For product designers and engineers, Rogers Corporation is the elastomeric materials solutions partner of choice when quality, innovation, and collaborative support are critical to design optimization and product functionality.

Rogers’ materials are designed into products and applications in segments where high reliability and mission-critical performance are essential: automobiles, aerospace, mass transit, electronics, protective gear, footwear, medical products, and much more.

With unrivaled technical support, we foster successful customer relationships through a dedication to technical know-how, application expertise, and global support.

For further information on Rogers’ portfolio of elastomeric material solutions, please contact the Rogers’ facility closest to you or visit rogerscorp.com.

**BISCO® Silicone Materials** are the unrivaled long-lasting solution for product designers and engineers addressing mission-critical sealing, shock and vibration challenges under extreme conditions or safety requirements.

- **Venting Films**
  DeWAL® V-Series venting material for battery air pressure management.

- **Manual Service Disconnect Seal**
  BISCO® materials are used as a reliable environmental seal that withstands repeated opening and closing. The materials’ flame resistance (UL-V0) contributes to the safety requirements for high voltage batteries.

- **Pouch Cell Pads**
  PORON® polyurethanes pouch cell pads hold components in place, while withstanding dimensional changes to the pouch cells over the life of the battery. In parallel, they protect the cells against internal impact and vibration.

- **Cooling Plate Spring Pads**
  BISCO® silicones and PORON® polyurethanes are used as reliable elastomeric springs to maintain close contact between the cooling plate and the battery, ensuring performance.

- **Battery Housing Seal**
  BISCO® silicones provide ingress protection over the lifetime of the battery pack.
KEY BENEFITS

- **Superior Flame Ratings**
  Meets the highest UL, railway and aerospace standards.

- **Low Flame, Smoke, and Toxicity**
  During combustion.

- **Excellent Performance**
  At extreme high and low temperatures.

- **Superior Resistance to Compression Set**
  At ambient and elevated temperatures.

- **Natural Resistance to UV and Ozone**

- **Good Sealability with Low Compression**

- **Product Consistency**
  Quality manufacturing resulting in reliable and consistent material properties.

- **Broad Product Offering**
  Wide range of firmness, density, and thickness options available.

- **Quality Service**
  All products are supported by knowledgeable Rogers Sales and Applications Engineers, Technical Service and Customer Service Representatives.

MATERIAL SAMPLES

**BISCO® SILICONES**

**Cellular**

<table>
<thead>
<tr>
<th>BF-2000</th>
<th>BF-1000</th>
<th>HT-870</th>
<th>HT-800</th>
<th>HT-820</th>
<th>HT-840</th>
</tr>
</thead>
</table>

Specialty with Substrate

| HT-200 | EC-2130 |

**Solid**

1200 series

| HT-1240 | HT-1250 | HT-1260 | HT-1270 |

6000 series

| HT-6220 | HT-6210 | HT-6135 | HT-6240 | HT-6360 |

Specialty
<table>
<thead>
<tr>
<th>Property</th>
<th>HT-1500-1</th>
<th>HT-1500-2</th>
<th>HT-1500-3</th>
<th>HT-1500-4</th>
<th>HT-1500-5</th>
<th>HT-1500-6</th>
<th>HT-1500-7</th>
<th>HT-1500-8</th>
<th>HT-1500-9</th>
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<tbody>
<tr>
<td>Tensile Fill/Tensile Warp (ppi)</td>
<td>1.59-25.4</td>
<td>1.59-25.4</td>
<td>1.59-25.4</td>
<td>1.59-25.4</td>
<td>1.59-25.4</td>
<td>1.59-25.4</td>
<td>1.59-25.4</td>
<td>1.59-25.4</td>
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<tr>
<td>Tensile Strength, kPa (psi)</td>
<td>172</td>
<td>172</td>
<td>172</td>
<td>172</td>
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<td>Compression Set (%)</td>
<td>1.22-7.32</td>
<td>1.22-7.32</td>
<td>1.22-7.32</td>
<td>1.22-7.32</td>
<td>1.22-7.32</td>
<td>1.22-7.32</td>
<td>1.22-7.32</td>
<td>1.22-7.32</td>
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</tr>
<tr>
<td>Areal Density, kg/m² (lb./ft²)</td>
<td>1.22-7.32</td>
<td>1.22-7.32</td>
<td>1.22-7.32</td>
<td>1.22-7.32</td>
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<td>1.22-7.32</td>
<td>1.22-7.32</td>
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<tr>
<td>Tensile Elongation (%)</td>
<td>60</td>
<td>60</td>
<td>20</td>
<td>45</td>
<td>45</td>
<td>45</td>
<td>35</td>
<td>565</td>
<td>580</td>
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<td>Flammability Index (Is)</td>
<td>3</td>
<td>3</td>
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<td>3</td>
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<tr>
<td>Low Temperature Brittleness</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
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<tr>
<td>Water Vapor Regain (%)</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Collected Volatile Condensible Materials (CVCM) (%)</td>
<td>0.063-0.500</td>
<td>0.063-0.500</td>
<td>0.063-0.500</td>
<td>0.063-0.500</td>
<td>0.063-0.500</td>
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<td>0.063-0.500</td>
<td>0.063-0.500</td>
<td>0.063-0.500</td>
</tr>
<tr>
<td>Volume Resistivity (Ohm-cm)</td>
<td>10^13</td>
<td>10^13</td>
<td>10^13</td>
<td>10^13</td>
<td>10^13</td>
<td>10^13</td>
<td>10^13</td>
<td>10^13</td>
<td>10^13</td>
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<tr>
<td>Dielectric Strength (Volts/mil)</td>
<td>48</td>
<td>72</td>
<td>65</td>
<td>75</td>
<td>66</td>
<td>57</td>
<td>17</td>
<td>372</td>
<td>374</td>
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<tr>
<td>Durometer, Shore A, except HT-6210 Shore OO</td>
<td>40 +/- 5</td>
<td>50 +/- 5</td>
<td>60 +/- 5</td>
<td>70 +/- 5</td>
<td>62 +/- 4</td>
<td>22 +/- 5</td>
<td>35 +/- 5</td>
<td>65 +/- 5</td>
<td>70 +/- 10</td>
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<td>Sound Transmission (dB)</td>
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<td>Refer to Datasheet</td>
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<tr>
<td>Temperature Resistance</td>
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<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
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<td>-55°C-200°C</td>
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<td>10^13</td>
<td>10^13</td>
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<tr>
<td>Total Mass Loss (%)</td>
<td>0.79-12.70</td>
<td>0.79-12.70</td>
<td>0.79-12.70</td>
<td>0.79-12.70</td>
<td>0.79-12.70</td>
<td>0.79-12.70</td>
<td>0.79-12.70</td>
<td>0.79-12.70</td>
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<tr>
<td>Dissipation Factor (1kHz)</td>
<td>0.003</td>
<td>0.003</td>
<td>0.001</td>
<td>0.006</td>
<td>0.003</td>
<td>0.005</td>
<td>0.003</td>
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<tr>
<td>Low Temperature Flex</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
<td>-55°C-200°C</td>
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<tr>
<td>Electrical &amp; Thermal Properties</td>
<td>Meets Meets Meets Meets Meets Meets Meets Meets Meets Meets Meets</td>
<td></td>
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</tbody>
</table>

**SPECIALTY SERVICES**

- Silicone one side only
- Acrylic one or two sides of material
- Ability to slit minimum width of 6.35 mm (0.250"")
- Adhesive applied

**LEGEND**

- BISCO Cellular Silicones
- BISCO Solid Silicones
- BISCO Specialty Silicones

**TIPS FOR MATERIAL SELECTIONS**

- Applications
  - Aerospace
  - Communications
  - Rail
  - Automotive
  - Energy
  - Lighting

- Material Survey
  - Type of service
  - Part size & complexity
  - Ambiance
  - Applications
  - Material & design
  - Quantity & timeline

- Process
  - Manufacturing challenges
  - Challenges with application
  - Challenges with measurement
  - Challenges with cleaning

- Performance
  - Specification values
  - Application values
  - Functional values
  - Environmental values

- Special requests
  - Material w/substrate

- HT-200 defined

- HT-1500 defined

- HT-1000 defined

- HT-500 defined

- HT-100 defined

- HT-50 defined

- HT-10 defined

- HT-5 defined

- HT-1 defined

- HT-0.5 defined

- HT-0.25 defined

- HT-0.125 defined

- HT-0.063 defined

- HT-0.031 defined

- HT-0.010 defined
Elastomeric Material Solutions Application Design Tool

The Elastomeric Material Solutions Application Design Tool assists in the identification of PORON® Polyurethane and BISCO® Silicone materials that best meet your design requirements and provides material options based upon your application requirements.

DESIGN TOOLS

Compression Force Deflection (CFD) Tool

Using stress-strain data, the CFD Curve Tool helps in the identification of the BISCO® or PORON® material(s) that meet your engineering requirements.

CFD Data Curve
// 1.5 to 4.75 mm Thickness
// 0.60 N/mm² Maximum Stress

Poron® Polyurethanes
BF-1000 (2.40 mm)
HT-800 (2.40 mm)
HT-840 (2.40 mm)

BISCO® Silicones
BISCO® HT-800

Vibration Isolation Tool

The Vibration Isolation Tool recommends the proper PORON® Polyurethane and BISCO® Silicone materials for your vibration mitigation applications. This tool uses your specifications to calculate the isolation efficiency of our materials, and provides the most effective material option.

STANDARDS

Industry

ABS 5006
ABS 5026
ABS 5708
AMS 3195
AMS 3196
BMS 1-23
BMS 1-60
BMS 1-68
BMG 10
BMG 14
C-0808
C-0810
CMS-RB-202
CMS-RB-209
DMS 1980 GR2 CL2
DMS 1980 GR1 CL1
DMS 1980 GR1 CL2
DMS 1980 GR 3 CL2

Automotive

Chrysler MS-AY556
GMW16392

Rogers Internal BISCO Standard

Food/Medical

FDA

Rail

49 CFR 238
BS6853
DIN5510
EN 45545
NFF16-1014
NFPA 130

UL

UL 50
UL 50E
UL 157
UL 508
UL 1598

STANDARDS

Industry

UL

Results

Flamability and Outgassing

UL94 V-0

(Pass/Fail) Pass Pass Pass Pass Pass Pass

UL94 HF-1

(Pass/Fail) Pass Pass Pass Pass Pass Pass

Burn Rate FMVSS302

(Pass/Fail) Pass Pass Pass Pass Pass Pass

Flame Resistance @ 12 Sec FAR 25.853

(Pass/Fail) Pass Pass Pass Pass Pass Pass

Flame Resistance @ 60 Sec FAR 25.853

(Pass/Fail) Pass Pass Pass Pass Pass Pass

Smoke Density (DS)

@ 1.5 min ASTM E 662 <100 <100 <100 <100 <100 <100

Smoke Density (DS)

@ 4.0 min ASTM E 662 <200 <200 <200 <200 <200 <200

Toxic Gas Emissions Rating SMP-800C

(Pass/Fail @1.5/4.0 min) Pass Pass Pass Pass Pass Pass

Total Mass Loss

ASTM E 595 (%) 3.81 3.46 1.19 0.98 2.11 2.08

Collected Volatile Condensible Materials

ASTM E 595 (%) 1.14 1.12 0.34 0.25 0.63 0.57

Water Vapor Regain ASTM E595 (%) 0.07 0.04 0.02 0.03 0.02 0.01
APPLICATIONS

Gaskets
Heat Shields
Seals
Cushioning
Insulation
Floating Floors
and more …

For more information please visit us at:
www.rogerscorp.com/ems/bisco/index.aspx
World Class Performance

Rogers Corporation (NYSE:ROG) is a global leader in engineered materials to power, protect, and connect our world. With more than 180 years of materials science experience, Rogers delivers high-performance solutions that enable clean energy, internet connectivity, and safety and protection applications, as well as other technologies where reliability is critical. Rogers delivers Power Electronics Solutions for energy-efficient motor drives, vehicle electrification and alternative energy; Elastomeric Material Solutions for sealing, vibration management and impact protection in mobile devices, transportation interiors, industrial equipment and performance apparel; and Advanced Connectivity Solutions for wireless infrastructure, automotive safety and radar systems.

Headquartered in Arizona (USA), Rogers operates manufacturing facilities in the United States, China, Germany, Belgium, Hungary, and South Korea, with joint ventures and sales offices worldwide.

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