Technical Specifications

Tuff-Mass Barrier

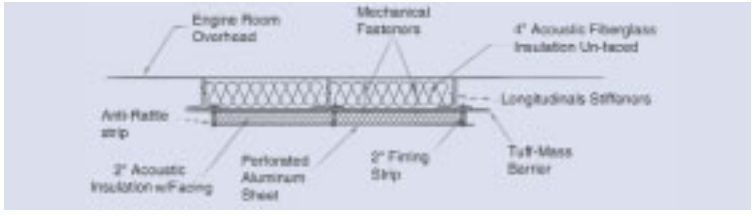
SOUNDOWN Tuff-Mass is a specially developed mass layer product offering superior acoustic transmission loss combined with good damping properties.

SOUNDOWN'S mass/damper sheet offers STC Ratings up to 32. It is a low cost material used for a variety of marine and land based applications. The drawing below shows Tuff-Mass installed as a suspended barrier. This typical application would improve transmission loss between adjoining spaces.

The combination of the damping and stiffness properties of Tuff-Mass gives it excellent performance as a combined mass layer and damper when applied to partition panels and lightweight structural bulkheads, reducing transmission of both airborne and structurebourne noise. Application direct to panels is best done with pre-applied pressure sensitive adhesive (PSA), backed up by minimal fasteners or staples.

Tuff-Mass exhibits the strength and workability of conventional reinforced barrier materials, without using a fabric layer. This innovation of integral strength and tear resistance provides a barrier that is suitable for suspension with mechanical fastenings, without the cost normally associated with a fabric reinforced laminated product.

The standard color of Tuff-Mass is black. Grey or Mylar facing can be applied to Tuff-Mass for further reinforcement. Tuff-Mass is sold by the square foot on 4.5' wide rolls up to 500 linear feet.



Above:

A typical built-in-place insulation treatment showing Tuff-Mass Barrier being utilized between the 4-inch decoupler layer and 2-inch absorption layer creating a highly effective noise insulation treatment.

SOUNDOWN
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Barrier Sheet

The Material

Soundown Tuff-Mass is produced on 54" (1.37m) wide rolls. Length of roll varies by product density. The following densities are available in quantity or on a per square foot basis;

Surface Density	Thickness
0.5 lb/sf (2.44 kg/m2)	1/16" (1.59mm)
1.0 lb/sf (4.88 kg/m2)	1/8" (3.18mm)
1.5 lb/sf (7.32 kg/m2)	3/16" (4.76mm)
2.0 lb/sf (9.76 kg/m2)	1/4" (6.35mm)

Typical Physical Properties

Thickness (in)	1/16 to 1/4
Weights (1lb/ft2)	.50 to 2.0
Flammability, UL 94 HF-1 MVSS 302	MEETS
Specific Gravity (Barrier) ASTM D 798	1.80
Hardness (Barrier) Shore A 2 ASTM D 2240	90 Nominal

Stiffness, MPA (Barrier) ASTM 749	19.60
Tensile, PSI (Barrier) ADSTM D 412	407
Elongation, % (Barrier) ASTM D 412	120
Tear, lbs/1" (Barrier) ASTM D 624	77
Temp Range, Degrees Fahrenheit	-40 to 255

Typical Acoustic Properties

Transmission Loss of Tuff-Mass

Frequency, Hz	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	STC
2 lb/ft, sq	18	19	18	19	19	23	26	27	28	32	34	35	37	38	40	42	43	43	32
1 lb/ft, sq	13	14	13	14	14	18	22	23	24	27	29	29	33	34	35	36	37	37	27
. 5 lb/ft, sq	8	5	6	7	12	13	14	15	17	19	22	22	24	26	28	30	32	32	20

17 Lime Street Suite 1
Marblehead, MA 01945
1-800-359-1036
www.SOUNDOWN.com

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FOR PEACE AND QUIET

3005 S.W. 2nd Ave. #102
Fort Lauderdale, FL 33315
1-954-761-9188
sales@soundown.com