ROGERS CORPORATION

BISCO® Silicones

High Performance Foams Division
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Typical Product Properties

BISCO® HT-840 – EXTRA FIRM CELLULAR SILICONE

HT-840 is an extra-firm grade silicone foam that offers improved durability and sealing. It is used to seal and protect various outdoor communication, lighting, and electronic enclosures from small dust particles, wind driven rain, and fire. It offers a higher tear and tensile strength than our lighter grade foams. 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.
- Resistance to ultraviolet light, ozone, extreme temperatures, and flame enables consistent performance in all environments.
- Compact cell structure provides improved sealing performance.
- 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
- Enclosures requiring a more durable, high closure force gasket.
- Press pads requiring greater conformability and even pressure distribution at high temperatures

Installation

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

BISCO® HT-840

Property	Test Method	Typical Value
PHYSICAL		
Color		Gray
Thickness, inches (mm) **Tolerance**		1/16 to 1/4 (1.6 – 6.4) See Reverse
Standard Width, inches (mm)		36 (914)
Density, lb./ft³ (kg/m³)	ASTM D 1056	27 (432)
Compression Force Deflection, psi (kPa)	Force measured @ 25% Deflection ASTM D 1056	22 (151.7)
Compression Set, % max.	ASTM D 1056 Test D @ 158°F (70°C) ASTM D 1056 Test D @ 212°F (100°C)	< 1 < 5
Tensile Strength, psi (kPa)	ASTM D 412	60 (414)
Elongation, %	ASTM D 412	60
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 Tested @ 1.5 minutes	 < 50 < 20
Toxic Gas Emissions Rating	SMP-800C	Pass

Please see reverse for additional data.

BISCO® HT-840 – EXTRA FIRM CELLULAR SILICONE (continued)

PROPERTY	TEST METHOD	VALUE
ENVIRONMENTAL PROPERTIES		
Water Absorption	Internal: 24 hrs @ room temp.	0.20 %
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	1.58
Dielectric Strength	ASTM D 149, Volts/mil	95
Dry Arc Resistance	ASTM D 495, Seconds	98
Volume Resistivity, Ohm - cm	ASTM D 257	10^{14}
Thermal Conductivity, BTU in/hr/ft² /°F (w/m °K)	ASTM C 518	0.84 (0.12)
TEMPERATURE RESISTANCE		
Low Temperature Flex at -67°F (-55°C)	ASTM D 1056	Pass
Recommended Use Temperature, °F (°C)	SAE J-2236	-67 to 392 (-55 to 200)
Recommended Intermittent High Temperature Use, °F (°C)	Internal	482 (250)

Standard Thickness Tolerance

Standard Thickness			Tolerance (Inches)
Inches		mm	
1/16	0.062	1.57	± 0.020
3/32	0.094	2.39	± 0.020
1/8	0.125	3.18	± 0.025
3/16	0.188	4.76	± 0.025
1/4	0.250	6.35	± 0.040

Width Tolerance (Cellular)

Nominal Width (Inches)	Tolerance (w/o PSA)	Tolerance (with PSA)
$0 < T \leq 3$	± 0.063	± 0.031
$3 < T \leq 8$	± 0.094	± 0.031
$8 < T \leq 12$	± 0.125	± 0.031
$12 < T \leq 18$	± 0.188	± 0.031
$18 < T \leq 26$	± 0.219	± 0.063
$26 < T \leq 36$	± 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.

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