

# Flexible TPV for peristaltic pump tubing

Help improve pump service  
life using Santoprene® TPV

Peristaltic pumps enable the safe delivery of pharmaceuticals and other critical liquids to patients. To achieve consistent flow over millions of cycles, while maintaining sterility and preventing contamination, specifying the right material for peristaltic pump tubing is essential.

Whether used in biopharmaceutical processing, dialysis machines, IV equipment, or other laboratory applications, peristaltic pump tubing must be made of materials capable of handling aggressive, corrosive, or abrasive media while resisting spallation, or the loss of tubing material which can raise contamination concerns. It must also retain its shape over time, helping to ensure a consistent flow of fluids, extend pump service life, and reduce the risk of downtime caused by tubing failure.



Santoprene® thermoplastic vulcanizates (TPV) offer outstanding flex-fatigue resistance, producing highly-elastic peristaltic pump tubing that resists kinks, retains its shape and is compatible with barbed fittings. Able to withstand a high number of flex cycles with minimal compression/tension set or loss of weight due to abrasion, Santoprene® TPV helps deliver tubing that lasts, and extends the service life of peristaltic pumps.

## Design smarter with Santoprene® TPV

Santoprene® thermoplastic vulcanizate (TPV) is the thermoplastic elastomer (TPE) solution for extruded medical tubing with high flexural fatigue resistance and exacting dimensions for consistent fluid delivery.

- + Excellent chemical resistance to a broad range of fluids used in healthcare environment (including IPA and bleach)
- + Withstands extreme temperature range -60°C (-75°F) to 135°C (275°F)
- + 20% lighter in weight compared to flexible PVC and silicone
- + Co-extrudable with polyolefin
- + Phthalate-free and silicone-free
- + USP Class VI and ISO 10993-5,6,10, and 11 compliance
- + Steam and gamma sterilizable
- + Sustainability benefit: Fully recyclable and reprocessable during manufacturing

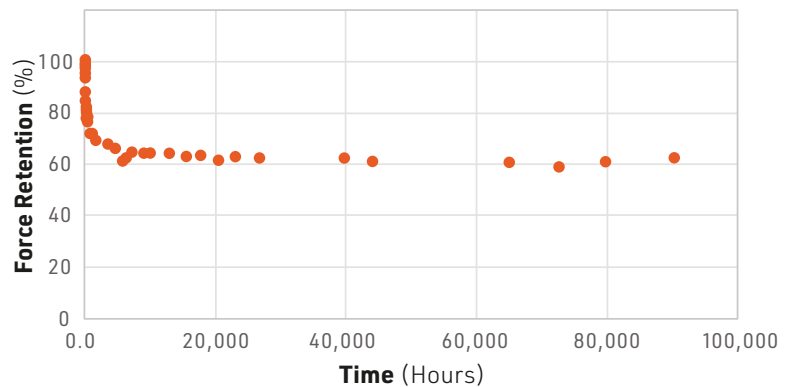
Santoprene® TPV Medical (MED) grades	Color	Hardness A scale. (+/-5)	Specific gravity at 23°C	Tensile strength (MPa)	Elongation at break (%)	Modulus at 100% (Mpa)	Comp, set (22h at 70°C)
		ISO 868	ISO 1183	ISO 37	ISO 37	ISO 37	ISO 815
Santoprene® TPV 281-64MED	natural	71	0.95	6.1	432	2.7	27%
Santoprene® TPV 8281-65MED	natural	68	0.92	5.9	480	2.4	32%

### Details of Testing

<b>Fabrication Method</b>	Injection molding
<b>Specimen Size</b>	13 mm diameter and 6.2 mm thick button from plaque
<b>Testing Method</b>	ISO 3384
<b>Compression Strain</b>	25%
<b>Test Temperature</b>	23°C
<b>Testing Equipment</b>	Wallace stress relaxometer

### Compression Stress Relaxation: ISO 3384 at 23°C

Santoprene® TPV 281-64MED



Durable, flexible Santoprene® TPV for peristaltic pump tubing provides:

- Consistent flow due to high resiliency
- Improved pump service life due to excellent flex fatigue
- Biocompatible
- Sterilizable
- Low permeation
- Highly elastic – works well with barbed fittings
- Sustainability benefits

Contact us for technical support or to request samples for your application.

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Publication Number:

MED-606-SolutionsforPeristalticPumpTubing-SS-EN-224

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