

ExxonMobil Santoprene® 8201-90 Thermoplastic Elastomer

Category : Polymer , Thermoplastic , Elastomer, TPE , Thermoplastic Vulcanizate Elastomer (TPV)

Material Notes:

A hard, colorable, non-hygroscopic thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. This material combines good physical properties and chemical resistance for use in a wide range of applications. This grade of Santoprene 8000 TPV is shear-dependent and can be processed on conventional thermoplastics equipment for injection molding, extrusion or blow molding. It is polyolefin based and completely recyclable. Key Features: Non-hygroscopic product, requires little to no drying before processing. Neutral, easy coloring formulation. Recommended for applications requiring excellent ozone resistance. Used in sealing applications. Recommended for applications requiring excellent flex fatigue resistance. UL listed: file #QMFZ2.E80017, Plastics - Component; file #QMFZ8.E80017, Plastics Certified For Canada - Component. Although not NSF certified, this product has a Material Supplier Form on file with NSF to facilitate its evaluation for use in applications requiring NSF certification. EU and China RoHS compliant. Applications: General Purpose Uses: Appliance Components Cell Phones Flexible Grips Kitchenware Stationary Supplies Strain Reliefs Processing Method: Blow Molding, Coextrusion, Extrusion, Extrusion Blow Molding, Injection Blow Molding, Injection Molding, Multi Injection Molding, Profile Extrusion, Sheet Extrusion, Thermoforming and Vacuum Forming Availability: Africa & Middle East, Europe, North America, Asia Pacific, Latin America and South America Information provided by ExxonMobil Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_ExxonMobil-Santoprene-8201-90-Thermoplastic-Elastomer.php

| Physical Properties | Metric | English | Comments |
|---------------------|------------|------------|-----------------|
| Specific Gravity | 0.940 g/cc | 0.940 g/cc | 23°C; ASTM D792 |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|---------------|---------------|---------------------------------|
| Hardness, Shore A | 96 | 96 | 2 mm, 15 sec; ISO 868 |
| | 97 | 97 | Air at 302°F, 168 hr; ASTM D573 |
| Tensile Strength at Break | 13.0 MPa | 1890 psi | Across Flow; ASTM D412 |
| | 13.2 MPa | 1910 psi | Air at 302°F, 168 hr; ASTM D573 |
| Tensile Stress | 7.10 MPa | 1030 psi | Across Flow; ASTM D412 |
| | @Strain 100 % | @Strain 100 % | |
| Elongation at Break | 527 % | 527 % | Air at 302°F, 168 hr; ASTM D573 |
| | 620 % | 620 % | Across Flow; ASTM D412 |
| Tear Strength | 48.0 kN/m | 274 pli | 73°C, Die C; ASTM D624 |
| Compression Set | 52 % | 52 % | 158°F, 22 hr; ASTM D395 |

| Thermal Properties | Metric | English | Comments |
|--------------------|--------|---------|----------|
|--------------------|--------|---------|----------|

| Brittleness Temperature Thermal Properties | -53.9 °C Metric | -65.0 °F English | ASTM D746 Comments |
|---|--------------------|----------------------|-----------------------|
| UL RTI, Electrical | 100 °C | 212 °F | UL 746 |
| UL RTI, Mechanical with Impact | 90.0 °C | 194 °F | UL 746 |
| | @Thickness 1.10 mm | @Thickness 0.0433 in | |
| | 95.0 °C | 203 °F | |
| Flammability, UL94 | @Thickness 1.60 mm | @Thickness 0.0630 in | UL 746 |
| | 95.0 °C | 203 °F | UL 746 |
| | @Thickness 3.00 mm | @Thickness 0.118 in | |
| HB | HB | | |
| Flammability, UL94 | @Thickness 1.10 mm | @Thickness 0.0433 in | UL 746 |
| | HB | HB | |
| | @Thickness 1.60 mm | @Thickness 0.0630 in | |
| Flammability, UL94 | HB | HB | UL 746 |
| | @Thickness 3.00 mm | @Thickness 0.118 in | |
| | HB | HB | |

| Processing Properties | Metric | English | Comments |
|---------------------------|-------------------|------------------|------------|
| Processing Temperature | 175 - 230 °C | 347 - 446 °F | |
| Rear Barrel Temperature | 191 - 204 °C | 375 - 400 °F | |
| Middle Barrel Temperature | 196 - 210 °C | 385 - 410 °F | |
| Front Barrel Temperature | 196 - 210 °C | 385 - 410 °F | |
| Nozzle Temperature | 210 - 221 °C | 410 - 430 °F | |
| Die Temperature | 196 - 224 °C | 385 - 435 °F | Extrusion |
| Melt Temperature | 199 - 216 °C | 390 - 420 °F | Processing |
| | 196 - 224 °C | 385 - 435 °F | Extrusion |
| Mold Temperature | 23.9 - 51.7 °C | 75.0 - 125 °F | Processing |
| Moisture Content | 0.080 % | 0.080 % | |
| Back Pressure | 0.345 - 0.689 MPa | 50.0 - 100 psi | |
| Clamp Pressure | 41.4 - 68.9 MPa | 6000 - 10000 psi | |
| Vent Depth | 0.00254 cm | 0.00100 in | |
| Cushion | 0.317 - 0.635 cm | 0.125 - 0.250 in | |

| Processing Properties | Metric | English | Comments |
|-----------------------|---------------|---------------|----------|
| Screw Speed | 100 - 200 rpm | 100 - 200 rpm | |

| Descriptive Properties | Value | Comments |
|-------------------------|---------------|--------------------------|
| Change in Mass in Air | -7.0% | 150°C, 168 hr, ASTM D573 |
| Color | Natural Color | |
| Form | Pellets | |
| Injection Rate | Fast | |
| Maximum Regrind % | 20 | |
| Screw Compression Ratio | 2:1 - 2.5:1 | |
| Screw L/D Ratio | 16:1 - 20:1 | |

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