

SANTOPRENE® 121-70M350

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A soft, black, UV resistant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material is designed for gap filler applications requiring scratch resistance and good appearance. This grade of Santoprene® TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

- Designed for fast, easy injection molding, especially for complex part geometries
- Used in sealing applications
- Recommended for applications requiring superior part surface appearance
- Designed to be injected at lower molding temperatures or at lower injection pressures

Product information

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

Typical mechanical properties

Tensile stress at 100% elongation, perpendicular	2.6 MPa	ISO 37
Tensile stress at break, perpendicular	6.2 MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	480 %	ISO 527-1/-2 or ISO 37
Shore A hardness, 15s	70	ISO 48-4 / ISO 868
Compression set, 70 °C, 24h	40 %	ISO 815

Flammability

FMVSS Class	B	ISO 3795 (FMVSS 302)
Burning rate, Thickness 2 mm	49.3 mm/min	ISO 3795 (FMVSS 302)

Physical/Other properties

Density	930 kg/m ³	ISO 1183
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Injection

Drying Recommended	yes
Drying Temperature	80 °C
Drying Time, Dehumidified Dryer	≥3 h
Processing Moisture Content	≤0.08 %
Melt Temperature Optimum	215 °C
Min. melt temperature	195 °C
Max. melt temperature	240 °C
Mold Temperature Optimum	30 °C
Min. mould temperature	10 °C
Max. mould temperature	50 °C

Characteristics

Processing	Injection Moulding, Multi Injection Moulding
Delivery form	Pellets
Special characteristics	U.V. stabilised or stable to weather, High Flow

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Additional information

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

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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.

Automotive

OEM	STANDARD
Mercedes-Benz	DBL5562
VW Group	VW 50123
VW Group	VW 50180