

Santoprene™ 281-55MED

Thermoplastic Vulcanizate

Product Description

A soft, colorable, 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

- Based on a series of biocompatibility tests conducted on representative grades, this grade should meet 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

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	▪ Natural Color		
Form(s)	▪ Pellets		
Processing Method	▪ Coextrusion ▪ Extrusion	▪ Injection Molding ▪ Multi Injection Molding	▪ Profile Extrusion ▪ Sheet Extrusion

Physical	Typical Value (English)	Typical Value (SI)	Test Based On
Density / Specific Gravity	0.960	0.960	ASTM D792
Density	0.960 g/cm ³	0.960 g/cm ³	ISO 1183

Hardness	Typical Value (English)	Typical Value (SI)	Test Based On
Shore Hardness			ISO 868
Shore A, 15 sec, 73°F (23°C)	60	60	

Elastomers	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Set (73°F (23°C))	5 %	5 %	ASTM D412
Tensile Set (73°F (23°C))	5 %	5 %	ISO 2285
Tensile Stress at 100% - Across Flow (73°F (23°C))	290 psi	2.00 MPa	ASTM D412
Tensile Stress at 100% - Across Flow (73°F (23°C))	290 psi	2.00 MPa	ISO 37
Tensile Strength at Break - Across Flow (73°F (23°C))	711 psi	4.90 MPa	ASTM D412
Tensile Stress at Break - Across Flow (73°F (23°C))	711 psi	4.90 MPa	ISO 37
Elongation at Break - Across Flow (73°F (23°C))	410 %	410 %	ASTM D412
Tensile Strain at Break - Across Flow (73°F (23°C))	410 %	410 %	ISO 37
Compression Set			ASTM D395B
73°F (23°C), 168 hr, Type 1	20 %	20 %	
212°F (100°C), 168 hr, Type 1	48 %	48 %	
Compression Set			ISO 815
73°F (23°C), 168 hr, Type A	20 %	20 %	
212°F (100°C), 168 hr, Type A	48 %	48 %	



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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.

Aging	Typical Value (English)	Typical Value (SI)	Test Based On
Change in Tensile Strength in Air 212°F (100°C), 168 hr	11 %	11 %	ASTM D573
Change in Tensile Strength in Air 212°F (100°C), 168 hr	11 %	11 %	ISO 188
Change in Ultimate Elongation in Air 212°F (100°C), 168 hr	9.0 %	9.0 %	ASTM D573
Change in Tensile Strain at Break in Air 212°F (100°C), 168 hr	9.0 %	9.0 %	ISO 188

