



SANTOPRENE® 123-40

SANTOPRENE®

A hard, black, UV resistant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material combines good physical properties and chemical resistance for use in a wide range of applications. This grade of Santoprene® TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding, extrusion, blow molding, thermoforming or vacuum forming. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

- · Recommended for applications requiring excellent flex fatigue resistance
- Excellent ozone resistance
- Designed for improved UV resistance

Product information

TPV >TPV<		ISO 1043 ISO 11469
19.1 620 -58	MPa % °C	ISO 37 ISO 527-1/-2 or ISO 37 ISO 527-1/-2 or ISO 37 ASTM D 746 ISO 812 ISO 48-4 / ISO 868
B 24.7	mm/min	ISO 3795 (FMVSS 302) ISO 3795 (FMVSS 302)
2.6		IEC 62631-2-1
960	kg/m³	ISO 1183
≥3 ≤0.08 20 220 205 230 30 10	h % °C °C °C °C	
	>TPV< 9.1 19.1 620 -58 -58 41 B 24.7 2.6 960 yes 80 ≥3 ≤0.08 20 220 205 230 30 10	9.1 MPa 19.1 MPa 620 % -58 °C -58 °C 41 B 24.7 mm/min 2.6

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Extrusion

Drying Temperature 82 °C
Drying Time, Dehumidified Dryer 3 h
Melt Temperature Range 210 °C

Characteristics

Processing Injection Moulding, Multi Injection Moulding, Extrusion, Sheet Extrusion,

Coextrusion, Blow Moulding, Thermoforming

Delivery form Pellets

Special characteristics U.V. stabilised or stable to weather

Additional information

Non Standard Data

Property Name	Condition	Value	Unit	Standard
Change in Tensile Strength	150°C, 168h	-17	%	ISO 188
Change in Tensile Strain at Break	150°C, 168h	-22	%	ISO 188
Change in Shore D Hardness	150°C, 168h	2	-	ISO 188

Injection molding Holding pressure should be about 50 to 75% of the actual injection pressure.

A high screw RPM (100 to 200) is recommended.

Back pressure is not always needed, however, a back pressure of 0.3 to 0.7 MPa may be used to ensure a homogeneous melt and maintain a consistent shot size. A higher back pressure is normally employed when using masterbatches.

Processing Notes 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.

Santoprene® TPV has a relatively high melt viscosity at low shear rates. Viscosity decreases as the shear rate increases.

Increasing temperature has little effect on TPV melt viscosity. Smaller gates and higher shear rates keep melt viscosity low and improve melt flow. Please also refer to the injection molding guide.

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Automotive

OEM STANDARD ADDITIONAL INFORMATION

General Motors GMW15812P-TPV(EPDM+PP)-Type 9 N/A

Li Auto Q/LiA5310057 2021 (V2)

Mercedes-Benz DBL5562

Stellantis 55248_02 EMP140 MS-AR-100 GGV

VW Group VW 50123

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