ExxonMobil

Grade slate for industrial and consumer applications

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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	✓ ✓ ✓ ✓	▪ Standard extrusion and molding ▪ Hard grades (>85A) ideal for blow molding ▪ Highest level of elastomeric properties (i.e., lowest compression/tension set)
	8201-xx	Natural	60A – 90A	✓	▪ Standard extrusion and molding ▪ Hard grade (90A) ideal for blow molding ▪ Excellent colorability
Specialty molding	121-xxM100	Black	50A – 85A	✓	▪ Improved processability and aesthetics ▪ Designed for improved UV resistance
	121-xxM200	Black	60A – 75A		▪ Superior processability and aesthetics ▪ Designed for improved UV resistance
	8211-xx	Natural	35A – 75A	✓	▪ Outstanding processability for specialty molding ▪ Excellent colorability
Extrusion	121-xxW175 121-73W175 691-xxW175	Black Black Natural	58A – 50D 73A 65A, 73A	✓	▪ Designed and released against specific extrusion performance criteria ▪ 121 series designed for improved UV resistance
Flame retardant	251-xxW232	Natural	70A – 92A	✓	▪ UL 94 V-0 rated except 85A is V-2 rated
	151-xxW256	Black	70A	✓	▪ UL 94 5VA rated ▪ UV resistant (UL (f1) rated) ▪ Stabilized against copper and other metal-catalyzed degradation
Detergent resistent	101-xxW255 201-55W255	Black Natural	45A, 55A 55A	✓	▪ Property retention in presence of typical dishwasher and washing machine detergents ▪ Stabilized for protection against copper and other metal-catalyzed degradation
Improved elasticity	101-60W261	Black	60A	✓	▪ Improved elastic recovery properties ▪ Excellent flexural crack resistance ▪ Proven performance for dryer drum roller wheel
Potable water	241-xx 241-xxW236	Natural Natural	55A, 64A 73A, 80A	✓	▪ NSF 61 certified (241-xx also NSF 51 certified) ▪ W236 grades stabilized against copper and other metal-catalyzed degradation
Non-fatty food contact	271-xx/273-xx 8271-xx	Natural Natural	55A – 40D 55A – 75A	✓ ✓	▪ FDA non-fatty food contact rating ▪ NSF 51 certified ▪ 8271-XX non-hygroscopic; enhanced colorability
Bonding	121-xxB260	Black	40A - 70A - 80A		▪ Improved bonding to TPV, EPDM and PP ▪ Low CoF to reduce friction
	291-60B150 291-75B150 8191-55B100 8211-55B100	Natural Natural Black Natural	60A 75A 55A 55A	 ✓ ✓ ✓	▪ Insert or 2 shot molding ▪ Bonds to PC, ABS, PS and other engineering thermoplastics (ETPs) ▪ B100 grades also bond to PP
	8291-85TL	Natural	85A		▪ Extrusion ▪ Bonds to metal and PP
UV resistant	121-xx/123-xx 121-80 8221-xx	Black Black Natural	80A - 40D 80A 60A, 70A	 ✓ ✓	▪ Designed for UV resistance ▪ UL listed grades are UL (f1) rated
Feedstock	RC8001	Natural	55A		▪ High rubber, low filler content feedstock for compounding

* 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 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

Contact your ExxonMobil Chemical representative for more information:
santoprene.com

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