

# KINETICS®

## Barrier Composites

### Model KBC

#### Description

Kinetics KBC Barrier Composites are thin, rugged, high-performing, flexible acoustical quilt and vinyl composites designed to solve noise control applications where sound absorption and sound blocking must be increased. Kinetics model KBC Barrier Composites are available with 0.50, 1.0, or 2.0 psf (2.5, 4.9 or 9.8 kg/m<sup>2</sup>) mass loaded vinyl barriers with a quilted aluminum cloth faced fiberglass absorber on one or both sides of the barrier.

Kinetics models KBC-50RBQ and 100RBQ are used when a noise source is located on one side of the acoustical material. Sound originating from the source is initially absorbed by the quilted fiberglass and then blocked by the vinyl barrier. The reflected sound waves are further dissipated by the fiberglass absorber.

Model KBC-50BQQ, 100BQQ, and 200BQQ perform in the same manner except that they are designed to absorb sound on both sides of the composite, with one side acting as a decoupling layer.

Model KBC Barrier Composites can be installed free hanging or attached directly to a noise-radiating surface. Models KBC-50BQQ, 100BQQ, and 200BQQ are ideal as an internal lining on any rigid structure that requires significant transmission loss improvement. In this manner, the limp mass vinyl barrier is decoupled from the structure by the fiberglass absorber which allows the barrier to vibrate freely thus increasing sound transmission loss performance.



#### Application

KBC Barrier Composites are ideal for many diverse industrial & OEM applications where both reverberation control and sound transmission loss are required. Industrial applications include enclosures, machinery cover linings, and additions to existing walls or barriers. Architectural applications include crosstalk barriers, room dividers, ceiling barriers, and pipe and duct wrap.

#### Specifications

Barrier Absorber Composite shall be of the description and acoustical data listed in this brochure. Barrier and absorber composites shall be Model KBC by Kinetics Noise Control.

## Sound Transmission Loss (dB)

ASTM E90-90

Product	Weight		Frequency (Hz)						
	lb/ft <sup>2</sup>	kg/m <sup>2</sup>	125	250	500	1000	2000	4000	STC*
KBC-50RBQ	0.7	3.4	6	12	17	27	38	46	23
KBC-100RBQ	1.3	6.4	10	16	22	30	42	49	27
KBC-50BQQ	1.0	4.9	7	12	18	31	46	50	24
KBC-100BQQ	1.5	7.4	11	16	28	41	50	53	29
KBC-200BQQ	2.5	12.5	16	20	30	40	51	55	33

\*Per ASTM designation E413-87

## Absorption Characteristics

Product	Octave Band Frequency (Hz)						
	125	250	500	1000	2000	4000	NRC
Q - 1" Quilt	0.12	0.47	0.85	0.84	0.64	0.62	0.70
Q2 - 2" Quilt	0.08	0.33	0.79	1.02	1.04	1.02	0.80

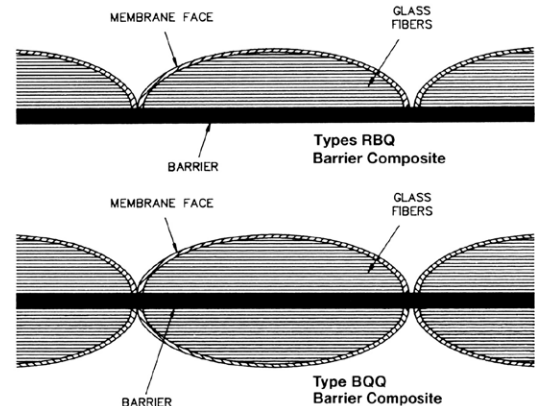
## Product Description

**KBC-50RBQ** 0.50 psf (2.5 kg/m<sup>2</sup>) Kinetics Limp Barrier Material, reinforced with a fiberglass screen, loaded with barium sulphate, with a quilted faced fiberglass absorber on one side. The barrier and absorber are silver in color. Available in 54" x 25' (1.37 x 7.62 m) rolls. Nominal thickness 1" (25 mm).

**KBC-100RBQ** 1.0 psf (4.9 kg/m<sup>2</sup>) Kinetics Limp Barrier Material, reinforced with a fiberglass screen, loaded with barium sulphate, with a quilted faced fiberglass absorber on one side. The barrier and absorber are silver in color. Available in 54" x 25' (1.37 x 7.62 m) rolls. Nominal thickness 1" (25 mm).

**KBC-50BQQ** 0.50 psf (2.5 kg/m<sup>2</sup>) Kinetics Limp Barrier Material, loaded with barium sulphate with a quilted faced fiberglass absorber on both sides. The absorber is silver in color. Available in 48" x 25' rolls. Nominal thickness (1.22 x 7.62 m) 2" (51 mm).

**KBC-100BQQ** 1.0 psf (4.9 kg/m<sup>2</sup>) Kinetics Limp Barrier Material loaded with barium sulphate, with a quilted faced fiberglass absorber on both sides. The absorber is silver in color. Available in 48" x 25' rolls. Nominal thickness (1.22 x 7.62 m) 2" (51 mm).



**KBC-200BQQ** 2.0 psf (9.8 kg/m<sup>2</sup>) Kinetics Limp Barrier Material loaded with barium sulphate, with a quilted faced fiberglass absorber on both sides. The absorber is silver in color. Available in 48" x 25' rolls. Nominal thickness (1.22 x 7.62 m) 2" (51 mm).

Vinyls and fiberglass facings are available in other colors. Consult Kinetics Noise Control for availability.



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