

# SANTOPRENE<sup>®</sup> 121-40B265

### **SANTOPRENE®**

Santoprene® 121-40B265 is a soft, black thermoplastic vulcanizate (TPV) that combines a low coefficient of friction with good bonding to TPV and EPDM rubber, in particular EPDM sponge profiles. This grade offers easy processability due to a high shear thinning behavior for injection molding of complex geometries and excellent surface aesthetics, without surface bleeding after heat or UV aging. This grade has been designed to offer excellent UV resistance performance to fulfill most of the global auto OEMs specifications. This grade has been primarily designed for soft corner molding, sails, muckets and end caps of automotive dense and sponge weatherseals.

### **Key Features**

- High flow injection molding grade
- Exterior UV stabilized fulfilling SAEJ2527 3.5MJ/m<sup>2</sup> and PV3930 5.8MJ/m<sup>2</sup>
- Built-in low coefficient of friction properties
- Specially formulated to replace thermoset EPDM rubber in automotive weather seal and general molding applications
- Designed for shorter processing cycle time compared to thermoset EPDM rubber
- Adheres to vulcanized EPDM rubber (dense and sponge) and TPV Excellent surface aspect

### Product information

Resin Identification Part Marking Code	TPV >TPV<		ISO 1043 ISO 11469
Typical mechanical properties			
Tensile stress at 100% elongation, perpendicular Tensile stress at break, perpendicular Elongation at break, perpendicular Shore A hardness, 15s Compression set, 23°C, 24h Compression set, 70°C, 24h		%	ISO 37 ISO 527-1/-2 or ISO 37 ISO 527-1/-2 or ISO 37 ISO 48-4 / ISO 868 ISO 815 ISO 815
Physical/Other properties			
Density	908	kg/m³	ISO 1183
Injection			
Drying Recommended Drying Temperature Drying Time, Dehumidified Dryer Processing Moisture Content Max. regrind level Melt Temperature Optimum Min. melt temperature Max. melt temperature Mold Temperature Optimum Min. mould temperature Max. mould temperature	≥3 ≤0.08 10 225 210 240 50 40	% °C °C °C °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
	Santoprene® is incompatible with acetal and PVC. 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). To obtain a good bonding on EPDM sponge profile, the injection speed should be fast, at very high temperature in a warm mold. In order to prevent a deformation of the sponge profile, the injection pressure should be moderate, keeping the holding pressure low. The EPDM profile should be perfectly positioned in the mold, and maintained without deformation, to insure a maximum of surface interaction with the melt. Cooling time should be longer than a typical TPV, to initiate recrystallization at contact interface.
	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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