

# Soundown Noise Control Products

## Providing positive, cost effective results.

Soundown Corporation manufactures and distributes noise and vibration control materials for marine and many other industries. We provide information, technical assistance, and detailed installation instructions to assure our customers positive and cost effective

results. Over the years we have provided assistance to thousands of OEM and custom boat builders, naval architects, and boat owners. Our technology, engineering, and capabilities for reducing noise in marine applications are unmatched. Noise problems similar to

those in marine applications occur across most industries and can be solved with our materials and experience. Soundown manufactures a wide variety of noise and vibration control materials that meet the requirements of all our customers' specific needs.

## Noise Barrier and Sound Absorption Materials

Soundown BARRIER COMPOSITE MATERIALS use an array of base materials to achieve specific results, and are the best materials for lining engines, generators and other noisy spaces. These materials absorb reflecting noise within machinery space while creating an effective barrier against sound transmission through walls, panels and bulkheads. In some cases Barrier Composites are not required and Soundown provides ACOUSTIC ABSORBERS from a similar array of base materials. These Acoustic Absorption Composites are lighter, and are manufactured from the same basic materials as the other composites.

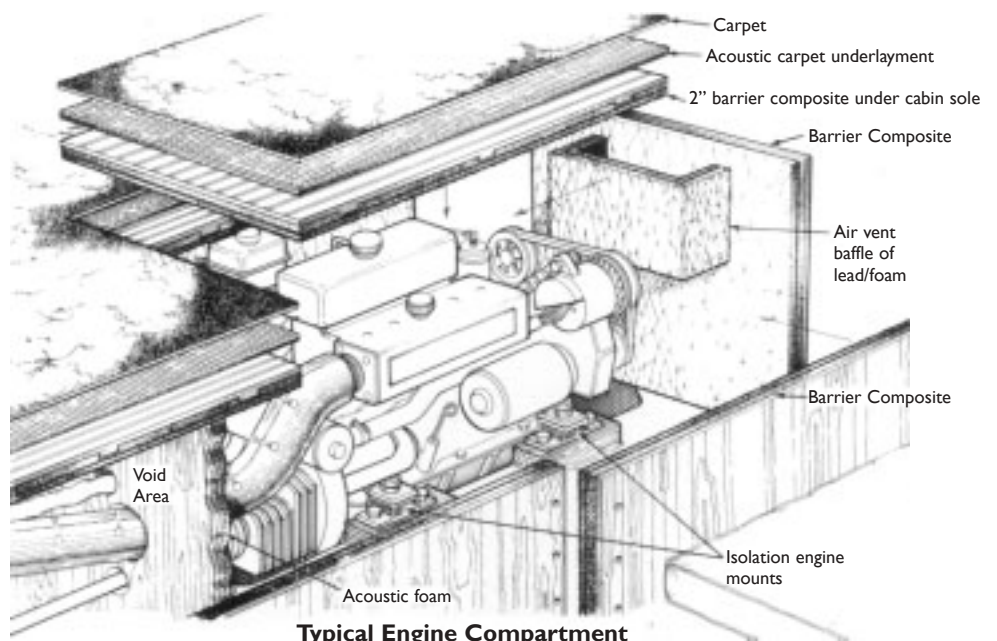
Soundown manufacturing extends beyond these materials however, as we offer comprehensive solutions to noise problems. We also supply acoustic carpet underlayments, barrier sheets, vibration damping material, isolation materials, equipment isolators, engine mounts, shaft couplings and exhaust silencers. We stock a complete line of support materials and installation aids for our entire line of products.

A carefully planned and installed acoustic program using quality Soundown products reduces noise and greatly improves the comfort and quality in, and around, your boat. Soundown sales engineers can advise you on how all the systems we supply are integrated with each other to achieve the best results. For



Soundown Barrier Composites: an ideal start to engine room insulation.

technical support or more information, contact your local Soundown distributor, representative, or our main office in Marblehead, Massachusetts. Soundown's technical staff and trained distributors are pleased to assist in solving your particular noise problem, whatever it may be.



Typical Engine Compartment



# The Full Range of Soundown Soundproofing Materials

In marine and all other applications, there are two basic types of noise:

**AIRBORNE NOISE** - radiating directly from the engine, transmission, exhaust, and other rotating equipment.

**STRUCTUREBORNE NOISE** - vibrational energy imparted to the hull, super structure, and other components that is transmitted throughout the vessel and is then radiated as airborne noise.

**AIRBORNE NOISE** is reduced using Soundown Barrier Composites and other Soundown Materials to block noise escaping from the engine area, and absorb

noise within the engine area. Soundown Carpet Underlay is a barrier composite for application in accommodation spaces, while Soundown Head and Hull Liners are acoustic absorbers for use in these areas as well. Soundown Exhaust Silencers reduce annoying exhaust noise in both interior and exterior spaces.

**STRUCTUREBORNE NOISE** is minimized by isolating all machinery and in some cases entire interior surfaces from the structure of the vessel. Soundown Engine Mounts and Ring-Bushing Mounts are ideal for isolating the main propulsion

engines, generators, and other rotating equipment. For isolation of interior components or surfaces, Soundown supplied Sylomer is installed in strip bearing fashion. To control vibration on large flat panels and heavy hull structures, Soundown Damping Sheets and Tiles are extremely effective.

Soundown supplies technical support to select the proper materials or combinations for your application. Please refer to the following descriptions of the complete range of Soundown Products.

## Soundown Product Guide



Acoustic Insulation



Exhaust Silencers



Vibration Damping



Shaft Couplings



Isolation Mounts



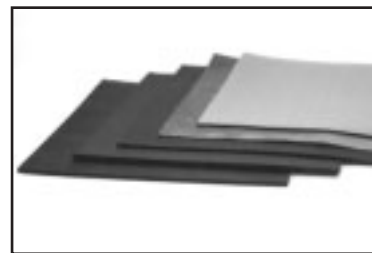
Custom Cutting



Installation Accessories

### Barrier Sheet Materials

Soundown Tuff-Mass® barrier material is available in 1/2, 1, 1-1/2, and 2 lb/ft<sup>2</sup> densities. It is a rugged all-purpose sheet barrier with a wide range of uses. Tuff Mass is supplied in a standard 54" width and variable roll lengths from 10' to 250' depending upon material configuration. Soundown Acoustic Lead Barrier is available in weights of 1



and 2 lb. This traditional incombustible barrier material is supplied in a standard 48" width, and rolls of 12', 24', or longer as required.

### Exhaust Silencers

Soundown Waterdrop Vertical and Soundown Axial Marine Exhaust Silencers are the industry benchmark for super quiet, low back pressure, universally configurable systems. These silencers are manufactured in both vertical and horizontal format, and are capable of both above and below water discharge for applications ranging from small 7 kW generators up to 3500 hp main engines. Construction is primarily heavy schedule, high temperature, fire retardant FRP lay-up with white finish. Complete system



design and review is also available as an additional service when installing Soundown Exhaust Silencers.

### Barrier Composite Insulation

Soundown Barrier Composite Insulation is the most commonly used material due to its wide range of applications and excellent acoustic properties. These composites are typically a fire retardant polyether foam absorber and decoupler type, with a mass loaded PVC barrier in one of several different weights. They also have a rip stop Mylar vapor barrier. Other absorber and decoupler



materials include several types of fiberglass, mineral wool, and polyimide foam. Lead barrier is also available. Barrier composite materials are available in 1/2 - 4" thicknesses, depending upon the material configuration.

## Acoustic Carpet Underlay



Soundown Acoustic Carpet Underlay is a composite material using Soundown Tuff-Mass® as a barrier in weights of 1 or 2 lb., and acoustic foam decoupler. There is an option for a soft or firm acoustic foam layer that provides a comfortable feel. Soundown Carpet Underlay reduces noise radiating from carpeted surfaces. It may be used



alone or to supplement insulation applied in engine spaces. Soundown Carpet Underlay is manufactured in 54" width at 1/4" and 1/2" thickness.

## Vibration Damping



Soundown Vibration Damping Sheets and Tiles are a high performance, easily applied, extensional vibration dampers for reducing structural reverberant "ringing" and structureborne noise. This material is effective on a wide range of substrates, especially fiberglass, aluminum, and steel. Soundown Damping Sheets are available in



1/16", 1/8", 1/4" at 54" width, and in 1'x 1' tiles in 3/8" and 1/2". We also stock a complete line of interlayer damping materials for many applications.

## Engine Isolation Mounts



Soundown Engine Isolation Mounts are used for the reduction of structureborne noise from propulsion engines. We provide mountings of all types, for installations up to 6000 hp. Soundown Flexible Engine Mounts are high performance adjustable isolators for both thrust taking and non-thrust applications. This range of mounts is available in various configurations, all with heavy-duty features, including



some types available in steel, cast iron, or aluminum constructions. Our mounts are available with or without height adjustment, and are specified for each unique application to deliver the best isolation performance possible.

## Equipment Isolation Mounts



Soundown Equipment Mounts cover a wide range of applications. Ring/Bushing Mounts are a versatile, highly effective mounting system for the isolation of auxiliary equipment vibration noise. They are available in four sizes ranging in capacity from 12 - 350 pounds. Each size is available in four variables of stiffness, enabling precise selection of the correct isolator for every specific application. Other



equipment mounts include specially designed elastic exhaust hangers, many sizes and styles of metal bonded rubber isolators and steel spring seismic mountings. The range of capacity is 150-6000 lbs.

## Flexible Shaft Couplings



Soundown Flexible Shaft Couplings are available for a range of thrust and non-thrust applications. These are very effective at reducing structureborne gear noise. We deliver these couplings for main propulsion systems ranging from 200 hp through 2500 hp.

All Flexible Shaft Couplings are delivered with custom mating flanges to adapt



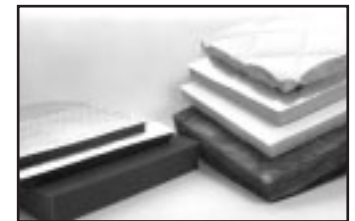
specifically to your gearbox installation.

All coupling specifications are reviewed for high performance and long life based on the unique criteria of each installation.

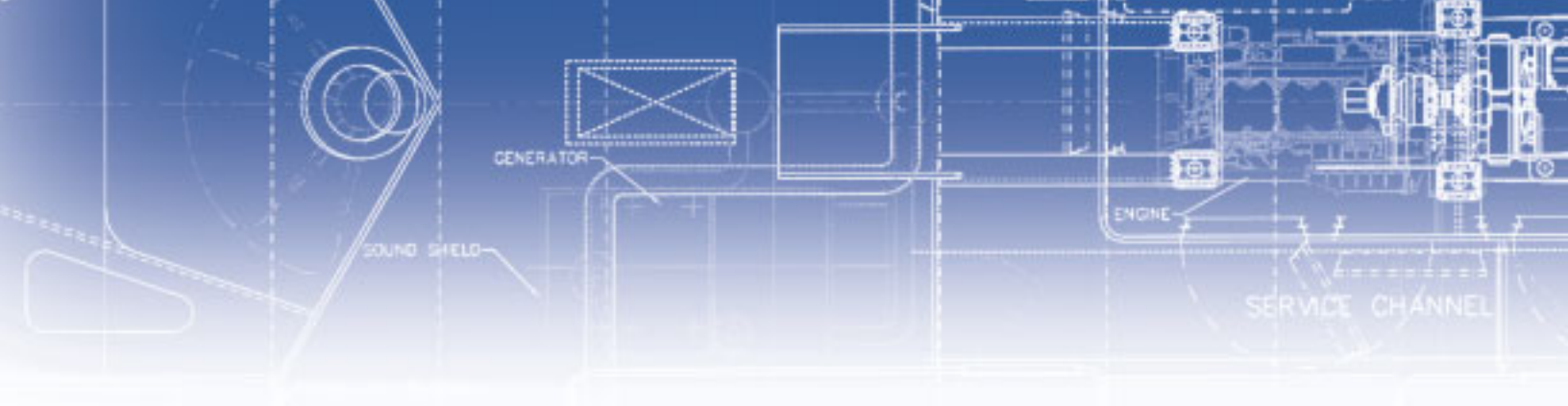
## Sound Absorption Material



Soundown Acoustic Absorption Materials are used in applications where barrier treatments are not required. These treatments are manufactured from a wide range of base materials such as polyether foam, acoustic fiberglass, coast guard approved fiberglass, polyimide foam, and mineral wool. Soundown Acoustic Head and Hull liners also



provide good absorption performance in occupied spaces. This family of products is delivered in various sizes and configurations ranging from 1/4 - 4" depending on the material specification.



## Vibration Isolation Materials



## Installation Accessories

Soundown Vibration Isolation Pads are based on the sylomer product line which is a recognized "standard" in the marine industry. This load bearing, foamed urethane product is extremely effective in reducing structureborne noise and vibration in finished surfaces, such as floors and joiner panels. Sylomer has a variety of other uses in a range of industries such as railroads,



construction, machine manufacturing, and isolation of delicate instrumentation. Soundown provides this material in six different densities and thickness, up to 2" and in any possible fabricated configuration.

Soundown Installation Accessories are available for use with all our materials. Various types of adhesives compatible with all our foams are available in spray and brush-on formats. There are also epoxy systems available for Soundown Damping Materials. Most of our sheet products and materials can be ordered with aggressive Peel and Stick Adhesive (PSA). There are several types of



Soundown Fasteners in aluminum and stainless, or plated steel. We also supply a complete line of edge tapes designed to match the insulation finish.

# Soundown, Silent Since 1983

Incorporated in 1983, Soundown's original customers were New England boat builders seeking to build higher quality – therefore quiet – yachts. With Soundown's original line of sound insulation blankets, hand fabricated to customer order, company founder Joseph

Smullin helped guide customers through engineered solutions. Before long Soundown earned a reputation as a solutions company for noise and vibration problems.

Since then, our range of customers and products has expanded. Currently

our business ranges from individuals looking to quiet their own boat, to custom builders of all size yachts, as well as production boat builders, and manufacturers of engines and other machinery. The scale of projects ranges from large cruise ships to small music rooms in a home.



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