

R-10404

Gap Filler

Thermal Interface Materials

Saint-Gobain Performance Plastics **ThermaCool™ R-10404** is a thermally conductive closed cell silicone sponge rubber. This material offers thermal conductivity along with electrical isolation. R-10404 is the superior choice for gasketing and cushioning applications requiring critical thermal transfer, sealing.

Physical Properties

| Property | Test Method | R-10404 |
|--|-------------|----------------------------------|
| Color | Visual | Light Green |
| Thickness, nominal (inch) | ASTM D374 | 1/32, 1/16, 3/32, 1/8, 3/16, 1/4 |
| Thermal Conductivity (W/mK) | ASTM E1530 | see chart below |
| Thermal Impedance (°C in. ² /W) | ASTM E1530 | see chart below |
| Break Strength (psi) | ASTM D412 | 120 |
| Elongation (%) | ASTM D412 | 150 |
| Hardness (Shore A) | ASTM D2240 | 13 |
| Dielectric Strength (volts/mil) | ASTM D149 | 100 |
| Compression Deflection (@25%, psi) | ASTM D1056 | 20 |
| Compression Set | ASTM D1056 | 15 |
| Density (lbs./in. ³) | ASTM D297 | 0.040 |
| Operating Temperature (°F) | — | -80 to 400 |

| Compression (%) | Pressure (psi) | Thermal Conductivity (W/mK) | Thermal Impedance (°C in. ² /W) |
|-----------------|----------------|-----------------------------|--|
| Contact | <1 | 0.30 | 6.0 |
| 10 | 5 | 0.40 | 4.5 |
| 25 | 12 | 0.45 | 2.5 |
| 50 | 34 | 0.65 | 1.0 |

All properties are typical values and should not be used for writing specifications.

Recommended Uses

R-10404 is offered to fill the needs of an unsupported thermal transfer material in applications requiring clean release, enhanced thermal performance by filling air gaps, electrical isolation and vibration cushioning.

Availability

R-10404 is available in both sheets 36"x 36" and yard goods 36" wide. Material can be supplied with an aggressive acrylic pressure sensitive adhesive or high temperature silicone adhesive on one side. Non-standard thicknesses available, please consult with factory. Extra firm grade also available in 1/32" thickness.

Limited Warranty: For a period of 6 months from the date of first sale, Saint-Gobain Performance Plastics Corporation warrants this product(s) to be free from defects in manufacturing. Our only obligation will be to provide replacement product for any portion proving defective, or at our option, to refund the purchase price thereof. User assumes all other risks, if any, including the risk of injury, loss or damage, whether direct or consequential, arising out of the use, misuse, or inability to use this product(s). SAINT-GOBAIN PERFORMANCE PLASTICS DISCLAIMS ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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Features/Benefits

- Excellent Conformability to irregular surfaces
- Clean release from most materials
- Repositionable
- Die Cuttable
- Multiple thicknesses to fill various air gap heights
- Foam structure provides extremely compliant gap filler
- Cost effective thermal gap filler

Applications

- Electronic Modules for Power Devices for Power Supplies
- Computers
- Telecommunication
- Automotive Electronics
- Electrical Insulation
- Military
- Medical
- Heat Pipe Assemblies
- CD ROM Cooling
- Vibration mounts
- Press pads
- Decal transfer

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