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Santoprene™ 181-55MED

Thermoplastic Vulcanizate

Product Description

A soft, black, specialty thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. It is designed for use in medical and healthcare applications. This grade of Santoprene TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding or extrusion. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

- This grade meets the USP (U.S. Pharmacopeia) Class VI requirements for plastics.
- Additionally some ISO 10993 tests have been conducted.
- Each medical grade undergoes annual testing for cytotoxicity and heavy metals.
- Drug master file maintained with the FDA.

General

Availability [1]	▪ Africa & Middle East ▪ Asia Pacific	▪ Europe ▪ Latin America	▪ North America
Applications	▪ Medical - Soft Touch Grips, USP Class VI Seals and Gaskets		
Uses	▪ Medical/Healthcare Applications		
Agency Ratings	▪ USP Class VI		
RoHS Compliance	▪ RoHS Compliant		
Color	▪ Black		
Form(s)	▪ Pellets		
Processing Method	▪ Coextrusion ▪ Extrusion	▪ Injection Molding ▪ Multi Injection Molding	▪ Profile Extrusion ▪ Sheet Extrusion
Revision Date	▪ 06/20/2014		

Physical	Typical Value (English)		Typical Value (SI)		Test Based On
Density / Specific Gravity	0.980		0.980		ASTM D792
Density	0.980	g/cm³	0.980	g/cm³	ISO 1183

Hardness	Typical Value (English)		Typical Value (SI)		Test Based On
Shore Hardness					ISO 868
Shore A, 15 sec, 73°F (23°C)	59		59		

Elastomers	Typical Value (English)		Typical Value (SI)		Test Based On
Tensile Stress at 100% - Across Flow (73°F (23°C))	305	psi	2.10	MPa	ASTM D412
Tensile Stress at 100% - Across Flow (73°F (23°C))	305	psi	2.10	MPa	ISO 37
Tensile Strength at Break - Across Flow (73°F (23°C))	885	psi	6.10	MPa	ASTM D412
Tensile Stress at Break - Across Flow (73°F (23°C))	885	psi	6.10	MPa	ISO 37
Elongation at Break - Across Flow (73°F (23°C))	440	%	440	%	ASTM D412
Tensile Strain at Break - Across Flow (73°F (23°C))	440	%	440	%	ISO 37
Compression Set					ASTM D395B
73°F (23°C), 168 hr, Type 1	19	%	19	%	
Compression Set					ISO 815
73°F (23°C), 168 hr, Type A	19	%	19	%	

Injection Notes

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

Extrusion Notes

Santoprene TPV is incompatible with acetal and PVC in the molten state. For more information regarding processing and die design, please consult our Extrusion Guide.

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Additional Information

Where applicable, test results based on fan gated, 2.0 mm injection molded plaques. Tensile strength, elongation and tensile stress are measured across the flow direction. Test results are generated by ExxonMobil test methods that may not fully conform to the ASTM and/or ISO methods. Test methods are available upon request. Compression set at 25% deflection. All products purchased directly from an ExxonMobil affiliate in Europe are REACH compliant. For products not imported into Europe by ExxonMobil, customers should assess their legal responsibilities under REACH.

Legal Statement

This product, including the product name, shall not be used or tested in any medical application without the prior written acknowledgement of ExxonMobil Chemical as to the intended use. For detailed Product Stewardship information, please contact Customer Service.

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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 in the molten state. For more information, please consult our Safety Data Sheet, Injection Molding Guide and Extrusion Guide.

Notes

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

[1] Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

For additional technical, sales and order assistance: www.exxonmobilchemical.com/ContactUs

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