Application Note

BISCO® Silicone Materials
for Sound Blocking in Aerospace, Defense, Marine & Rail

Controlling sound transmission is a critical design consideration facing engineers when designing aerospace, defense, marine and rail applications.

Solid silicones can be used as acoustic barriers for these types of applications to improve performance, stealth, safety, and comfort.

Rogers offers a variety of high performance materials that deliver mission-critical reliability in:

- Aircraft and Helicopters
- Rail Cars
- Military Logistic Vehicles
- Tankers and Submarines
- Space Applications

We have helped solve design challenges for:

- Sub-flooring
- Interior paneling
- Air ducts

BISCO® SILICONES

BISCO HT-200, HT-210, and A2 are sound blocking solid silicones used in interior spaces.

BISCO HT-200 and HT-210 silicones combine noise reduction capabilities with superior fire resistance, preventing the spread of fire and smoke.

BISCO A2 is a sound barrier and reduces low-frequency noise. It passes FAR 25.856(a) and all FST requirements.

ADVANTAGES

Flame Resistance
Superior fire resistant properties compliant to the most stringent flame ratings

Extreme Temperature Stability
Withstand extreme range of temperatures from -55 to 250°C (-67 to 482°F) without sacrificing performance

Excellent Sound Blocking
Tune sound transmission to fit exact requirements by adjusting the areal density: 1.22-7.32 kg/m^2 (0.25-1.5 lb./ft^2) Peak Transmission Loss of 30dB @1000 Hz *(ASTM E90 @ 7.32 kg/m^2(1.5 lb./ft^2))*

International Compliance
Compliant to all international safety standards for aerospace, defense, marine and rail

Environmental Protection
Resistant to UV, ozone, moisture and common cleaning agents

Durability
Good tear strength, ensuring long-term performance

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BISCO TRUSTED TO THE EXTREME

CAPABILITIES AND SPECIFICATIONS

BISCO HT-200 and HT-210, and A2 solid silicone materials are supplied in roll form and available with or without adhesives and supported backings. The materials are available as standalone solid rubber or with fiberglass on one or both sides for additional support.

Materials can be further customized to meet your exact requirements, including desired sound blocking properties or additional mechanical strength.

See the table below for technical specifications:

Physical Property	Standard		HT-200	HT-210	A2
	HT-200 & HT-210	A2			
Durometer, Shore A Hardness			65+/-5	65+/-5	60+/-5
Color, Internal			Black	Black	Light Gray
Surface Finish			Smooth	Smooth	Light Fabric Finish
Flame Spread Index (Is)	ASTM E162		Flaming mode <5	Flaming mode <5	NA
Flame Penetration		AITM 2.0010	NA	NA	None
Smoke Density (Ds)	ASTM E662	AITM 2.0007	Ds Flaming <25 Ds Non-Flaming <25	Ds Flaming <25 Ds Non-Flaming <25	100 Max.
Toxic Gas Evolution	SMP800-C	AITM 3.0005	Pass	Pass	Pass
Thickness, mm (inches)			0.635-3.81 (0.025-0.150)	0.635-3.81 (0.025-0.150)	0.762-5.105 (0.030-0.201)
Width, mm (inches)			914.4 (36)	914.4 (36)	914.4 (36)
Areal Density, kg/m^2 (lb./ft.^{2})		ISO 2286-2	1.22-7.32 (0.25-1.5)	1.22-7.32 (0.25-1.5)	1.2-8.2 (0.25-1.68)
Specification			MIL-PRF-24699	MIL-PRF-24699	MIL-PRF-24699

Options: HT-200 and HT-210 can be produced with 390 gsm (11.5 oz) plain weave greige fiberglass fabric on either one or both sides of the material. It is cast onto the material without the use of adhesives. Adhesive can be laminated to one side of the product.

For more technical product information, explore the BISCO Product Properties Guide or contact the Rogers product experts at solutions@rogerscorp.com.

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