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SANTOPRENE® 121-80B260

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A hard black thermoplastic vulcanizate (TPV) combining a low coefficient of friction with a good bonding to TPV and EPDM rubber. The grade offers excellent processability due to high shear thinning behavior for injection molding of complex geometries, with excellent surface aesthetics providing good color harmony with extruded profiles, without surface bleeding nor change of friction after heat aging. Santoprene® 121-80B260 TPV has been designed for complex hard corner molding and end caps of automotive dense extruded weatherseals, either in TPV or in EPDM rubber.

Key Features

- Specially formulated to replace thermoset EPDM rubber in automotive GRC corner molding applications
- Designed for shorter processing cycle time compared to thermoset EPDM rubber
- Adheres to vulcanized EPDM rubber and TPV
- Built-in low COF properties
- Good flowability with excellent surface aspect

Product information

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

Typical mechanical properties

Tensile stress at 100% elongation, perpendicular	3.5	MPa	ISO 37
Tensile stress at break, perpendicular	11	MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	640	%	ISO 527-1/-2 or ISO 37
Shore A hardness, 15s	78		ISO 48-4 / ISO 868
Compression set, 70°C, 24h	62	%	ISO 815

Physical/Other properties

Density	910	kg/m³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	65	°C
Drying Time, Dehumidified Dryer	≥3	h
Processing Moisture Content	≤0.08	%
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

Characteristics

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

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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	

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.

Automotive

OEM	ADDITIONAL INFORMATION
Renault	FRM 18-27-207 /---, No Spec, Special Part Approval, See Your CE Account Manager.
SAIC Motor	SMTC 5 320 024

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