

Typical Product Properties

BISCO® HT-870 – Soft Cellular Silicone

Compressibility, softness, and durability allow HT-870 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 allows 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.
- Available through distribution sites throughout North America, Europe, and Asia.

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
- Shock absorbing cushions and gaskets within automobiles and appliances

Installation

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

Please see reverse for additional data.

BISCO® HT-870		
Property	Test Method	Typical Value
PHYSICAL		
Colors		Black, Red
Thickness , mm (inches) Tolerance		1.6 – 12.7 (1/16 to 1/2) See Reverse
Standard Width , mm (inches)		914 (36)
Density , kg/m ³ (lb./ft ³)	ASTM D 1056	240 (15)
Compression Force Deflection , kPa (psi)	Force measured @ 25% Deflection ASTM D 1056	27.6 (4)
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	207 (30)
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	< 25
Smoke Density (D_s)	ASTM E 662	< 50
	Tested @ 4.0 minutes Tested @ 1.5 minutes	< 20
Toxic Gas Emissions Rating	SMP-800C	Pass

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BISCO® HT-870 – Soft Cellular Silicone (continued)

PROPERTY	TEST METHOD	VALUE
ENVIRONMENTAL PROPERTIES		
Water Absorption	Internal: 24 hrs @ room temp.	2.50 %
UV Resistance	SAE J - 1960	No Degradation
Ozone Effect Rating	ASTM D 1171	0 (No Cracks)
Corrosion Resistance	AMS - 3568	Pass
ELECTRICAL & THERMAL PROPERTIES		
Dielectric Constant	ASTM D 150	1.38
Dielectric Strength	ASTM D 149, kV/m (Volts/mil)	3543 (90)
Dry Arc Resistance	ASTM D 495, Seconds	91
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	0.07 (0.49)
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
1.60	1/16	0.063	±0.508
2.39	3/32	0.094	±0.508
3.18	1/8	0.125	±0.635
4.76	3/16	0.188	±0.762
6.35	1/4	0.250	±0.762
9.53	3/8	0.375	±1.143
12.70	1/2	0.500	±1.27

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.

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