

# BISCO® HT-820

## Firm Silicone Foam

BISCO® HT-820 firm silicone foam exhibits enhanced sealing capabilities comparable to sponge rubber. It's designed for use in enclosures requiring a durable, high closure force gasket. Patented chemistry and cell structure provide a long-term performance advantage.

### Features & Benefits:

- Enhanced durability and sealing performance
- High tear and tensile strength comparable to a traditional sponge rubber
- Resistance to UV, ozone, and extreme temperatures for consistent performance across many environments
- Rated to most stringent UL flame standards

| PROPERTY  | TEST METHOD   | TYPICAL VALUE*                               | SPECIFICATION**  |
|---|---|--|--|
| <b>PHYSICAL</b>                                   |   |  |  |
| Color   | Visual  | <b>Gray</b>                                  | ---  |
| Thickness, mm (inches)                            | Internal  | <b>0.79 - 6.35</b><br><b>(0.031 - 0.250)</b> | See "Width Tolerance" table                                  |
| Density, kg/m <sup>3</sup> (lb./ft <sup>3</sup> ) | Internal  | 384<br>(22)                                  | <b>336 - 528</b><br><b>(21 - 33)</b>                         |
| Compression Force Deflection, kPa (psi)           | ASTM D1056  | 106<br>(15.3)                                | <b>82 - 138</b><br><b>(12 - 20)</b>                          |
| Compression Set, %                                | ASTM D1056<br>100°C (212°F) / 22 hrs / 50%                        | 2.6  | < 5  |
| Water Absorption, %                               | Internal<br>2" below water surface / 24 hrs /<br>change in weight | 0.5  | < 5  |
| <b>FLAMMABILITY</b>                               |   |  |  |
| Flame Resistance                                  | UL 94 (File E83967)   | Meets  | V-0  |
| Flame Spread Index (Is)                           | ASTM E162   | Meets  | Flaming Mode < 35  |
| Smoke Density (Ds)                                | ASTM E662   | Meets  | Flaming Mode, 1.5 min, < 100<br>Flaming Mode, 4.0 min, < 200 |
| Burn Length                                       | FMVSS 302   | Meets  | < 100 mm/min   |
| <b>THERMAL</b>                                    |   |  |  |
| Temperature Range, °C (°F)                        | Internal  | -55 to +200<br>(-67 to +392)                 | ---  |
| Thermal Conductivity, W/m °K                      | ASTM C518   | 0.09   | ---  |
| Low Temperature Flex                              | ASTM D1056<br>-55°C (-67°F) / 5 hrs                               | Pass   | ---  |
| Low Temperature Brittleness                       | ASTM D746<br>-55°C (-67°F) / 3 min                                | Pass   | ---  |

Specification values in bold are tested on a batch basis.

| PROPERTY  | TEST METHOD                            | TYPICAL VALUE*   | SPECIFICATION** |
|---|--|------------------|-----------------|
| <b>OUTGASSING</b>                                   |  |                  |                 |
| Total Mass Loss (%)                                 | ASTM E595<br>(4x10 <sup>-6</sup> Torr) | 2.11             | ---             |
| Collected Volatile Condensable Materials (CVCM) (%) | ASTM E595<br>(4x10 <sup>-6</sup> Torr) | 0.63             | ---             |
| Water Vapor Regain (%)                              | ASTM E595<br>(4x10 <sup>-6</sup> Torr) | 0.02             | ---             |
| <b>ELECTRIC</b>                                     |  |                  |                 |
| Dielectric Strength, Volts/mil                      | ASTM D149                              | 66               | ---             |
| Dielectric Constant, 1 kHz                          | ASTM D150                              | 1.7              | ---             |
| Dissipation Factor, 1 kHz                           | ASTM D495                              | 0.006            | ---             |
| Dry Arc Resistance, Seconds                         | ASTM D495                              | 174              | ---             |
| Volume Resistivity, Ohm-cm                          | ASTM D257                              | 10 <sup>14</sup> | ---             |

#### Standard Thickness Tolerances

| NOMINAL THICKNESS | TOLERANCE            |
|-------------------|----------------------|
| mm (inches)       | mm (inches)          |
| 0.79<br>(0.031)   | ± 0.381<br>(± 0.015) |
| 1.59<br>(0.063)   | ± 0.508<br>(± 0.020) |
| 2.39<br>(0.094)   | ± 0.508<br>(± 0.020) |
| 3.18<br>(0.125)   | ± 0.635<br>(± 0.025) |
| 4.78<br>(0.188)   | ± 0.635<br>(± 0.025) |
| 6.35<br>(0.250)   | ± 0.762<br>(± 0.030) |

#### Slit Material and Tape (PSA) Width Tolerances

| NOMINAL WIDTH              | TOLERANCE               |
|----------------------------|-------------------------|
| mm (inches)                | mm (inches)             |
| > 0 - 76<br>(> 0 - 3)      | ± 1.60<br>(± 0.063)     |
| > 76 - 203<br>(> 3 - 8)    | ± 2.39<br>(± 0.094)     |
| > 203 - 305<br>(> 8 - 12)  | ± 3.18<br>(± 0.125)     |
| > 305 - 457<br>(> 12 - 18) | ± 4.78<br>(± 0.188)     |
| > 457 - 660<br>(> 18 - 26) | ± 5.56<br>(± 0.219)     |
| > 660 - 914<br>(> 26 - 36) | + 25.4/- 0<br>(+ 1/- 0) |

#### VALUE ADDED OFFERINGS

- Adhesive (PSA) lamination
- Slit material/tapes

#### SPECIFICATION

- AMS3196

#### Notes:

\*Typical Value- Value is based on historical data. Please note the frequency of testing varies.

\*\*Specification- Applies to physical properties only, which are based on Rogers' internal benchmark and standard BISCO specification values. Additional industry specifications are available as well. All other properties are based on industry standard guidelines.

For more information and to request a sample, please contact our team of experts at [solutions@rogerscorp.com](mailto:solutions@rogerscorp.com)