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SANTOPRENE® 121-80B265

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Santoprene® 121-80B265 is a black thermoplastic vulcanizate (TPV) that combines low coefficient of friction with good bonding to TPV and EPDM rubber. This grade offers improved heat aging performance and excellent processability for injection molding of complex geometries with excellent surface aesthetics. It has low friction retention after heat aging without surface bleeding. It has been designed for corner molding and end cap of automotive extruded weather seals in TPV or in EDPM rubber.

Key Features

- Low friction injection molding grade
- Specially formulated to replace thermoset EPDM rubber in automotive glass run channel (GRC) corner molding applications
- Designed for shorter processing cycle time compared to thermoset EDPM rubber
- Adheres to vulcanized EPDM rubber and TPV
- Built-in low coefficient of friction properties
- Good flowability with excellent surface aspect

Product information

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

Typical mechanical properties

Low temperature brittleness	-64	°C	ISO 812
Shore A hardness, 15s	79		ISO 48-4 / ISO 868
Compression set, 70°C, 24h	46	%	ISO 815
Tear strength, normal	32	kN/m	ISO 34-1

Flammability

FMVSS Class	B		ISO 3795 (FMVSS 302)

Physical/Other properties

Density	919	kg/m³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	65	°C
Drying Time, Dehumidified Dryer	≥3	h
Processing Moisture Content	≤0.08	%
Max. regrind level	20	%
Melt Temperature Optimum	220	°C
Min. melt temperature	210	°C
Max. melt temperature	230	°C
Mold Temperature Optimum	50	°C
Min. mould temperature	40	°C
Max. mould temperature	60	°C

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Characteristics

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

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	

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). In order to obtain good bonding on an EPDM sponge profile, the injection speed should be fast (60 - 100mm/sec) and at a very high temperature in a warm mold. The injection pressure should be moderate and the holding pressure kept low in order to prevent profile deformation. The profile should be perfectly positioned in the mold and maintained without deformation to ensure maximum surface interaction with the melt. Cooling time should be longer than a typical TPV in order to initiate recrystallization at the contact interface. Santoprene® TPV 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	ADDITIONAL INFORMATION
GAC	QJ/GAC 1240.022	
General Motors	GMW15825P-TPV(EPDM+PP)-Type-6	N/A

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