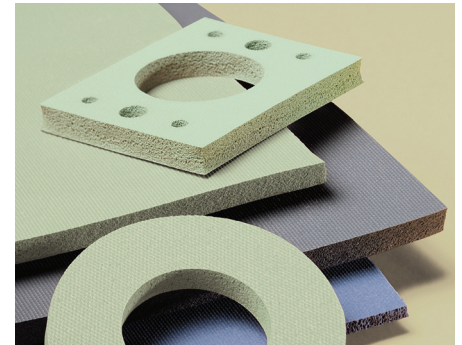


# R10404

## Thermally Conductive Silicone Sponge

Saint-Gobain Performance Plastics **ThermaCool® R10404** is a thermally conductive closed cell silicone sponge rubber. This material offers thermal conductivity, electrical isolation, and compression set resistance (vibration absorption). R10404 is the superior choice for battery pack gap filling, optimizing the efficiency and extending the service life of the individual battery cells.

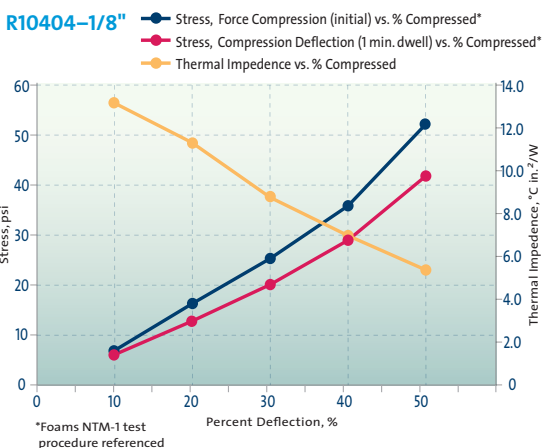


### Physical Properties

Property	Test Method	R10404
Color	Visual	Light Green
Thickness, nominal, inch (mm)	ASTM D374	1/32, 1/16, 3/32, 1/8, 3/16, 1/4 (0.8, 1.6, 2.4, 3.2, 4.8, 6.4)
Thermal Conductivity, W/mK	ASTM E1530	see chart below
Thermal Impedance, °C in. <sup>2</sup> /W (°C cm <sup>2</sup> /W)	ASTM E1530	see chart below
Tensile Strength, psi (kPa)	ASTM D412	120 (828)
Elongation, %	ASTM D412	150
Hardness, Shore "A"	ASTM D2240	13
Dielectric Strength, volts/mm	ASTM D149	4000
Compression Deflection, @25%, psi (kPa)	ASTM D1056	18 (125)
Compression Set, %	ASTM D1056	15
Density, lbs./ft. <sup>3</sup> (kg/m <sup>3</sup> )	ASTM D297	69 (1105)
Operating Temperature, °F (°C)	—	-80 to 400 (-62 to 205)

Compression, %	Thermal Conductivity, W/mK		Thermal Impedance, °C in. <sup>2</sup> /W (°C cm <sup>2</sup> /W)	
	R10404 @ 1/8"	R10404 @ 1/16"	R10404 @ 1/8"	R10404 @ 1/16"
10	0.36	0.36	13 (86)	5.5 (36)
30	0.52	0.46	9 (57)	3.5 (23)
50	0.86	0.57	5 (34)	2 (13)

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



### Recommended Uses

R10404 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

R10404 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.

The data and details in this leaflet were correct and up-to-date at the time of printing and are intended to provide information on our products and their possible applications. It is the user's responsibility to make sure he is in possession of the latest version of the product data sheet. This leaflet is not a specification and does not assure specific product characteristics or make reference to the suitability of the products for a definite application. Because Saint-Gobain cannot anticipate or control every application, we strongly recommend testing of this product under individual application conditions. The application, the use and the conversion of this product are under the user's responsibility.

### Features/Benefits

- Silicone based, for long life and temperature stability
- Closed cell sponge structure, for compression set resistance, critical for vibration control
- Thermally conductive
- Electrical isolative
- Conforms to irregular (cylindrical and other) surfaces

### Applications

- Lithium Ion Battery Pack
- Electronic Modules for Power Devices for Power Supplies
- Computers
- Telecommunication
- Automotive Electronics
- Electrical Insulation
- Military
- Medical
- Heat Pipe Assemblies
- Vibration mounts
- Press pads
- Decal transfer

Saint-Gobain Performance Plastics  
Avenue du Parc 18  
B4650 Chaineux, Belgium  
Tel: (32) 87-32-20-11  
Fax: (32) 87-32-20-51  
sgppl.chaineux@saint-gobain.com

14 McCaffrey St.  
Hoosick Falls, New York 12090-0320  
Customer Service: (800) 962-2666  
Tel: (518) 686-7301  
Fax: (800) 562-8479, (518) 686-4840

[www.foams.saint-gobain.eu](http://www.foams.saint-gobain.eu)

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