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SANTOPRENE® 121-67W175J

SANTOPRENE®

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
- 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

Product information

Resin Identification	TPV		ISO 1043
Part Marking Code	>TPV<		ISO 11469

Typical mechanical properties

Tensile stress at 100% elongation, perpendicular	2.89	MPa	ISO 37
Tensile stress at break, perpendicular	6.83	MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	432	%	ISO 527-1/-2 or ISO 37
Brittleness Temperature	-59	°C	ASTM D 746
Low temperature brittleness	-59	°C	ISO 812
Shore A hardness, 15s	72		ISO 48-4 / ISO 868
Compression set, 70°C, 24h	29	%	ISO 815
Compression set, 125°C, 70h	43	%	ISO 815
Tear strength, normal	24	kN/m	ISO 34-1

Specific Application Suitability

Continuous Upper Temperature Resistance, 1000h	135	°C	SAE J2236

Electrical properties

Relative permittivity, 60Hz	2.6		IEC 62631-2-1

Physical/Other properties

Density	970	kg/m³	ISO 1183

Extrusion

Drying Temperature	82	°C
Drying Time, Dehumidified Dryer	3	h
Melt Temperature Range	177 - 204	°C

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Characteristics

Processing	Extrusion, Sheet Extrusion, Coextrusion, 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	-12.1	%	ISO 188
Change in Tensile Strain at Break	150 °C, 168h	-0.5	%	ISO 188
Change in Shore A Hardness	150 °C, 168h	0	-	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. Do not exceed 15% drawdown.

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