

SANTOPRENE™ 121-80W175 - 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, thermoforming or vacuum forming. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

- Recommended for applications requiring excellent flex fatigue resistance
- Recommended for applications requiring excellent ozone resistance
- Designed for improved UV resistance
- Designed for extruding thin wall sections with excellent definition (down to 0.33 mm [0.013"] radius) and to maximize run length with minimal build-up of material on screen packs or narrow sections of dies

Characteristics

Applications	Automotive - Seals and Gaskets, Automotive - Weather Seals
Uses	Automotive applications, Automotive exterior trim, Outdoor applications
Color	Black
Delivery Form	Pellets
Processing	Coextrusion, Extrusion, Profile extrusion, Sheet extrusion, Thermoforming, Vacuum forming

Physical properties	Value	Unit	Test Standard
Density	59.6	lb/ft ³	ASTM D792
Density	60.3	lb/ft ³	ISO 1183
Hardness	Value	Unit	
Shore A hardness-TPE, 15s	85		ISO 868
Mechanical properties	Value	Unit	Test Standard
Tensile stress at 100%, perpendicular	643	psi	ASTM D412
Tensile stress at 100%, perpendicular	643	psi	ISO 37
Tensile strength at break elast, perpendicular	1320	psi	ASTM D412
Tensile stress at break, perpendicular	1320	psi	ISO 37
Elongation at break elast, perpendicular	470	%	ASTM D412
Tensile strain at break, perpendicular	470	%	ISO 37
Tear strength, Die C, perpendicular	4440	psi	ASTM D624
Tear strength, Die C, perpendicular	30.6	kN/m	ISO 34-1
Compression set, 70 °C, 22h, Type A	39	%	ISO 815
Compression set, 125 °C, 70h, Type A	55	%	ISO 815
Aging	Value	Unit	Test Standard
Change in Tensile Strength in Air @ 150 C, 168 h	-15	%	ASTM D573
Change in Tensile Strength in Air @ 150 C, 168 h	-15	%	ISO 188
Change in Ultimate Elongation in Air @ 150 C, 168 h	-13	%	ASTM D573
Change in Tensile Strain at Break in Air @ 150 C, 168 h	-13	%	ISO 188
Change in Durometer Hardness in Air @ 150 C, 168 h, Shore A	0	-	ASTM D573
Change in Shore Hardness in Air @ 150 C, 168 h, Shore A	0	-	ISO 188

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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	Additional Information
GM	GMW15812, Type 7E	
Renault	FRM 18-27-144 /---	
Iveco	IVECO 15-5244 EMP80	
Stellantis - Chrysler		MS-AR-100 DGV
GAC	QJ/GAC 1240.022	
SAIC Motor	SMTC 5 320 024	
VW Group	TL52703	
VW Group	VW50123	