

SANTOPRENE™ 121-58W175 - TPV

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, and is designed for thin wall or complex profile 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.

Characteristics

Applications	Automotive - Weather Seals
Uses	Automotive applications, Automotive exterior trim, Outdoor applications
Color	Black
Delivery Form	Pellets
Processing	Extrusion, Profile extrusion, Sheet extrusion

Physical properties	Value	Unit	Test Standard
Density	0.97	g/cm ³	ASTM D792
Density	970	kg/m ³	ISO 1183

Hardness	Value	Unit	Test Standard
Shore A hardness-TPE, 15s	61		ISO 868

Mechanical properties	Value	Unit	Test Standard
Tensile stress at 100%, perpendicular	1.99	MPa	ASTM D412
Tensile stress at 100%, perpendicular	1.99	MPa	ISO 37
Tensile strength at break elast, perpendicular	5.09	MPa	ASTM D412
Tensile stress at break, perpendicular	5.09	MPa	ISO 37
Elongation at break elast, perpendicular	460	%	ASTM D412
Tensile strain at break, perpendicular	460	%	ISO 37
Tear strength, Method Ba, perpendicular	20.6	kN/m	ISO 34-1
Compression set, 70 °C, 22h, Type 1, Method B	27	%	ASTM D395
Compression set, 70 °C, 22h, Type A	27	%	ISO 815
Compression set, 125 °C, 70h, Type 1, Method B	43	%	ASTM D395
Compression set, 125 °C, 70h, Type A	43	%	ISO 815

Thermal properties	Value	Unit	Test Standard
Brittleness temperature	-60	°C	ASTM D746

Electrical properties	Value	Unit	Test Standard
Dielectric Strength, 2.0 mm	26	kV/mm	ASTM D149
Dielectric Constant, 60Hz, 1.93 mm	2.7	-	ASTM D150
Dielectric Constant 60Hz, 1.93 mm	2.7	-	IEC 60250

Extrusion	Value	Unit
Drying temperature	82	°C
Drying time	3	h
Melt temperature	177 - 204	°C
Die head temperature	204	°C
Back pressure	5 - 20	MPa

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Aging	Value	Unit	Test Standard
Change in Tensile Strength in Air @ 150 C, 168 h	-21	%	ASTM D573
Change in Tensile Strength in Air @ 150 C, 168 h	-21	%	ISO 188
Change in Ultimate Elongation in Air @ 150 C, 168 h	7.7	%	ASTM D573
Change in Tensile Strain at Break in Air @ 150 C, 168 h	7.7	%	ISO 188
Change in Durometer Hardness in Air @ 150 C, 168 h, Shore A	-3	-	ASTM D573
Change in Shore Hardness in Air @ 150 C, 168 h, Shore A	-3	-	ISO 188
Continuous Upper Temperature Resistance (CUTR) @ 1008 h	135	°C	SAE J2236

Other text information

Processing Notes

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. Do not exceed 15% drawdown.

Other Approvals

OEM	Specification
Chrysler (FCA)	MS-AR-100 AGV
FORD	WSS-M2D378-B1
GM	GMW15812, Type 4E

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