

AUBURN PRODUCT NEWS

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HT-870 Soft Cellular Silicone Foam

Introduction:

Compressibility, softness and durability allow HT-870 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. HT-870 Soft Silicone Foam from Auburn is available in various thicknesses and manufactured in roll form which can be easily converted into tapes, sheets or custom die cut gaskets.

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 Auburn silicone foams to perform consistently in all environments.
- ▶ Softness allows designers to use less force to seal enclosures and still protect their devices for the environment.
- ▶ High compressibility allows material to conform to variable width gaps and awkward shapes, thereby allowing engineers more design flexibility.
- ▶ Available in roll goods, slit tapes or custom die cut parts. All Auburn silicone foams are available either plain or with an adhesive backing applied to one or both surfaces.

Applications:

- ▶ Environmental seals to protect against penetration of dust, moisture, air, or light into outdoor enclosures such as lighting fixtures, HVAC units or electronic cabinets.
- ▶ Vibration isolators in electronic components or transportation vehicles.
- ▶ Shock absorbing cushions, pads or gaskets.

Typical Product Data Sheet

PROPERTY	TEST METHOD	TYPICAL VALUE
Physical		
Color		Grey
Thickness, Inches (mm) Tolerance		1/32 - 1/2 (0.8 – 12.7) See Reverse
Standard Width, Inch (mm)		36 (914)
Density, lb./ft ³ (kg/m ³)	ASTM D 1056	23 (368)
Compression Force Deflection, psi (Kpa)	Force measured @ 25% Deflection ASTM D 1056	16.0 (110.3)
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, psi (kPa)	ASTM D 412	50 (345)
Elongation, %	ASTM D 412	55
Flammability & Outgassing		
Flame Resistance	UL 94	Listed V-0 and HF-1
Flame Spread Index (Ls)	ASTM E 162	< 25
Smoke Density (Ds)	ASTM E 162 Tested @ 4.0 minutes	< 50
	Tested @ 1.5 minutes	< 20
Toxic Gas Emissions Rating	SMP-800C	Pass

AUBURN HT-870 – SOFT CELLULAR SILICONE FOAM

UL Recognized, MH13898

PROPERTY	TEST METHOD	VALUE
Environmental Properties		
Water Absorption	Internal: 24 hrs @ room temp.	0.80 %
UV Resistance	SAE J-1960	No Degradation
Ozone Effect Rating	ASTM D1171	0 (No Cracks)
Corrosion Resistance	AMS-3568	Pass
Meets Requirements of FDA CFR 177.2600 for Food Contact		HT-820 Gray
Electrical and Thermal Properties		
Dielectric Constant, K' ("DK")	ASTM D 150	1.50
Dielectric Strength, volts/mil	ASTM D149 Volts/mil	93
Dry Arc Resistance	ASTM D 495, Seconds	96
Volume Resistivity, ohm/cm	ASTM D257	10 ¹⁴
Thermal Conductivity, (BTU-in./hr. ft ² -F) W/m-K	ASTM C518	0.75 (0.11)
Temperature Resistance		
Low Temperature Flex @ -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	
1/32	0.031	0.80	± 0.015
1/16	0.062	1.57	± 0.020
3/32	0.093	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)	Tolerances (w/o 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) Typical values are a representation of an average value for the population of the property. For specification values contact Auburn Manufacturing Company

The Information contained in this data sheet is intended to assist you in designing with Flame Retardant Silicone Foams from Auburn. 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 Flame Retardant Silicone Foams from Auburn for each application.