

ExxonMobil Santoprene® 241-87 Thermoplastic Elastomer (discontinued **)

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

Material Notes:

A hard, colorable, specialty thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family. It complies with NSF 61 for plumbing applications in contact with potable water and NSF 51 for food processing equipment. This grade of Santoprene 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. Complies with NSF Standard 51: Listed Plastic Materials and Components used in Food Equipment. Complies with NSF Standard 61: Piping System Components for Drinking Water. Recommended for applications requiring excellent flex fatigue resistance. Information provided by Advanced Elastomer Systems

Order this product through the following link:

http://www.lookpolymers.com/polymer_ExxonMobil-Santoprene-241-87-Thermoplastic-Elastomer-nbspdiscontinued-.php

| Physical Properties | Metric | English | Comments |
|---------------------|------------|------------|-----------------|
| Specific Gravity | 0.960 g/cc | 0.960 g/cc | 23°C; ASTM D792 |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|----------|----------|--------------------------|
| Hardness, Shore A | 87 | 87 | .12 in; ASTM D2240 |
| Tensile Strength at Break | 16.8 MPa | 2440 psi | Across Flow; ASTM D412 |
| Tensile Strength, Ultimate | 6.62 MPa | 960 psi | Across Flow; ASTM D412 |
| Elongation at Break | 620 % | 620 % | Across Flow; ASTM D412 |
| Compression Set | 23 % | 23 % | 73°F, 22 hr; ASTM D395 |
| | 72 % | 72 % | 212°F, 168 hr; ASTM D395 |

| Processing Properties | Metric | English | Comments |
|---------------------------|--------------|--------------|------------|
| Processing Temperature | 175 - 230 °C | 347 - 446 °F | |
| Rear Barrel Temperature | 182 °C | 360 °F | |
| Middle Barrel Temperature | 188 °C | 370 °F | |
| Front Barrel Temperature | 193 °C | 380 °F | |
| Nozzle Temperature | 199 - 235 °C | 390 - 455 °F | |
| Die Temperature | 210 °C | 410 °F | Extrusion |
| Melt Temperature | 204 °C | 400 °F | Extrusion |
| | 204 - 232 °C | 400 - 450 °F | Processing |

| Mold Temperature Processing Properties | 10.0 - 51.7 °C Metric | 50.0 - 125 °F English | Processing Comments |
|---|--------------------------|--------------------------|------------------------|
| Drying Temperature | 82.2 °C | 180 °F | |
| Dry Time | 3 hour | 3 hour | |
| Moisture Content | 0.080 % | 0.080 % | |
| Back Pressure | 0.345 - 0.689 MPa | 50.0 - 100 psi | Processing |
| | 5.00 - 20.0 MPa | 725 - 2900 psi | Extrusion |
| 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 | |
| Screw Speed | 100 - 200 rpm | 100 - 200 rpm | |

| Descriptive Properties | Value | Comments |
|--|---------------|----------|
| Change in Mass in IRM 903 Oil at 257°F for 70 hr | 87 | |
| Color | Natural Color | |
| Form | Pellets | |
| Injection Rate | Fast | |
| Maximum Re grind % | 20 | |
| Screw Compression Ratio | 2:1 - 2.5:1 | |
| Screw L/D Ratio | 16:1 - 20:1 | |

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