

BISCO® HT-820 – Firm Cellular Silicone

Typical Product Properties

HT-820 is a 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.

Installation

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

| BISCO® HT-820 | | |
|---|---|---------------------------------------|
| PROPERTY | TEST METHOD | TYPICAL VALUE |
| PHYSICAL | | |
| Color | | Gray |
| Thickness , mm (inches) Tolerance | | 0.8 – 6.4 (1/32 – 1/4) See Reverse |
| Standard Width , mm (inches) | | 914 (36) |
| Density , kg/m ³ (lb./ft ³) | ASTM D 1056 | 368 (23) |
| Compression Force Deflection , kPa (psi) | Force measured @ 25% Deflection ASTM D 1056 | 110.3 (16) |
| Compression Set , % max. | ASTM D 1056 Test D @ 70°C (158°F) ASTM D 1056 Test D @ 100°C (212°F) | < 1 < 5 |
| Tensile Strength , kPa (psi) | ASTM D 412 | 345 (50) |
| Elongation , % | ASTM D 412 | 55 |
| 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 Tested @ 1.5 minutes | < 50 < 20 |
| Toxic Gas Emissions Rating | SMP-800C | Pass |

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BISCO® HT-820 – Firm Cellular Silicone (continued)

| PROPERTY | TEST METHOD | VALUE |
|---|-------------------------------|-----------------------------|
| Environmental Properties | | |
| Water Absorption | Internal: 24 hrs @ room temp. | 0.80 % |
| 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 | 1.50 |
| Dielectric Strength | ASTM D 149, Volts/mil | 93 |
| Dry Arc Resistance | ASTM D 495, Seconds | 96 |
| Volume Resistivity, Ohm - cm | ASTM D 257 | 10 ¹⁴ |
| Thermal Conductivity, w/m °K (BTU in/hr/ft ² /°F) | ASTM C 518 | 0.11 (0.75) |
| Temperature Resistance | | |
| Low Temperature Flex at -55°C (-67°F) | ASTM D 1056 | Pass |
| Recommended Use Temperature, °C (°F) | Internal | -55° to 200° (-67° to 392°) |

Standard Thickness Tolerance

| Standard Thickness | | | Tolerance (Inches) |
|--------------------|-------|------|-----------------------|
| Inches | mm | | |
| 1/32 | 0.031 | 0.80 | ± 0.015 |
| 1/16 | 0.063 | 1.60 | ± 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 | ± 0.030 |

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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**Seal & Design
Able Division**
5533 Steeles Avenue West Unit 11
Toronto, Ontario M9L 1S7
Ph: (416) 741-0750
Gasket@AbleSealAndDesign.com



**Seal & Design
Corporate Headquarters**
4015 Casilio Parkway
Clarence, NY 14031
Ph: (716) 759-2222
Info@SealAndDesign.com
www.SealAndDesign.com



**Seal & Design
Higbee Division**
6741 Thompson Rd N
Syracuse, NY 13221
Ph: (315) 432-8021
Sales@Higbee-Inc.com