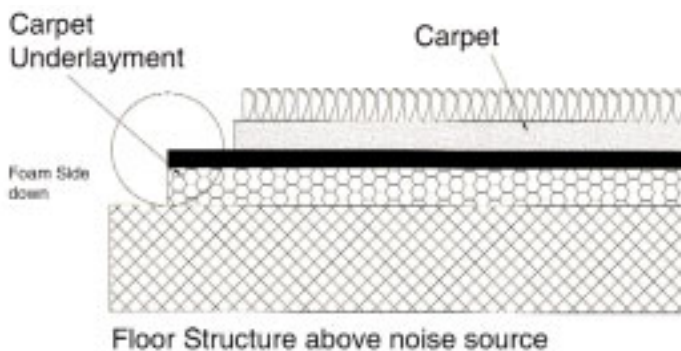
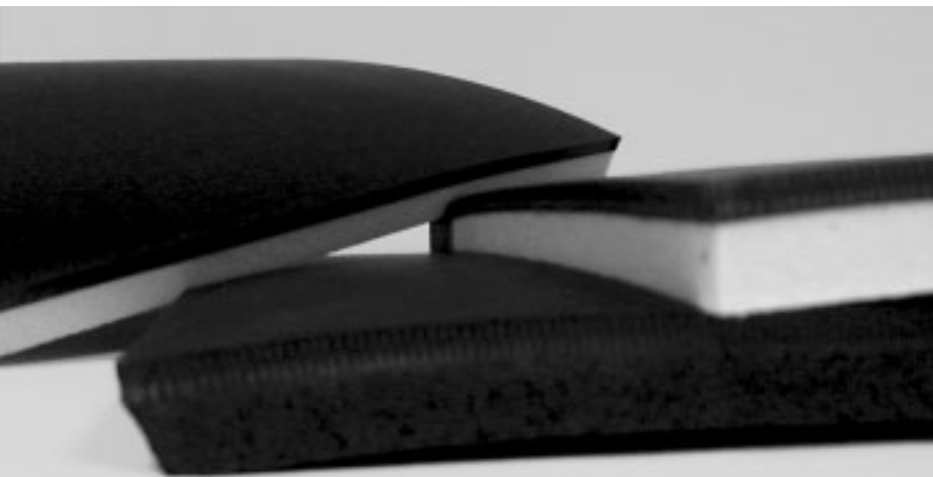




Technical Specifications Carpet Underlayment



Carpet Underlayment

SOUNDOWN Acoustic Carpet Underlayment is an important part of a boat's sound reduction package. This easy to install product can be used at any point in the insulation process. Carpet underlayment is effective as a primary treatment for living areas of the boat, such as salons or staterooms where flooring is the dominant source of noise in situations where it is difficult to install prop-

er engine room insulation. Underlayment products consist of a foam layer supporting an acoustic vinyl barrier. The foam layer acts to decouple the mass layer from the floor vibrations, creating an effective barrier against noise radiating from the floor due to structureborne or airborne sources of noise excitation.

Carpet underlayment is also very effective as part of a full insulation package. In cases where greater attenuation levels are required, carpet underlayment will improve upon the engine room insulation package. Not only will the carpet underlayment add a second decoupled mass, but it will also seal areas such as hatches where leakage can take place.

Material configuration or options

Materials	Total Thickness	Foam	Mass Layer
2 lb/ft,sq 1/2"	3/4 inch	1/2 inch thick	2 pounds per square foot
2 lb/ft,sq 1/4"	1/2 inch	1/4 inch thick	2 pounds per square foot
1 lb/ft,sq 1/2"	5/8 inch	1/2 inch thick	1 pounds per square foot
1 lb/ft,sq 1/4"	3/8 inch	1/4 inch thick	1 pounds per square foot
.5 lb/ft,sq 1/2"	9/16 inch	1/2 inch thick	1/2 pound per square foot
.5 lb/ft,sq 1/4"	5/16 inch	1/4 inch thick	1/2 pound per square foot



SOUNDOWN CORPORATION
ACOUSTIC INSULATION DETAIL

2" ID (203.2mm) ENGINE EXHAUST PIPE

DUAL-LIFT (0.123m)

Barrier Foam Composites

The Material

There are a number of formats for this product, each one consisting of one of the foams listed with a vinyl loaded mass layer bonded to the top.

Foams

Charcoal 1/2" and 1/4"

Soft underfoot feel compatible with softer carpeting.

Premium grade 1/2"

Feel compatible with carpets requiring a firmer support.

Closed cell 1/2"

For use under all weather carpeting in areas of the boat that get wet.

Mass Layer

The mass portion of this material is a mass loaded vinyl, with a reduced slippage embossed surface, in densities from 1/2 lb to 2 lb per square foot.

Typical Physical Properties

Thickness	1/4" to 3/4"
Weights (per ft ²)	.55 lbs. to 2.2 lbs.
Flammability, foam UL 94 HF-1 MVSS 302	PASS ----- 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/l" (Barrier) ASTM D 624	77
Temp Range, Fahrenheit (Composite)	-40 to 255 degrees

Enhanced Noise Reduction due to Carpet Underlay

Material	100hz	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
2. lb/ft, sq. 1/2"	2	0	2	7	10	14	18	22	27	30	34	36	37	39	40	42	45	45
1. lb/ft, sq. 1/2"	2	2	2	0	5	8	12	17	20	24	29	30	33	35	36	37	38	38
.5 lb/ft, sq. 1/2"	0	0	0	0	0	3	7	10	14	18	22	24	25	28	29	32	33	33
2. lb/ft, sq. 1/4"	2	2	2	0	5	8	12	17	21	25	28	33	36	38	40	31	33	33
1. lb/ft, sq. 1/4"	2	2	2	2	2	4	8	11	17	19	24	26	30	35	36	37	38	38
.5 lb/ft, sq. 1/4"	0	0	0	0	0	0	0	4	8	12	17	20	23	27	29	30	32	32