

Santoprene™ TPV

# Gradeslate for industrial and consumer applications

## Typical properties

Family	Grade series*	Description	Hardness reference	UL listed	Key attributes**
General purpose	101-xx/103-xx 201-xx/203-xx 111-xx 211-45	Black Natural Black Natural	55A – 50D 55A – 50D 35A, 45A 45A	✓ ✓ ✓ ✓	<ul style="list-style-type: none"> <li>Basic molding and extrusion</li> <li>Hard grades (&gt;85A) ideal for blow molding</li> <li>Highest level of elastomeric properties (i.e., lowest compression/tension set)</li> </ul>
	8201-xx	Natural	60A – 90A	✓	<ul style="list-style-type: none"> <li>Basic molding and extrusion</li> <li>Hard grade (90A) ideal for blow molding</li> <li>Excellent colorability</li> </ul>
Specialty molding	121-xxM100	Black	50A – 85A	✓	<ul style="list-style-type: none"> <li>Outstanding processability for specialty molding</li> <li>Designed for improved UV resistance</li> </ul>
	8211-xx	Natural	35A – 75A	✓	<ul style="list-style-type: none"> <li>Outstanding processability for specialty molding</li> <li>Excellent colorability</li> </ul>
Extrusion	121-xxW175 121-73W175 691-xxW175	Black Black Natural	58A – 50D 73A 65A, 73A	✓	<ul style="list-style-type: none"> <li>Designed and released against specific extrusion performance criteria</li> <li>121 series designed for improved UV resistance</li> </ul>
	251-xxW232	Natural	70A – 92A	✓	<ul style="list-style-type: none"> <li>UL 94 V-0 rated except 85A is V-2 rated</li> </ul>
Flame retardant	151-xxW256	Black	70A	✓	<ul style="list-style-type: none"> <li>UL 94 5VA rated</li> <li>UV resistant (UL (f1) rated)</li> <li>Stabilized against copper and other metal-catalyzed degradation</li> </ul>
	101-xxW255 201-55W255	Black Natural	45A, 55A 55A	✓	<ul style="list-style-type: none"> <li>Property retention in presence of typical dishwasher and washing machine detergents</li> <li>Stabilized for protection against copper and other metal-catalyzed degradation</li> </ul>
Potable water	241-xx 241-xxW236	Natural Natural	55A, 64A 73A, 80A	✓	<ul style="list-style-type: none"> <li>NSF 61 certified (241-xx also NSF 51 certified)</li> <li>W236 grades stabilized against copper and other metal-catalyzed degradation</li> </ul>
	271-xx/273-xx 8271-xx	Natural Natural	55A – 40D 55A – 75A	✓ ✓	<ul style="list-style-type: none"> <li>FDA non-fatty food contact rating</li> <li>NSF 51 certified</li> <li>8271-XX non-hygroscopic; enhanced colorability</li> </ul>
Bonding	291-60B150 291-75B150 8191-55B100 8211-55B100	Natural Natural Black Natural	60A 75A 55A 55A	✓ ✓ ✓ ✓	<ul style="list-style-type: none"> <li>Insert or 2 shot molding</li> <li>Bonds to PC, ABS, PS and other engineering thermoplastics (ETPs)</li> <li>B100 grades also bond to PP</li> </ul>
	8291-85TL	Natural	85A		<ul style="list-style-type: none"> <li>Extrusion</li> <li>Bonds to metal and PP</li> </ul>
UV resistant	121-xx/123-xx 121-80 8221-xx	Black Black Natural	80A – 40D 80A 60A, 70A	✓ ✓	<ul style="list-style-type: none"> <li>Designed for UV resistance</li> <li>UL listed grades are UL (f1) rated</li> </ul>
	Feedstock	RC8001	Natural	55A	<ul style="list-style-type: none"> <li>High rubber, low filler content feedstock for compounding</li> </ul>

\* xx = hardness reference value

\*\* Comparisons are made to the grades in the first section of the general purpose family below

## Bonding grades – licensed technology

Bonding products based on Santoprene™ TPV are available from RTP Company. See [www.rtpcompany.com](http://www.rtpcompany.com) for more information.

RTP Company grade designation	Features	Corresponding discontinued Santoprene TPV grade
RTP 6091-55A BLK		191-55PA
RTP 6091-70A BLK		191-70PA
RTP 6091-85A BLK		191-85PA
RTP 6091-55A NAT	Bonds to nylon 6, nylon 6 (30% glass filled), nylon 6,6 and PP	8291-55PA
RTP 6091-70A NAT		8291-70PA
RTP 6091-85A NAT		8291-85PA
RTP 6091 B-60A BLK		8191-60B500
RTP 6091 B-60A NAT	Bond to nylon 6, nylon 6 (30% glass filled), nylon 6,6, and nylon 12	8291-60B500
RTP 6091 B-85PA12 BLK	Bonds to nylon 12, nylon 6, nylon 6 (30% glass filled), nylon 6,6 and PP	191-85PA12

Santoprene thermoplastic vulcanizates (TPVs) have a successful track record for flexible, high-quality engineered parts used in a wide range of industrial and consumer applications.

Combining the characteristics of vulcanized rubber with the processing ease of thermoplastics, Santoprene TPVs deliver excellent long-term performance, the potential for reduced system costs, and the possibility of sustainability benefits.

### Excellent performance

- Long-term durable sealing capabilities in harsh environments
- Outstanding physical properties
- High-end finished part aesthetics through aspect harmonization and excellent surface qualities

### Reduced part/system costs

- Ease of processing which allows a broad processing window, fast cycle times and tight tolerances in part design
- Design flexibility which allows the combination of hard/soft materials
- Lower scrap rates compared to thermoset rubber materials

With a broad portfolio of flexible and easy to process high-quality grades, Santoprene TPVs are helping to drive customer success across a wide range of applications.

### Sustainability opportunities

- The lower density of Santoprene TPVs compared to thermoset rubber and other thermoplastic elastomers can contribute to reduced part weight
- Reduction in overall waste in the manufacturing process as scrap produced during processing can be recycled
- Due to integrated manufacturing, such as multi-shot injection molding, chemical usage is reduced because spray coatings and adhesive application are not needed
- Reduced manufacturing energy consumption as heat curing is not required compared to EPDM thermoset rubber
- Less manufacturing space because typical TPV extrusion lines only need one-third of the space used by comparable EPDM thermoset lines

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