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SANTOPRENE® 121-65B200

SANTOPRENE®

A soft, black, UV resistant thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material is specially formulated to bond to thermoset EPDM rubber for corner molding, end caps and special applications requiring such adhesion to thermoset EPDM. 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

- Adheres to vulcanized EPDM rubber over wide range of temperatures
- High flexibility targeted for dynamic EPDM applications
- Higher gloss enables matching EPDM mating surface
- Used in sealing applications

Product information

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

Typical mechanical properties

Tensile stress at 100% elongation, perpendicular	2.3	MPa	ISO 37
Tensile stress at break, perpendicular	9.2	MPa	ISO 527-1/-2 or ISO 37
Elongation at break, perpendicular	600	%	ISO 527-1/-2 or ISO 37
Shore A hardness, 15s	67		ISO 48-4 / ISO 868
Compression set, 23°C, 24h	22	%	ISO 815
Compression set, 70°C, 24h	48	%	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	240	°C
Min. melt temperature	220	°C
Max. melt temperature	260	°C
Mold Temperature Optimum	40	°C
Min. mould temperature	30	°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

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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	STANDARD	ADDITIONAL INFORMATION
Geely	Q/JLY J7110166C-2024	
Li Auto	Q/LiA5310057	2021 (V2)
Mercedes-Benz	DBL5562	
Renault	FRM 18-27-141 /---, No Spec, Special Part Approval, See Your CE Account Manager.	
SAIC Motor	SMTC 5 320 024	
Stellantis	55248_02 EMP60	01378_21_03313
VW Group	VW 50123	
VW Group	VW 50180	
VW Group	VW TL 526 41-C	
VW Group	VW TL 527 03	

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