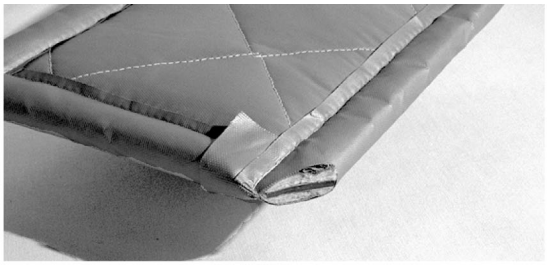
Specification Sheet

KMH SYSTEMS
Equipment & Service Solutions

Composite Acoustic Absorber/Barriers



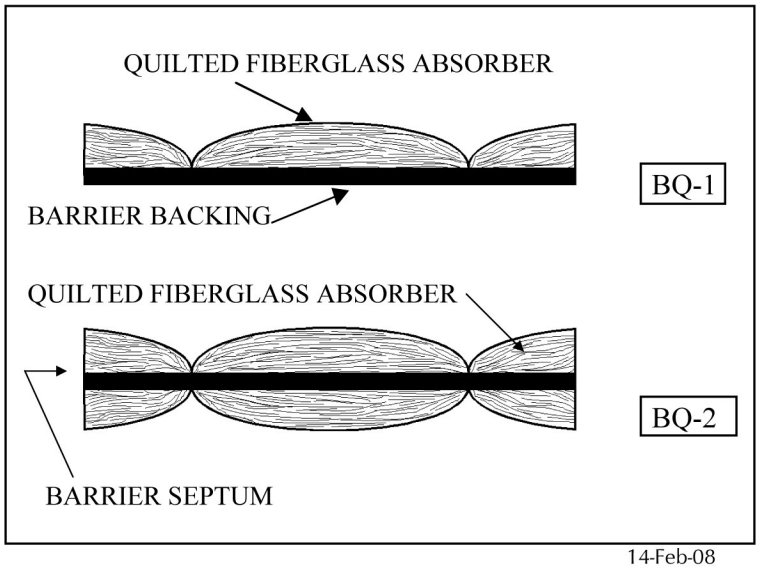
Many noise control applications, due to the intensity and/or frequency of their emitted sound energy, require and acoustical material which not only absorbs source noise build-up, but also blocks substantial amounts of airborne sound waves.

While certain Soper's quilted absorbers exhibit some meaningful noise barrier characteristics, they generally do not provide sufficient transmission loss performance to effectively or efficiently solve the more extreme applications. Consequently, it is often necessary to augment the quilted fibreglass absorbers' sound absorbing characteristics by combining them with high-density, mass-loaded vinyls that possess "dense limp mass" sound barrier properties. Combining a quilted absorber with a loaded vinyl barrier produces a reasonably thin, flexible, lightweight acoustical product that has excellent mechanical (strength) properties plus provides a high sound absorption rating and delivers significant sound transmission loss performance.

Two basic composite constructions are offered (see below): BQ-1, barrier with quilted absorber one side, and BQ-2, barrier with quilted absorber both sides.

BQ-1 is used when the noise source is located on only one side of the acoustical material. The sound waves will be initially absorbed by the fibreglass and then blocked by the sound barrier backing. Any reflected sound will once again enter the fibreglass and be further dissipated.

BQ-2 may function as a divider when multiple noise sources are located on both sides of the acoustical material, or when a greater amount of noise reduction is required. Sound waves can be simultaneously absorbed on both sides and then subsequently blocked by the mutual barrier septum. The reflected sound will be further dissipated.



14-Feb-08

Specifications:

Fibreglass batting:

- Density: 2lb./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

Mass Loaded Vinyl Barrier

- Continuous service temperature limits: -40°F to 225°F
- Chemical resistance: resists oils, greases, mild acids, alkalis, salt atmospheres

Composite Absorber/Barrier

- 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
- Mildew and rot resistant
- Excellent abrasion resistance
- Cleanability: Can be steamed cleaned or washed with standard industrial cleaners

Acoustical Data:

Sound Transmission Loss Data		Sound Transmission Loss (dB) 1/3 Octave Band Centre Frequency (HZ)						
Model No.	Product Weight (LB/Sq.FT)	125	250	500	1000	2000	4000	STC
BQ-1	1.3	11	16	24	30	35	30	27
BQ-2	1.5	12	16	27	40	44	43	29

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

Ordering Data:

Product No.	Product Description	Thickness (Nominal)	Barrier Width	Absorber Width	Roll Length
BQ-1	1″ quilted fibreglass absorber (QA-1) with 1lb./sq.ft. mass loaded vinyl reinforced barrier (VB-R) backing.	1″	54″	48″	25′
BQ-2	Two layers of 1″ quilted fibreglass absorber (QA-1) with 1 lb/sq.ft. mass loaded vinyl non-reinforced barrier (VB-N) septum.	2″	54″	48″	25′