

BISCO® Silicones

BISCO® HT-840 – EXTRA FIRM CELLULAR SILICONE

HT-840 is an extra-firm grade silicone foam that offers improved durability and sealing. It is used to seal and protect various outdoor communication, lighting, and electronic enclosures from small dust particles, wind driven rain, and fire. It offers a higher tear and tensile strength than our lighter grade foams. 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.
- Resistance to ultraviolet light, ozone, extreme temperatures, and flame enables consistent performance in all environments.
- Compact cell structure provides improved sealing performance.
- 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
- Enclosures requiring a more durable, high closure force gasket.
- Press pads requiring greater conformability and even pressure distribution at high temperatures

Installation

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

| BISCO® HT-840 | | |
|---|--|--|
| Property | Test Method | Typical Value |
| PHYSICAL | | |
| Color | | Gray |
| Thickness, inches (mm) Tolerance | | 1/16 to 1/4 (1.6 – 6.4) See Reverse |
| Standard Width, inches (mm) | | 36 (914) |
| Density, lb./ft ³ (kg/m ³) | ASTM D 1056 | 27 (432) |
| Compression Force Deflection, psi (kPa) | Force measured @ 25% Deflection ASTM D 1056 | 22 (151.7) |
| 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 | 60 (414) |
| Elongation, % | ASTM D 412 | 60 |
| 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.

BISCO® HT-840 – EXTRA FIRM CELLULAR SILICONE (continued)

| PROPERTY | TEST METHOD | VALUE |
|---|-------------------------------|-------------------------|
| ENVIRONMENTAL PROPERTIES | | |
| Water Absorption | Internal: 24 hrs @ room temp. | 0.20 % |
| 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 | 1.58 |
| Dielectric Strength | ASTM D 149, Volts/mil | 95 |
| Dry Arc Resistance | ASTM D 495, Seconds | 98 |
| Volume Resistivity, Ohm - cm | ASTM D 257 | 10 ¹⁴ |
| Thermal Conductivity, BTU in/hr/ft ² /°F (w/m °K) | ASTM C 518 | 0.84 (0.12) |
| 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 | 1.57 ± 0.020 |
| 3/32 | 0.094 | 2.39 ± 0.020 |
| 1/8 | 0.125 | 3.18 ± 0.025 |
| 3/16 | 0.188 | 4.76 ± 0.025 |
| 1/4 | 0.250 | 6.35 ± 0.040 |

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 |

Notes:

1. All metric conversions are approximate.
2. Additional technical information is available.
3. 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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