

SANTOPRENE® 8181-55B1MED

SANTOPRENE®

A soft, black, specialty, non-hygroscopic thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. It is especially formulated to bond to ABS, PS, PC, COPE, ASA, PET, PPO/PS and metal for blends applications where hard/soft combinations are required. This grade of Santoprene™ TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding or extrusion. 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.
- Designed for excellent adhesion onto ABS, PS, PC, PMMA, ASA, and COPE (cold insert or 2K [two-shot] molding)
- Recommended for applications requiring excellent flex fatigue resistance
- Designed for soft touch applications
- Adhesion values can vary according to type of ABS, PS, PC, PMMA, ASA, COPE, metal, or blends thereof, tool design and processing conditions

Product information

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

Typical mechanical properties

Elongation at break, perpendicular	600 %	ISO 527-1/-2 or ISO 37
Shore A hardness, 15s	57	ISO 48-4 / ISO 868
Compression set, 125 °C, 70h	55 %	ISO 815

Physical/Other properties

Density	1030 kg/m ³	ISO 1183
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Injection

Drying Recommended	yes
Drying Temperature	70 °C
Drying Time, Dehumidified Dryer	≥3 h
Processing Moisture Content	≤0.08 %
Max. regrind level	20 %
Melt Temperature Optimum	200 °C
Min. melt temperature	185 °C
Max. melt temperature	210 °C
Mold Temperature Optimum	35 °C
Min. mould temperature	20 °C
Max. mould temperature	50 °C

Characteristics

Processing	Multi Injection Moulding
Delivery form	Pellets

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Additional information

Processing Notes

Processing Notes

Desiccant drying for 3 hours at 70°C (160°F) can be performed if desired. For two-shot injection molding, recommended melt temperature is 210 to 230°C (410 to 445°F) with mold temperatures of 30 to 50°C (90 to 125°F). For insert injection molding, recommended melt temperature is 230 to 250°C (445 to 485°F) with mold temperatures of 25 to 50°C (75 to 125°F). Because of its inherent nature to bond, this material may, on occasion, agglomerate from shipping and storage. Santoprene® TPV is incompatible with acetal and PVC.

24 hours are required before measuring bonding levels. Design Note: Degree of bonding can vary depending on gate size and thickness of grade layer. The recommended gate size is 75-85% of material wall thickness. To achieve optimal bonding to ABS substrates, Santoprene® TPV and substrate thickness need to be at least 2mm (0.080"). For other substances (PC, PS, etc), Santoprene® TPV and substrate thickness must be at least 1.5mm (0.060").