

BISCO® Silicones

BISCO® HT-870 – SOFT CELLULAR SILICONE

Compressibility, softness, and durability allow HT-870 to adapt to various environments, making it an ideal choice for sealing outdoor enclosures, protecting electronics from shock and heat, and providing cushioning or vibration isolation for various applications. BISCO® Silicones are available in various thicknesses and manufactured in roll form to allow fabricators to easily convert the material to the proper dimensions.

Features and Benefits

- Excellent memory and low stress relaxation reduces maintenance costs associated with gasket failures due to compression set and softening.
- Softness allows designers to use less force to seal enclosures and still protect their device from the environment.
- High compressibility allows material to conform to variable width gaps and awkward shapes, thereby allowing engineers more design flexibility.
- Resistance to ultraviolet light, ozone, extreme temperatures, and flame enables consistent performance in all environments.
- Available through distribution sites throughout North America, Europe, and Asia.

Applications

- Environmental seals to protect against penetration of dust, moisture, air, or light within outdoor enclosures such as lighting fixtures, HVAC units, and electronic cabinets
- Shock absorbing cushions and gaskets within automobiles and appliances

Installation

- Available with a pressure sensitive-adhesive on one or two sides to allow easy application to a variety of surfaces.

| BISCO® HT-870 | | |
|---------------------------------------------------|------------------------------------------------|-----------------------------------------|
| Property | Test Method | Typical Value |
| PHYSICAL | | |
| Colors | | Black, Red |
| Thickness, inches (mm) Tolerance | | 1/16 to 1/2 (1.6 – 12.7) See Reverse |
| Standard Width, inches (mm) | | 36 (914) |
| Density, lb./ft ³ (kg/m ³) | ASTM D 1056 | 15 (240) |
| Compression Force Deflection, psi (kPa) | Force measured @ 25% Deflection ASTM D 1056 | 4 (27.6) |
| Compression Set, % max. | ASTM D 1056 Test D @ 158°F (70°C) | < 1 |
| | ASTM D 1056 Test D @ 212°F (100°C) | < 5 |
| Tensile Strength, psi (kPa) | ASTM D 412 | 30 (207) |
| Elongation, % | ASTM D 412 | 90 |
| FLAMMABILITY & OUTGASSING | | |
| Flame Resistance | UL 94 | Listed V-0 and HF-1 |
| Flame Spread Index (L _s) | ASTM E 162 | < 25 |
| Smoke Density (D _s) | ASTM E 662 Tested @ 4.0 minutes | < 50 |
| | Tested @ 1.5 minutes | < 20 |
| Toxic Gas Emissions Rating | SMP-800C | Pass |

Please see reverse for additional data.

The information contained in this data sheet is intended to assist you in designing with Rogers BISCO Silicones. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose or that the results shown on the data sheet will be achieved by a user for a particular purpose. The user should determine the suitability of Rogers BISCO Silicones for each application.

The world runs better with Rogers.®

BISCO® HT-870 – SOFT CELLULAR SILICONE (continued)

| PROPERTY | TEST METHOD | VALUE |
|-----------------------------------------------------------------|-------------------------------|-------------------------|
| ENVIRONMENTAL PROPERTIES | | |
| Water Absorption | Internal: 24 hrs @ room temp. | 2.50 % |
| UV Resistance | SAE J - 1960 | No Degradation |
| Ozone Effect Rating | ASTM D 1171 | 0 (No Cracks) |
| Corrosion Resistance | AMS - 3568 | Pass |
| ELECTRICAL & THERMAL PROPERTIES | | |
| Dielectric Constant | ASTM D 150 | 1.38 |
| Dielectric Strength | ASTM D 149, Volts/mil | 90 |
| Dry Arc Resistance | ASTM D 495, Seconds | 91 |
| Volume Resistivity, Ohm - cm | ASTM D 257 | 10 ¹⁴ |
| Thermal Conductivity, BTU in/hr/ft ² /°F (w/m °K) | ASTM C 518 | 0.49 (0.07) |
| TEMPERATURE RESISTANCE | | |
| Low Temperature Flex at -67°F (-55°C) | ASTM D 1056 | Pass |
| Recommended Use Temperature, °F (°C) | SAE J-2236 | -67 to 392 (-55 to 200) |
| Recommended Intermittent High Temperature Use, °F (°C) | Internal | 482 (250) |

Standard Thickness Tolerance

| Standard Thickness | | Tolerance (Inches) |
|--------------------|-------|--------------------|
| Inches | mm | |
| 1/16 | 0.062 | ± 0.020 |
| 3/32 | 0.094 | ± 0.020 |
| 1/8 | 0.125 | ± 0.025 |
| 3/16 | 0.188 | ± 0.030 |
| 1/4 | 0.250 | ± 0.030 |
| 3/8 | 0.375 | ± 0.045 |
| 1/2 | 0.500 | ± 0.050 |

Width Tolerance (Cellular)

| Nominal Width (Inches) | Tolerance (w/o PSA) | Tolerance (with PSA) |
|------------------------|---------------------|----------------------|
| 0 < T ≤ 3 | ± 0.063 | ± 0.031 |
| 3 < T ≤ 8 | ± 0.094 | ± 0.031 |
| 8 < T ≤ 12 | ± 0.125 | ± 0.031 |
| 12 < T ≤ 18 | ± 0.188 | ± 0.031 |
| 18 < T ≤ 26 | ± 0.219 | ± 0.063 |
| 26 < T ≤ 36 | ± 0.250 | ± 0.063 |



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Notes:

- All metric conversions are approximate.
- Additional technical information is available.
- Typical values are a representation of an average value for the population of the property. For specification values contact Rogers Corporation.

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