

# SANTOPRENE® 8281-55B1MED

## SANTOPRENE®

A natural color, 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 <sup>3</sup>	ISO 1183
---------	------------------------	----------

### 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

# SANTOPRENE® 8281-55B1MED

## SANTOPRENE®

### Additional information

#### Processing Notes

#### Processing Notes

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").

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.