

Santoprene™ 121-50E500

Thermoplastic Vulcanizate

Product Description

A soft, black, UV resistant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material has controlled rheology for robotic or specialty extrusion applications. This grade of Santoprene TPV is shear-dependent and can be processed on conventional thermoplastics equipment for extrusion. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

- Designed for applications requiring good elastic recovery.
- Designed for improved UV resistance.
- Recommended for applications requiring superior part surface appearance.

General

Applications	▪ Automotive - Weather Seals		
Uses	▪ Automotive Applications	▪ Automotive Exterior Trim	▪ Outdoor Applications
RoHS Compliance	▪ RoHS Compliant		
Color	▪ Black		
Form(s)	▪ Pellets		
Processing Method	▪ Extrusion	▪ Profile Extrusion	

Physical	Typical Value (English)	Typical Value (SI)	Test Based On
Density / Specific Gravity	0.910	0.910	ASTM D792
Density	0.910 g/cm ³	0.910 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)	56	56	

Elastomers	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Stress at 100% - Across Flow (73°F (23°C))	247 psi	1.70 MPa	ASTM D412
Tensile Stress at 100% - Across Flow (73°F (23°C))	247 psi	1.70 MPa	ISO 37
Tensile Strength at Break - Across Flow (73°F (23°C))	580 psi	4.00 MPa	ASTM D412
Tensile Stress at Break - Across Flow (73°F (23°C))	580 psi	4.00 MPa	ISO 37
Elongation at Break - Across Flow (73°F (23°C))	450 %	450 %	ASTM D412
Tensile Strain at Break - Across Flow (73°F (23°C))	450 %	450 %	ISO 37
Compression Set			ASTM D395B
158°F (70°C), 22 hr, Type 1	23 %	23 %	
257°F (125°C), 70 hr, Type 1	41 %	41 %	
Compression Set			ISO 815
158°F (70°C), 22 hr, Type A	23 %	23 %	
257°F (125°C), 70 hr, Type A	41 %	41 %	

Thermal	Typical Value (English)	Typical Value (SI)	Test Based On
Brittleness Temperature	-78 °F	-61 °C	ASTM D746
Brittleness Temperature	-78 °F	-61 °C	ISO 812



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Aging	Typical Value (English)	Typical Value (SI)	Test Based On
Change in Tensile Strength in Air 275°F (135°C), 168 hr	-5.0 %	-5.0 %	ASTM D573
Change in Tensile Strength in Air 275°F (135°C), 168 hr	-5.0 %	-5.0 %	ISO 188
Change in Ultimate Elongation in Air 275°F (135°C), 168 hr	-5.0 %	-5.0 %	ASTM D573
Change in Tensile Strain at Break in Air 275°F (135°C), 168 hr	-5.0 %	-5.0 %	ISO 188
Change in Durometer Hardness in Air Shore A, 275°F (135°C), 168 hr	-1.0	-1.0	ASTM D573
Change in Shore Hardness in Air Shore A, 275°F (135°C), 168 hr	-1.0	-1.0	ISO 188

