

BISCO® HT-800 – Medium Cellular Silicone

Typical Product Properties

BISCO® HT-800 is a highly versatile, medium firmness silicone that offers the lightness of a foam, with the enhanced sealing capabilities of a traditional sponge rubber. It is used to seal and protect various outdoor communication, electronics, and lighting enclosures, while providing protection against wind-driven rain and fire. The material is also used to reduce shock or isolate vibration.

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 and unique formulation provides enhanced sealing performance to resist penetration of fine particles and wind-driven rain.
- 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 isolators in electronic components and transportation vehicles
- Shock absorbing cushions and gaskets

Installation

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

BISCO® HT-800		
Property	Test Method	Typical Value
PHYSICAL		
Color		Black, Gray & Red*
Thickness , mm (inches) Tolerance		0.80 – 12.70 (1/32 – 1/2) See Reverse
Standard Width , mm (inches)		914 (36)
Density , kg/m ³ (lb./ft ³)	ASTM D 1056	352 (22)
Compression Force Deflection , kPa (psi)	Force measured @ 25% Deflection ASTM D 1056	62.0 (9.0)
Compression Set , % max.	ASTM D 1056 Test D @ 70°C (158°F)	< 1
	ASTM D 1056 Test D @ 100°C (212°F)	< 5
Tensile Strength , kPa (psi)	ASTM D 412	310 (45)
Elongation , %	ASTM D 412	80
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	< 50
	Tested @ 1.5 minutes	< 20
Toxic Gas Emissions Rating	SMP-800C	Pass

* Red color not available as standard for 0.80mm (1/32")

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BISCO® HT-800 – Medium Cellular Silicone (continued)

PROPERTY	TEST METHOD	VALUE
Environmental Properties		
Water Absorption	Internal: 24 hrs @ room temp.	1.40 %
Electrical & Thermal Properties		
Dielectric Constant	ASTM D 150	1.42
Dielectric Strength	ASTM D 149, kV/m (Volts/mil)	3583 (91)
Dry Arc Resistance	ASTM D 495, Seconds	92
Volume Resistivity, Ohm – cm (ohm-in)	ASTM D 257	10 ¹⁴ (3.94 x 10 ¹³)
Thermal Conductivity, w/m °K (BTU in/hr/ft ² /°F)	ASTM C 518	0.09 (0.63)
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	
mm	Inches		mm	inches
0.8	1/32	0.031	-0.127, +0.381	-0.005, + 0.015
1.60	1/16	0.063	±0.508	± 0.020
2.39	3/32	0.094	±0.508	± 0.020
3.18	1/8	0.125	±0.635	± 0.025
4.76	3/16	0.188	±0.635	± 0.025
6.35	1/4	0.250	±0.762	± 0.030
9.53	3/8	0.375	±1.143	± 0.045
12.70	1/2	0.500	±1.27	± 0.050

Width Tolerance (Cellular)

Nominal Width		Tolerance (w/o PSA)		Tolerance (with PSA)	
mm	inches	mm	inches	mm	inches
0 < T ≤ 76	0 < T ≤ 3	±1.60	± 0.063	±0.787	± 0.031
76 < T ≤ 203	3 < T ≤ 8	±2.39	± 0.094	±0.787	± 0.031
203 < T ≤ 305	8 < T ≤ 12	±3.18	± 0.125	±0.787	± 0.031
305 < T ≤ 457	12 < T ≤ 18	±4.78	± 0.188	±0.787	± 0.031
457 < T ≤ 660	18 < T ≤ 26	±5.56	± 0.219	±1.600	± 0.063
660 < T ≤ 914	26 < T ≤ 36	±6.35	± 0.250	±1.600	± 0.063

Notes:

1. All metric conversions are approximate.
2. Additional technical information is available.
3. Typical values should not be used for specification limits.

‡ Statement of FDA compliance is based solely on the following: HT-800 (Gray) 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 CFR177.2600 as necessary for rubber articles intended for repeated use in those areas specified in the regulation.

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