



WILLIAM JOHNSTON & COMPANY LIMITED

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BF1000 Soft Silicone Low Smoke & Toxicity Sponge WJSPBF1000FR

Information

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. 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.
- Softness allow designers to use less force to seal enclosures and still protect their device from the environment. High compressibility allows 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.
- 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.

Physical

PROPERTY	TEST METHOD	TYPICAL VALUE
Colour		White, Grey & Black
Thickness mm (inches) Tolerance		1.60 – 25.40 (0.063 – 1.000) See below
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), 22hrs ASTM D 1056 Test D @ 100°C (212°F), 22hrs	< 1 < 5
Tensile Strength, kPa (psi)	ASTM D 412	241 (35)
Elongation, %	ASTM D 412	90

Flammability & Outgassing

PROPERTY	TEST METHOD	TYPICAL VALUE
Flame Resistance	UL94	Listed V-0 and HF-1
Flame Spread Index (Ls)	ASTM E 162	< 35
Smoke Density (Ds)	ASTM E 662 Tested @ 4.0 minutes Tested @ 1.5 minutes	< 50 < 20
Toxic Gas Emissions Rating	SMP-800C & BSS 7239	Pass



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Environmental Properties

PROPERTY	TEST METHOD	TYPICAL VALUE
Water Absorption	Internal: 24hrs @ 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

PROPERTY	TEST METHOD	TYPICAL VALUE
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

PROPERTY	TEST METHOD	TYPICAL VALUE
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 (INCHES)	
INCHES	MM		
1/16	0.063	1.60	± 0.016
3/32	0.094	2.39	± 0.020
1/8	0.125	3.18	± 0.025
3/16	0.188	4.78	± 0.030
1/4	0.250	6.35	± 0.040
3/8	0.375	9.53	± 0.060
1/2	0.500	12.70	± 0.050
5/8	0.625	15.88	± 0.060
3/4	0.750	19.05	± 0.090
1	1.000	25.40	± 0.090



The information contained in this Data Sheet is intended to assist you in designing with BISCO Foams. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose or that the results shown on the Data Sheet will be achieved by a user for a particular purpose. The user should determine the suitability of BISCO Foams for each application.

Notes

- All metric conversions are approximate.
- Additional technical information is available.
- Typical values are a representation of an average value for the population of the property.

¥ 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 paragraph 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.

Disclaimer
Please note, failure to select the correct materials or products we supply ("the Products") may result in damage to plant, equipment or property. In some instances, it may cause death or personal injury. We are not designers and do not give advice about design related matters concerning the Products. We can help and assist with the technical specifications for the Products. In specific applications, particularly where critical conditions exist, we will try to assist you within the limitations of the services that we offer. All information supplied by us is intended as technical co-operation outlining the specifications of the different Products which we supply. To the extent permitted in law, no warranty is given in respect of any information supplied by us. The customer must satisfy themselves as to the suitability of the Products for their intended application and use. The correct fitting of Products is the responsibility of the customer. Your statutory rights remain unaffected. Save in respect of death, personal injury or fraud, our entire liability to you, however arising from the supply of Products shall be limited to the £10M indemnity amount provided by our insurers.