

BISCO® BF-1000 – Extra Soft Cellular Silicone

Typical Product Properties

Compressibility, softness, and durability allow BF-1000 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.

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 the 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.
- FDA compliant in accordance with FDA Regulation 21 CFR 177.2600. ‡

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
- Vibration isolation in electronic components and transportation vehicles
- Fire retardant thermal insulation

Installation

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

BISCO® BF-1000		
Property	Test Method	Typical Value
PHYSICAL		
Color		White, Gray & Black
Thickness , mm (inches) Tolerance		1.60 – 25.40 (0.063 – 1.000) See Reverse
Standard Width , mm (inches)		914 (36)
Density , kg/m ³ (lb./ft ³)	ASTM D 1056	208 (13)
Compression Force Deflection , kPa (psi)	Force measured @ 25% Deflection ASTM D 1056	20.7 (3)
Compression Set , % max.	ASTM D 1056 Test D @ 70°C (158°F), 22 hrs.	< 1
	ASTM D 1056 Test D @ 100°C (212°F), 22 hrs.	< 5
Tensile Strength , kPa (psi)	ASTM D 412	241 (35)
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	< 35
Smoke Density (D_s)	ASTM E 662 Tested @ 4.0 minutes	< 50
	Tested @ 1.5 minutes	< 20
Toxic Gas Emissions Rating	SMP-800C & BSS 7239	Pass

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BISCO® BF-1000 – Extra Soft Cellular Silicone (continued)

PROPERTY	TEST METHOD	VALUE
ENVIRONMENTAL PROPERTIES		
Water Absorption	Internal: 24 hrs @ room temp.	3.50 %
UV Resistance	SAE J - 1960	No Degradation
Ozone Effect Rating	ASTM D 1171	0 (No Cracks)
Corrosion Resistance	AMS - 3568	Pass
Other Specifications Available	BMS 1-68	
ELECTRICAL & THERMAL PROPERTIES		
Dielectric Constant	ASTM D 150	1.34
Dielectric Strength	ASTM D 149, Volts/mil	89
Dry Arc Resistance	ASTM D 495, Seconds	90
Volume Resistivity, Ohm - cm	ASTM D 257	10 ¹⁴
Thermal Conductivity, w/m °K (BTU in/hr/ft ² /°F)	ASTM C 518	0.06 (0.39)
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	
1/16	0.063	± 0.016
3/32	0.094	± 0.020
1/8	0.125	± 0.025
3/16	0.188	± 0.030
1/4	0.250	± 0.040
3/8	0.375	± 0.060
1/2	0.500	± 0.050
5/8	0.625	± 0.060
3/4	0.750	± 0.090
1	1.000	± 0.090

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.

‡ 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; and (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.

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