

# Grade slate for industrial and consumer applications

Energy lives here™

## Typical properties

Family	Grade series*	Description	Hardness reference	UL listed	Key attributes**
General purpose	101-xx/103-xx	Black	55A – 50D	✓	<ul style="list-style-type: none"> <li>Standard extrusion and molding</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>
	201-xx/203-xx	Natural	55A – 50D	✓	
111-xx	Black	35A, 45A	✓		
211-45	Natural	45A	✓		
	8201-xx	Natural	60A – 90A	✓	<ul style="list-style-type: none"> <li>Standard extrusion and molding</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>Improved processability and aesthetics</li> <li>Designed for improved UV resistance</li> </ul>
	121-xxM200	Black	60A – 75A		<ul style="list-style-type: none"> <li>Superior processability and aesthetics</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	Black	58A – 50D	✓	<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>
	121-73W175	Black	73A		
691-xxW175	Natural	65A, 73A			
Flame retardant	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>
	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>
Detergent resistant	101-xxW255	Black	45A, 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>
	201-55W255	Natural	55A		
Improved elasticity	101-60W261	Black	60A	✓	<ul style="list-style-type: none"> <li>Improved elastic recovery properties</li> <li>Excellent flexural crack resistance</li> <li>Proven performance for dryer drum roller wheel</li> </ul>
Potable water	241-xx	Natural	55A, 64A	✓	<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>
	241-xxW236	Natural	73A, 80A		
Non-fatty food contact	271-xx/273-xx	Natural	55A – 40D	✓	<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>
	8271-xx	Natural	55A – 75A	✓	
Bonding	121-xxB260	Black	40A – 70A – 80A		<ul style="list-style-type: none"> <li>Improved bonding to TPV, EPDM and PP</li> <li>Low CoF to reduce friction</li> </ul>
	291-60B150	Natural	60A		<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>
	291-75B150	Natural	75A	✓	
	8191-55B100	Black	55A	✓	
	8211-55B100	Natural	55A	✓	
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	Black	80A – 40D	✓	<ul style="list-style-type: none"> <li>Designed for UV resistance</li> <li>UL listed grades are UL (f1) rated</li> </ul>
	121-80	Black	80A		
	8221-xx	Natural	60A, 70A		
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

## 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*	Hardness reference	Features	Corresponding discontinued Santoprene TPV grade*
RTP 6091-xx BLK	55A - 85A	Bonds to nylon 6, nylon 6 (30% glass filled), nylon 6,6 and PP	191-xxPA
RTP 6091-xx NAT	55A - 85A		8291-xxPA
RTP 6091 B-60A BLK	60A	Bonds to nylon 6, nylon 6 (30% glass filled), nylon 6,6 and nylon 12	8191-60B500
RTP 6091 B-60A NAT	60A		8291-60B500
RTP 6091 B-85PA12 BLK	85PA12	Bonds to nylon 12, nylon 6, nylon 6 (30% glass filled), nylon 6,6 and PP	191-85PA12

\*xx = hardness reference value

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

### 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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