Santoprene
Specialty Products

Wednesday, April 04, 2007

Santoprene™ TPV 251-70W232

Advanced Elastomer Systems - *Thermoplastic Elastomer*

Unit System: English

Actions **Legend (Open)**

General Information

Product Description

A soft, colorable, flame retardant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material has good fluid resistance and contains non-ether brominated flame retardants (non-furan emitting). It does not contain added antioxidants or metal deactivators. This grade of Santoprene TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding, extrusion or blow molding. It is polyolefin based and completely recyclable.

General	
Material Status	• Commercial: Active
Availability	• Africa • Asia • Australia • Europe • Latin America • Middle East • North America • Pacific Rim • South America
Test Standards Available	• ASTM • ISO
Uses	• Automotive Applications • Cable Jacketing • Electrical/Electronic Applications • Wire & Cable Applications
Agency Ratings	• EU 2003/11/EC • RoHS Compliant • UL QMFZ2 • UL QMFZ8
Color	• Natural Color
Forms	• Pellets
Processing Method	• Blow Molding • Coextrusion • Extrusion • Extrusion Blow Molding • Extrusion, Profile • Extrusion, Sheet • Injection Molding • Injection Molding, Multi

Properties [1]

Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (A Scale, 0.120 in)	70		ASTM D2240
Physical	**Nominal Value**	**Unit**	**Test Method**
Density -Specific Gravity	1.24	sp gr 23/23°C	ASTM D792
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress @ 100%	Across Flow: 390	psi	ASTM D412
Tensile Str @ Break Elast (73 °F)	Across Flow: 910	psi	ASTM D412
Elongation @ Break Elast	Across Flow: 550	%	ASTM D412
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Strength	810	V/mil	ASTM D149
Dielectric Constant	2.50		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Limiting Oxygen Index	26.0	%	ASTM D2863
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength in Air (302 °F, 168 hr)	-21	%	ASTM D573
Change in Ultimate Elongation in Air (302 °F, 168 hr)	-25	%	ASTM D573

Key Features

- UL listed: file #QMFZ2.E80017, Plastics - Component; file #QMFZ8.E80017, Plastics Certified For Canada -

Component. - Recommended for applications requiring excellent flex fatigue resistance. - Recommended for applications requiring excellent ozone resistance. - Limiting oxygen index, ASTM D 2863A: 26%. - Trace amounts (below 50 ppm) of polybrominated diphenylethers (PBDEs) may exist in this product. - Compliant to EU Directive 2003/11/EC regarding marketing and use of certain dangerous substances and preparations, specifically pentabromodiphenyl ether or octabromodiphenyl ether. - EU Directive 2002/95/EC (RoHS) compliant.

Processing Statement

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. For more information, please consult our Material Safety Data Sheet, Injection Molding Guide, Extrusion Guide and Blow Molding Guide.

Revision Date

03/23/2006

Additional Properties

Values are for injection molded plaques, fan-gated, 102.0 mm x 152.0 mm x 2.0 mm (4.000" x 6.000" x 0.080"). Tensile strength, elongation and tensile stress are measured across the flow direction - ISO type 1, ASTM die C.

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	180	F
Drying Time	3	hr
Suggested Max Moisture	0.080	%
Suggested Max Regrind	20	%
Mold Temperature	50 to 125	F
Injection Rate	Fast	
Back Pressure	50 to 100	psi
Screw Speed	100 to 200	rpm
Clamp Tonnage	3 to 5	tons/in²
Cushion	0.125 to 0.250	in
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	0.001	in

Injection Notes

Santoprene TPV is incompatible with acetal and PVC. For more information regarding processing and mold design, please consult our Injection Molding Guide.

Extrusion	Nominal Value	Unit
Drying Temperature	180	°F
Drying Time	3	hr

Extrusion Notes

Santoprene TPV is incompatible with acetal and PVC. For more information regarding processing and mold design, please consult our Extrusion Guide.

Notes

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

For additional technical, sales and order assistance:

ADVANCED ELASTOMER SYSTEMS
388 S. Main Street
Akron, OH 44311-1065

An **ExxonMobil Chemical** Affiliate

U.S. AnswerPerson(SM):	**800.305.8070**	option 2
North America AnswerPerson(SM):	**330.849.5272**	
Europe AnswerPerson(SM):	32.2.706.3511	
Japan AnswerPerson(SM):	**81-44-288-9920**	
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