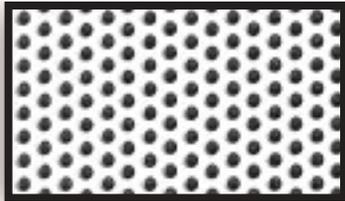




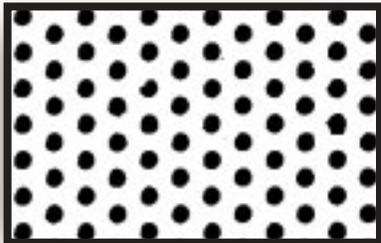
# Technical Specifications Perforated Aluminum



## Specifications: pattern one

Perforation Pattern	36% open area .087" diameter holes
Weight	.40 lb/ft <sup>2</sup>
Thickness	.040"
Sheet size	4' x 8'
Pattern	as shown on right
Pallet	+ packing charge applies

\* Cutting for UPS shipping: sheets cut into thirds (48" x 32").  
\$15.00 cutting charge per sheet for 1-10 full sheets or less.



## Specifications: pattern two

Perforation Pattern	25% open area .10" diameter holes
Weight	.47 lb/ft <sup>2</sup>
Thickness	.040"
Sheet size	4' x 8'
Pallet	+ packing charge applies

\* Cutting for UPS shipping: sheets cut into thirds (48" x 32").  
\$15.00 cutting charge per sheet for 1-10 full sheets or less.

## Quietech Perforated Aluminum

SOUNDOWN Perforated Aluminum with Quietech offers a hard durable finish, aesthetic appeal, and sound absorption that all adds up to the perfect engine room finish material.

SOUNDOWN Perforated Aluminum with Quietech provides one advantage unique from all other engine room finishes. This material provides acoustic absorption that is unavailable from any other standard finish materials. The integral, "blackout" of Quietech provides a one step-covering layer protecting and hiding underlying insulation eliminating the high sound reverberation from a typical solid finish.

SOUNDOWN'S Acoustical Perforated Aluminum sheet is an ideal protective and cosmetic covering for engine room insulation materials. These sheets have an oven cured epoxy-polyester hybrid coating that provides high resistance to abrasion and corrosion. Two available patterns at 25% and 36% open area, allow a choice of engine room appearance. Both patterns allow sound waves to be passed from the engine room and absorbed by the Quietech and other insulation, without noise increasing reflections.

### What is Quietech?

Quietech is a wet laid acoustic nonwoven fabric made of cellulose and glass fibers. It is very homogeneous in weight and thickness.

### How Does Quietech work?

A Quietech mat is bonded firmly to the perforated panel. Sound waves are forced through the nonwoven generating heat friction. The heat friction results in a loss of energy, reducing the magnitude of the sound.

**Quietech** Modifies the sound impedance of the perforated sheet to a level that is equivalent to the impedance of air, thus minimizing the level of reflected sound.

**Quietech** forces sound waves to literally "shear" around the fibers of the dense nonwoven sheet, causing them to lose energy as they pass through a cavity behind the perforated plate. **Quietech** provides excellent performance across the entire audio frequency range.

### Is Quietech flame retardant?

Yes. Quietech has a flame retardant finish and meets the requirements of Class A as per ASTM -E84-91a (Flame, Spread & Smoke).



## Quietech Sheets

### Aluminum

Grade	5052
Thickness inches (mm)	.040" (1.0)
Sheet size Feet (cm)	4' x 8' (122 x 244)

### Absorber Layer

Material	wet layed non woven
Color	black or white
Thickness inches (mm)	0.008" (.20)

## Typical Physical Properties

### Quietech Specifications

Weight	0.399 lb/sq.ft
Thickness	0.048"
Fiber	Cellulose/Glass
Flame and Smoke Spread ASTM-E84	Class A
Sound Impedance	190Ns/m <sup>3</sup>

### Metric/BS & DIN EN Standards Codes

Weight	61g/m <sup>2</sup>
Thickness	1.22mm
Quality verified to British Standard (BS) Classified in Class 0 for the requirements of the UK Building Regulations 1991 BS 476: PART 7: 1987/ Class 1 as per WARRES Test Report No. 64899 and 64900. Quality verified to DIN EN Flame-retardant to DIN 4102 B1 Non-flammable to DIN 4102 A2	

## Typical Acoustic Properties

### Sound Absorption Report

(RAL-A92-64) Using Hunter Douglas panel 20% open area

Frequency, Hz	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
Absorption	.95	.88	.70	.90	.89	.79	.70	.60	.75	.72	.75	.84	.87	.85	.83	.79	.74	.73

### Quietech Perforated Aluminum

Measurement 3:25% open area, with cavity depth of 50mm

Frequency, Hz	125	250	500	1000	2000	4000
Absorption	.04	.13	.33	.73	.99	.60

Measurement 2:25% open area, with cavity depth of 200mm

Frequency, Hz	125	250	500	1000	2000	4000
Absorption	.26	.67	.93	.58	.69	.70

Measurement 1:25% open area, with cavity depth of 400mm

Frequency, Hz	125	250	500	1000	2000	4000
Absorption	.60	.83	.56	.67	.75	.72