



SANTOPRENE® 8281-90MED

SANTOPRENE®

A hard, colorable, specialty, non-hygroscopic thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. It is designed for use in medical and healthcare applications. This grade of Santoprene® TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding or blow molding. It is polyolefin based and recyclable within the manufacturing stream.

Key Features

- Biocompatibility in tests corresponding to USP Class VI/ISO 10993
- A representative grade undergoes annual testing for cytotoxicity and heavy metals
- · Drug master file maintained with the FDA

Product information

TPV		ISO 1043
>TPV<		ISO 11469
6.7	MPa	ISO 37
13	MPa	ISO 527-1/-2 or ISO 37
650	%	ISO 527-1/-2 or ISO 37
94		ISO 48-4 / ISO 868
48	%	ISO 815
168	h	
48	%	ISO 815
60	%	ISO 815
930	kg/m³	ISO 1183
	>TPV< 6.7 13 650 94 48 168 48 60	>TPV< 6.7 MPa 13 MPa 650 %

Injection

Drying Recommended	yes
Drying Temperature	80 °C
Drying Time, Dehumidified Dryer	≥3 h
Processing Moisture Content	≤0.08 %
Max. regrind level	20 %
Melt Temperature Optimum	205 °C
Min. melt temperature	195 °C
Max. melt temperature	215 °C
Mold Temperature Optimum	35 °C
Min. mould temperature	20 °C
Max. mould temperature	50 °C

Characteristics

Processing Injection Moulding, Multi Injection Moulding, Blow Moulding

Delivery form Pellets

Printed: 2025-05-30 Page: 1 of 2

Revised: 2025-04-21 Source: Celanese Materials Database

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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.

Printed: 2025-05-30 Page: 2 of 2

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