch Grips • Tubing • White Goods & Small Appliances
Agency Ratings	• NSF STD-51	• UL QMFZ2	• UL QMFZ8
UL File Number	• E80017		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Blow Molding • Extrusion Blow Molding	• Injection Blow Molding • Injection Molding	• Multi Injection Molding

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.960	g/cm³	ASTM D792 ISO 1183
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress - Across Flow (100% Strain)	2.00	MPa	ASTM D412 ISO 37
Tensile Strength - Across Flow (Break)	4.50	MPa	ASTM D412 ISO 37
Tensile Elongation - Across Flow (Break)	430	%	ASTM D412 ISO 37
Compression Set			
70°C, 22 hr [4]	20	%	ASTM D395B
125°C, 70 hr [4]	46	%	ASTM D395B
70°C, 22 hr [5]	20	%	ISO 815
125°C, 70 hr [5]	46	%	ISO 815
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore A, 15 sec)	60		ISO 868
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	-63.0	°C	ASTM D746 ISO 812
RTI Elec	100	°C	UL 746B
RTI Str	85.0	°C	UL 746B

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Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.1 mm	HB		
3.0 mm	HB		

Injection	Nominal Value	Unit
Suggested Max Moisture	0.080	%
Suggested Max Regrind	20	%
Rear Temperature	177 to 191	°C
Middle Temperature	179 to 193	°C
Front Temperature	185 to 199	°C
Nozzle Temperature	185 to 210	°C
Processing (Melt) Temp	143 to 216	°C
Mold Temperature	24 to 52	°C
Injection Rate	Fast	
Back Pressure	0.345 to 0.689	MPa
Screw Speed	100 to 200	rpm
Clamp Tonnage	4.1 to 6.9	kN/cm²
Cushion	3.18 to 6.35	mm
Screw L/D Ratio	16.0:1.0 to 20.0:1.0	
Screw Compression Ratio	2.0:1.0 to 2.5:1.0	
Vent Depth	0.025	mm

Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

[3] Typical properties: these are not to be construed as specifications.

[4] Type 1

[5] Type A

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