

BISCO® BF-1000

Extra Soft Silicone Foam

BISCO® BF-1000 silicone foam's combination of low weight, extra softness, and high compressibility make it an ideal solution for various applications such as sealing outdoor enclosures, electronics protection, cushioning, and vibration isolation. The patented chemistry and cell structure provide a long-term performance advantage.

Features & Benefits:

- Extra softness enables a protective seal that requires less closure force
- Excellent memory and low stress relaxation reduces maintenance costs associated with gasket failures
- Resistance to UV, ozone, and extreme temperatures for consistent performance across many environments
- Rated to most stringent UL flame standards

† FDA compliant in accordance with regulation 21 CFR 177.2600 in white color

| PROPERTY | TEST METHOD | TYPICAL VALUE* | SPECIFICATION** |
|---|---|---|--|
| PHYSICAL | | | |
| Color | Visual | White, Gray, Black | --- |
| Thickness, mm (inches) | Internal | 1.59 - 25.40 (0.063 - 1.000) | --- |
| Density, kg/m ³ (lb./ft ³) | Internal | 192 (12) | 156 - 316 (9.8 - 19.7) |
| Compression Force Deflection, kPa (psi) | ASTM D1056 | 16.5 (2.4) | 7 - 35 (1 - 5) |
| Compression Set, % | ASTM D1056 100°C (212°F) / 22 hrs / 50% | 1.7 | < 5 |
| Tensile Strength, kPa (psi) | ASTM D412 | 262 (38) | > 138 (> 20) |
| Elongation, % | ASTM D412 | 86 | > 60 |
| Water Absorption, % | Internal 2" below water surface / 24 hrs / change in weight | 1.4 | < 10 |
| FLAMMABILITY | | | |
| Flame Resistance | UL 94 (File E83967) | Meets | V-0; HF-1 |
| Flame Spread Index (Is) | ASTM E162 | Meets | Flaming Mode < 35 |
| Smoke Density (Ds) | ASTM E662 | Meets | 1.5 min, Flaming Mode < 100 4.0 min, Flaming Mode < 200 |
| Burn Length | FMVSS 302 | Meets | < 100 mm/min |
| THERMAL | | | |
| Temperature Range, °C (°F) | Internal | -55 to +200 (-67 to +392) | --- |
| Thermal Conductivity, W/m °K | ASTM C518 | 0.048 | --- |
| Low Temperature Flex | ASTM D1056 -55°C (-67°F) / 5 hrs | Pass | --- |
| Low Temperature Brittleness | ASTM D746 -55°C (-67°F) / 3 min | Pass | --- |

Specification values in bold are tested on a batch basis.

| PROPERTY | TEST METHOD | TYPICAL VALUE* | SPECIFICATION** |
|---|--|------------------|-----------------|
| OUTGASSING | | | |
| Total Mass Loss (%) | ASTM E595 (4x10 ⁻⁶ Torr) | 3.46 | --- |
| Collected Volatile Condensable Materials (CVCM) (%) | ASTM E595 (4x10 ⁻⁶ Torr) | 1.12 | --- |
| Water Vapor Regain (%) | ASTM E595 (4x10 ⁻⁶ Torr) | 0.04 | --- |
| ELECTRIC | | | |
| Dielectric Strength, Volts/mil | ASTM D149 | 72 | --- |
| Dielectric Constant, 1 kHz | ASTM D150 | 1.5 | --- |
| Dissipation Factor, 1 kHz | ASTM D495 | 0.004 | --- |
| Dry Arc Resistance, Seconds | ASTM D495 | 123 | --- |
| Volume Resistivity, Ohm-cm | ASTM D257 | 10 ¹⁴ | --- |

Standard Thickness Tolerances

| NOMINAL THICKNESS | TOLERANCE |
|-------------------|----------------------|
| mm (inches) | mm (inches) |
| 1.59 (0.063) | ± 0.508 (± 0.020) |
| 2.38 (0.094) | ± 0.508 (± 0.020) |
| 3.18 (0.125) | ± 0.635 (± 0.025) |
| 4.76 (0.188) | ± 0.762 (± 0.030) |
| 6.35 (0.250) | ± 1.016 (± 0.040) |
| 9.53 (0.375) | ± 1.524 (± 0.060) |
| 12.70 (0.500) | ± 1.270 (± 0.050) |
| 15.88 (0.625) | ± 1.524 (± 0.060) |
| 19.05 (0.750) | ± 2.286 (± 0.090) |
| 25.40 (1.000) | ± 2.286 (± 0.090) |

Slit Material and Tape (PSA) Width Tolerances

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

VALUE ADDED OFFERINGS

- Adhesive (PSA) lamination
- Slit material/tapes

† Statement of FDA compliance is based solely on the following: BF-1000 (White) silicone foams (i) are compounded and cured under conditions of good manufacturing practice; (ii) have been subjected to annual extraction testing in accordance with FDA Regulation 21 CFR 177.2600 paragraphs (e) and (f) and found to meet all extractives limitations, both of which are criteria set forth in 21 CFR 177.2600 as necessary for rubber articles intended for repeated use in those areas specified in the regulation.

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.