Specification Sheet

SINCE 1875
SOPER'S
ENGINEERED FABRIC SOLUTIONS

Quilted Acoustic Absorbers

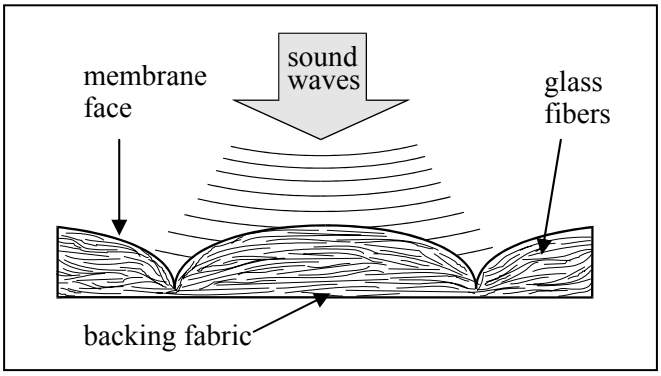
Soper's Quilted Fibreglass Absorbers are Class 1 fire rated, high performance acoustical fibreglass blankets that are used to reduce reflected airborne noise in many diverse industrial applications. They have a wide range of temperature limits, can be cleaned, and are unaffected by humidity, dust, dirt, oils, and most chemicals. Flexible quilted absorbers are easily installed and maintained. The absorber's standard configuration is a reinforced, nonporous, vinyl coated fibreglass cloth quilted directly to a single layer of fibreglass batting.

The quilting forms numerous diamond stitch patterns which encapsulate the fibreglass. When the facing material is subjected to airborne sound waves, it responds "diaphragmatically" and transmits the sound energy into the fibreglass batting core material.

Here it is displayed as thermal energy (see illustration). The opposite side of the quilted composition is a nonwoven, porous, scrim material which totally encapsulates the fibreglass.

Soper's Acoustical Absorbers can be produced in a single or double layer thickness, and, depending on the application, can include facing on one or both sides.

Soper's Quilted Fibreglass Absorber products exhibit a unique combination of physical and acoustical properties. The ability to tailor the quilted absorber's component materials into alternative configurations capable of satisfying special design requirements (e.g. high temperature or chemical resistance) makes them an extremely functional and cost effective product for solving noise control applications.



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Applications:

Industrial Plants
Absorbers are used to line walls (and other surfaces) to absorb and inhibit reflected noise. Other applications include ceiling baffles, pipe and duct outerwrap, liners for OSHA compliant noise enclosures, hoods, shrouds, booths, retractable curtain partitions, etc.

Original Equipment (OEM)
Quilted fibreglass absorbers are used by original equipment manufacturers on machinery housings, cabinets, compartments, enclosures, shrouds, walls, firewalls, hoods, operator cabs, etc.

Specifications:

Fibreglass batting
- Density: 2 lb./ft. (nominal)
- Thermal Conductivity: K=.25 (BTU in./°Fxft.^{2} xhr.) @ 75°F mean

Vinyl coated fibreglass cloth facing
- Continuous service temperature limits: -20°F to 180°F
- Moisture permeability: 0.5 perms
- R value 8

Scrim backing
- 100% nonwoven nylon
- 0.7 oz. per square yard
- continuous temperature limit: to 400°F

Composite
- Flammability (QA-1): Class 1 flame spread and smoke developed rating per ASTM Designation E84-84a; surface burning characteristics of building materials: flame spread – 17.66, smoke index – 22.75
- Quilted thickness: 1″, single layer fibreglass batting (nominal); 2″, double layer fibreglass batting (nominal)
- Material width: 48″
- Weight: Single layer fibreglass = .20 lb./ft.^{2}
  Double layer fibreglass = .40 lb./ft.^{2}
- Mildew and rot resistant
- Excellent abrasion resistance
- Chemical resistance: resists oils, greases, mild acids, alkalis, salt atmospheres
- Cleanability: can be steamed cleaned or washed with standard industrial cleaners

Acoustical Data:

Sound Absorbtion Data		Random Incident Sound Absorption Coefficient Octave Band Center Frequencies (Hz)						
Model No.	**Nominal Thickness**	125	250	500	1000	2000	4000	NRC
QA-1	1″	.12	.47	.85	.84	.64	.62	.70
QA-2	2″	.19	.99	.96	.80	.57	.33	.85

Ordering Data:

Product No.	Quilted Fibreglass Absorbers Product Description	Quilted Thickness (nominal)	Roll Width	A-1
QA-1	Single layer fibreglass, one side glass cloth, opposite side nonwoven scrim	1″	48″	50′
QA-2	Double layer fibreglass, both sides faced with glass cloth	2″	48″	25′