



BISCO® Silicones



*Typical Product Properties*

**BISCO® HT-820 Firm Cellular Silicone**

PROPERTY	TEST METHOD	VALUE
<b>PHYSICAL</b>		
Density, lb. / ft <sup>3</sup> (kg / m <sup>3</sup> )	ASTM D 3574	24 (384)
Thickness, inches (mm)	---	1/32 to 1/4 (0.8 to 6.4)
Tolerance		See reverse
Standard Widths, inches (mm)		36 (914)
Standard Colors		Gray
Compression Force Deflection, psi (KPa)	Force Measured @ 25% Deflection ASTM D 1056	12-20 (83-138)
Compression Set, % max.	ASTM D 1056 Test D @ 158°F (70°C)	<1
	ASTM D 1056 Test D @ 212°F (100°C)	<5
Tensile Strength, Min. psi (kPa),	ASTM D 412	60 (414)
Tensile Elongation, % min.,	ASTM D 412	65
<b>Environmental Properties</b>		
Water Absorption	ASTM D 471	0.80%
UV Resistance	SAE J - 1960	No Degradation
Ozone Effect Rating	ASTM D 1171	0 (No Cracks)
Stain Resistance	ASTM D 925(A)	No Staining
Corrosion Resistance	AMS - 3568	Pass
<b>Flammability &amp; Outgassing</b>		
Flame Resistance	UL 94	Listed HF-1 & V-0
Flame Spread Index	ASTM E 162	<25
Limiting Oxygen Index	ASTM D 2863	42%
Smoke Density	ASTM E 662 Tested @ 4.0 minutes Tested @ 1.5 minutes	<50 <20
Toxic Gas Emissions Rating	SMP – 800-C & BSS 7239	Pass
Weight Loss	ASTM D 573 After 168 Hours @ 275°F (135°C)	0.80%

Please see reverse side for additional data.

HT-820 Firm Cellular Silicone (Continued)

PROPERTY	TEST METHOD	VALUE
<b>Electrical &amp; Thermal Properties</b>		
Dielectric Constant	ASTM D 149	1.50
Dielectric Strength	ASTM D 150, Volts/mil	93
Dry Arc Resistance	ASTM D 495, Seconds	96
Volume Resistivity, Ohm – cm	ASTM D 257	10 <sup>14</sup>
Thermal Conductivity, BTU in/hr/ft <sup>2</sup> /°F (w/m °K)	ASTM C 518	0.75 (0.11)
<b>Temperature Resistance</b>		
Hot Flex	ASTM D 573 Tested @ 446°F (230°C)	Pass
Low Temperature Embrittlement, °F (°C)	ASTM D 746 (B) Tested @ -67 °F (-55°C)	Pass
Recommended Use Temperature, °F (°C)	SAE J-2236	-67- 392 (-55 – 200)
Recommended Intermittent High Temperature Use, °F (°C)	Internal	482 (250)

Standard Thickness Tolerance

Standard Thickness			Tolerance (Inches)
Inches		mm	
1/32	0.031	0.80	+/- 0.015
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	+/- 0.030

Width Tolerance (Cellular)

Nominal Width (Inches)	Tolerance without 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. Red color not available as standard for 1/32" (0.8 mm)

The information contained in this data sheet is intended to assist you in designing with Rogers BISCO Silicones. 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 Rogers BISCO Silicones for each application.