

HT-800 – 840 SH

Bisco® Flame Retardant Silicone Sponge Sheet

Material

General Purpose Silicone Rubber

Available Grades

BISCO® HT-800

BISCO® HT-820

BISCO® HT-840

Features and Benefits

HT-800	HT-820	HT-840
Highly versatile medium firm foam	Enhanced durability and sealing performance	
Excellent memory and low stress relaxation reduces maintenance costs associated with gasket failures	High tear strength comparable to a traditional sponge rubber	
Resistance to UV, ozone, and extreme temperatures for consistent performance across many environments		
Rated to most stringent UL flame standards		
† FDA compliant in accordance with regulation 21 CFR 177.2600		

Material Properties

Physical

Property	Unit	HT-800		HT-820		HT-840		Test Method
		Typical Value	Specification	Typical Value	Specification	Typical Value	Specification	
PHYSICAL								
Colour		Black, Grey, Red	-	Grey	-	Grey	-	Visual
Density	kg/m ³ (lb/ft ³)	352 (22)	300-473 (18.7 – 29.5)	384 (22)	336 – 528 (21 – 33)	448 (28)	369-553 (23.7 – 34.5)	Internal
Compression Force Deflection	kPa (PSI)	67 (9.7)	41 – 97 (6 – 14)	106 (15.3)	82 – 138 (12 – 20)		110 – 179 (16 – 26)	
Compression Set	%	2.4	<5	2.6	<5		<5	ASTM D1056 100°C (212°F)/22hrs/50%
Water Absorption	%	0.5	<5	0.5	<5		<5	Internal 2" below water surface /24 hrs/ change in weight

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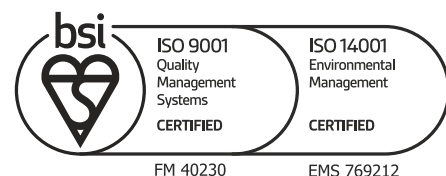
Viking Extrusions Ltd – Ivy Arch Road, Worthing, West Sussex, BN14 8BX, UK

Company Number: 2634482UK

VAT Number: GB587651394

Registered in England & Wales

REV 01 – Last Updated: 21/06/24



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Flammability

Property	Unit	HT-800		HT-820		HT-840		Test Method
		Typical Value	Specification	Typical Value	Specification	Typical Value	Specification	
FLAMMABILITY								
Flame Resistance	-	Meets	V-0	Meets	V-0	Meets	V-0	UL 94 (File E83967)
Flame Spread Index	Ls	Meets	Flaming Mode <35	Meets	Flaming Mode <35	Meets	Flaming Mode <35	ASTM E162
Smoke Density	Ds	Meets	Flaming Mode, 1.5min <100 Flaming Mode, 4.0 min, < 200	Meets	Flaming Mode, 1.5min <100 Flaming Mode, 4.0 min, < 200	Meets	Flaming Mode, 1.5min <100 Flaming Mode, 4.0 min, < 200	ASTM E662
Burn Length	-	Meets	<100mm/min	Meets	<100mm/min	Meets	<100mm/min	FMVS 302

Thermal

Property	Unit	HT-800		HT-820		HT-840		Test Method
		Typical Value	Specification	Typical Value	Specification	Typical Value	Specification	
Temperature Range	°C (°F)	-55 to +200 (-67 to +392)	-	55 to +200 (-67 to +392)	-	-55 to +200 (-67 to + 392)	-	Internal
Thermal Conductivity	W/m °K	0.076	-	0.09	-	0.09	-	ASTM C518
Low Temperature Flex	-	Pass	-	Pass	-	Pass	-	ASTMD1056 -55°C (-67°F) / 5hrs
Low Temperature Brittleness	-	Pass	-	Pass	-	Pass	-	ASTM D746 -55°C (-67°F) / 3min

Outgassing

Property	Unit	HT-800		HT-820		HT-840		Test Method
		Typical Value	Specification	Typical Value	Specification	Typical Value	Specification	
OUTGASSING								
Total Mass Loss	%	0.98	-	2.11	-	2.08	-	ASTM E595 (4x10 ⁻⁶ Torr)
Collected Volatile Condensable Materials (CVCM)	%	0.25	-	0.63	-	0.57	-	ASTM E595 (4x10 ⁻⁶ Torr)
Water Vapor Regain	%	0.03	-	0.02	-	0.01	-	ASTM E595 (4x10 ⁻⁶ Torr)

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Electric

Property	Unit	HT-800		HT-820		HT-840		Test Method
		Typical Value	Specification	Typical Value	Specification	Typical Value	Specification	
ELECTRIC								
Dielectric Strength	Volts/mil	75	-	66	-	57	-	ASTM D149
Dielectric Constant	1 kHz	1.7	-	1.7	-	1.8	-	ASTM D150
Dissipation Factor	1kHz	0.005	-	0.006	-	0.006	-	ASTM D495
Dry Arc Resistance	Seconds	125	-	174	-	149	-	ASTM D495
Volume Resistivity	Ω·cm	10 ¹⁴	-	10 ¹⁴	-	10 ¹⁴	-	ASTM D257

These figures are only intended as a guide and should not be used in preparing specifications.

Standard Thickness Tolerances

HT-800		HT-820		HT-840	
Nominal Thickness	Tolerance	Nominal Thickness	Tolerance	Nominal Thickness	Tolerance
mm (inches)	mm (inches)	mm (inches)	mm (inches)	mm (inches)	mm (inches)
0.79 (0.031)	± 0.381 (± 0.015)	0.79 (0.031)	± 0.381 (± 0.015)		
1.60 (0.063)	± 0.508 (± 0.020)	1.60 (0.063)	± 0.508 (± 0.020)	1.60 (0.063)	± 0.508 (± 0.020)
2.39 (0.094)	± 0.508 (± 0.020)	2.39 (0.094)	± 0.508 (± 0.020)	2.39 (0.094)	± 0.508 (± 0.020)
3.18 (0.125)	± 0.635 (± 0.025)	3.18 (0.125)	± 0.635 (± 0.025)	3.18 (0.125)	± 0.635 (± 0.025)
4.78 (0.188)	± 0.635 (± 0.025)	4.78 (0.188)	± 0.635 (± 0.025)	4.78 (0.188)	± 0.635 (± 0.025)
6.35 (0.250)	± 0.762 (± 0.030)	6.35 (0.250)	± 0.762 (± 0.030)	6.35 (0.250)	± 0.762 (± 0.030)
9.53 (0.375)	± 1.143 (± 0.045)				
12.70 (0.500)	± 1.270 (± 0.050)				

†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 CFR 177.2600 as necessary for rubber articles intended for repeated use in those areas specified in the regulation.

Notes:

*Typical Value- Value is based on historical data. Please note the frequency of testing varies.

**Specification- Applies to physical properties only, which are based on Rogers' internal benchmark and standard BISCO specification values. Additional industry specifications are available as well. All other properties are based on industry standard guidelines.

BISCO® Datasheets available at: [HT-800](#), [HT-820](#), [HT-840](#)

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