

Santoprene™ 121-85M100

Thermoplastic Vulcanizate

Product Description

A soft, black, UV resistant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material combines good physical properties and chemical resistance for use in difficult injection molding applications. This grade of Santoprene™ TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding. It is polyolefin based and recycled within the manufacturing stream

Key Features

- Used in applications for exterior trims and spoilers for injection molding.
- Designed for fast, easy injection molding, especially for complex part geometries.
- Used in sealing applications.
- Recommended for applications requiring improved part surface appearance.
- UL listed: file #QMFZ2.E80017, Plastics - Component; file #QMFZ8.E80017, Plastics Certified For Canada - Component.

General

Applications	▪ Automotive - Seals and Gaskets		
Uses	▪ Automotive Applications ▪ Automotive Exterior Trim	▪ Automotive Interior Trim ▪ Automotive Under the Hood	▪ Outdoor Applications
Agency Ratings	▪ UL QMFZ2	▪ UL QMFZ8	
RoHS Compliance	▪ RoHS Compliant		
Automotive Specifications	▪ CHRYSLER MS-AR-100 DMV	▪ GM GMPE/P.144	
UL File Number	▪ E80017		
Color	▪ Black		
Form(s)	▪ Pellets		
Processing Method	▪ Injection Molding	▪ Multi Injection Molding	

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)	89	89	

Elastomers	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Stress at 100% - Across Flow (73°F (23°C))	777 psi	5.36 MPa	ASTM D412
Tensile Stress at 100% - Across Flow (73°F (23°C))	777 psi	5.36 MPa	ISO 37
Tensile Strength at Break - Across Flow (73°F (23°C))	1060 psi	7.28 MPa	ASTM D412
Tensile Stress at Break - Across Flow (73°F (23°C))	1060 psi	7.28 MPa	ISO 37
Elongation at Break - Across Flow (73°F (23°C))	390 %	390 %	ASTM D412
Tensile Strain at Break - Across Flow (73°F (23°C))	390 %	390 %	ISO 37
Tear Strength - Across Flow 73°F (23°C), Method Ba, Angle (Unnicked)	190 lbf/in	33 kN/m	ISO 34-1
Compression Set			ASTM D395B
158°F (70°C), 22 hr, Type 1	49 %	49 %	
257°F (125°C), 70 hr, Type 1	76 %	76 %	
Compression Set			ISO 815
158°F (70°C), 22 hr, Type A	49 %	49 %	
257°F (125°C), 70 hr, Type A	76 %	76 %	



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Thermal	Typical Value (English)	Typical Value (SI)	Test Based On
Brittleness Temperature	-62 °F	-52 °C	ASTM D746
Brittleness Temperature	-62 °F	-52 °C	ISO 812

Injection Notes

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

Aging	Typical Value (English)	Typical Value (SI)	Test Based On
Change in Tensile Strength in Air 302°F (150°C), 168 hr	3.0 %	3.0 %	ASTM D573
Change in Tensile Strength in Air 302°F (150°C), 168 hr	3.0 %	3.0 %	ISO 188
Change in Ultimate Elongation in Air 302°F (150°C), 168 hr	-24 %	-24 %	ASTM D573
Change in Tensile Strain at Break in Air 302°F (150°C), 168 hr	-24 %	-24 %	ISO 188
Change in Durometer Hardness in Air Shore A, 302°F (150°C), 168 hr	1.0	1.0	ASTM D573
Change in Shore Hardness in Air Shore A, 302°F (150°C), 168 hr	1.0	1.0	ISO 188

Flammability	Typical Value (English)	Typical Value (SI)	Test Based On
Flame Rating (0.04 in (1.1 mm))	HB	HB	UL 94

