



Concrete Solutions, Inc.



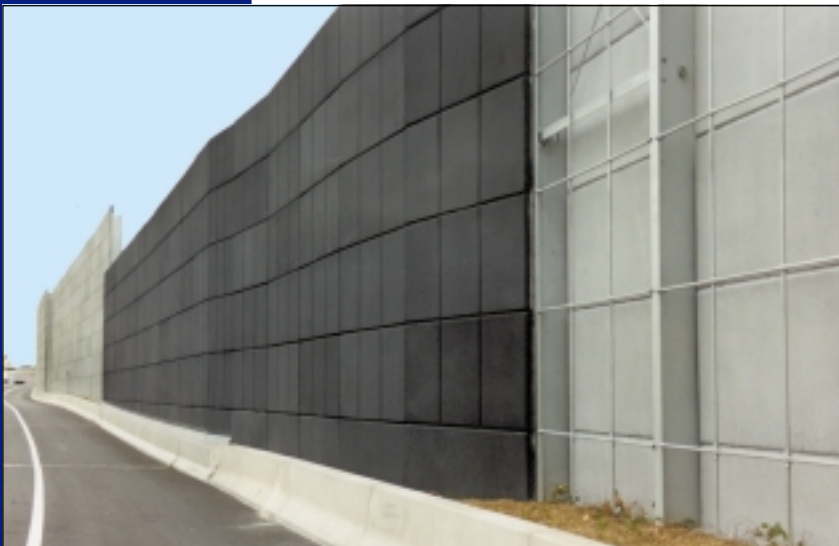
Sound solutions for the transportation industry

Featuring

SOUND SORB®

Durable Acoustic Material

Life's ever increasing hectic pace creates noise — noise from highways, railways, industry and other pollution sources that adversely affect each of us every day. Concrete Solutions, Inc. (CSI) has the answer to noise abatement, no matter what the situation. It's SoundSorb[®], a unique open cellular cement-based acoustic material that minimizes the effects of noise, providing a state-of-the-art sound absorbing solution to all types of noise concerns. SoundSorb exceeds acoustic requirements specified by transportation authorities, making it the elite product in noise abatement with millions of square feet of SoundSorb installed around the world.



SoundSorb ASTM C-423 NRC Ratings

- Tested at a thickness of 3.5" = NRC 1.00
- Tested at a thickness of 3.0" = NRC .95
- Tested at a thickness of 2.5" = NRC .85
- Tested at a thickness of 2.0" = NRC .80

As thickness increases, so will the sound-absorptive properties of SoundSorb.

Extremely Durable

Design engineers will appreciate the fact that SoundSorb is an advanced, free draining cement-based material with the life-span of concrete. SoundSorb is freeze-thaw resistant due to its free-draining nature. The material achieves a Class A rating in ASTM smoke and flame tests and is fireproof.

Seismic and Hurricane Resistant

Lightweight walls that incorporate SoundSorb can be designed to be hurricane and earthquake resistant.

Wall Height

The average height of a noise wall is 13 feet. SoundSorb can be integrated into any size of panel type for stacking or low-cost monolithic panels. Because of this, SoundSorb is useful in weight-sensitive construction when durability is important.

Diversity in Design

CSI aligns itself with concrete manufacturers internationally that have developed economic wall design solutions. Since SoundSorb is a wet-cast

product, it is easily integrated into many unique, cost-effective concrete wall designs. SoundSorb's unique molding characteristics allow it to be used with almost all sizes,

SoundSorb — The Premier Product for Sound Abatement

Sound absorption lab tests measure the sound level reduction properties attributed to the sound absorbing qualities of a material. Products in this category are typically measured via the Noise Reduction Coefficient (NRC), an average of four hertz frequency readings (250, 500, 1000 and 2000) with optimal NRC values described as an NRC 1.0. CSI's SoundSorb material reaches this optimal level at a thickness of 3.5 inches. Compare these results with other acoustical concrete materials — that's the SoundSorb difference!

Acoustical Properties of SoundSorb

Frequency (Hz)	125	250	500	1000	2000	4000	VALUES
ASTM C-423	.23	.60	1.25	.97	.95	.96	NRC .95
ASTM E-90	39	40	45	51	58	59	STC 51

(E-90 test done with 3 inches SoundSorb and 2.5 inches of concrete structural backing)



designs, textures, molds and colors, including customized projects. Design engineers are urged to contact CSI during the noise barrier design phase to provide their client with an aesthetic

touch while specifying cost-effective wall design solutions. Visit our company website at www.soundsorb.com for specifications or contact CSI directly for details.

The Cost-Efficient Option

While SoundSorb is of the highest quality, it is also one of the lowest cost sound absorptive indoor/outdoor materials on the market. Sourcing and manufacturing ingredients locally, utilizing efficient designs and texturing methods, and avoiding long-distance shipping fees all contribute to cost savings. Even lower costs are achieved when producing full-height monolithic panels to avoid the increased expenses associated with stacked panel production and installation.

Another Sound Solution: Cladding

For existing noise-reflective concrete surfaces, SoundSorb Cladding panels provide a lightweight noise abatement solution. These retrofit panels are easy to install and typically requires only one person to handle them. Custom design texturing and coloring are also available.



Texture and Color

It s easy to create a textured surface with SoundSorb, whether it is stamped or poured into mold liners. Fractured fin, granite, barn wood or brick are just a few examples of the readily



available liners utilized with SoundSorb. Then choose from a complete selection of stains to enhance the color of the project to blend with virtually any environment. CSI specializes in custom designs and will work together with you to create your own unique pattern or design combination. Contact CSI for more details.

Other Uses For SoundSorb

While highway and rail transportation projects are the core of our business, there are many noise mitigation applications for SoundSorb. It can be utilized (poured or as cladding) virtually anywhere there is unwanted noise. Here are some examples:

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|-------------------------|---------------------|
| Airport terminals | Auditoriums |
| Residential sound walls | Pool Areas |
| Correctional facilities | Convention centers |
| Industrial applications | Athletic facilities |
| Loading docks | Restaurants |
| Utility power plants | Hospitals |
| Waste treatment plants | Atriums/Lobbies |
| Museums | Media rooms |
| Libraries | Recording studios |
| Classrooms | Firing ranges |
| Dormitories | Kennels |
| Theatres | Custom projects |



Noise Abatement Products

Tire and rail sounds are the primary sources of noise with a frequency range within the 400 to 1250 hz range. SoundSorb is designed to eliminate the reflection of noise within that range. Acoustical performance can be further enhanced by adding a textured or molded surface.

SoundSorb

This durable material is wet cast during the precast production and is integrated with the structural portion of the panel to become an AASHTO compliant barrier system with excellent sound absorptive qualities. Typical uses for noise abatement include all modes of transportation and industrial noise reduction, as well as all commercial, residential, aviation, cooling tower, emergency generator station and generator noise.

SoundSorb Cladding

Existing walls creating reflective noise problems can benefit from this lightweight, retrofit panel, providing a cost-effective solution. Proper sizing allows easy installation by a single worker and is designed to retrofit emergency generator stations, transformer towers, chiller walls, industrial noise, reflective highway noise barriers, in-home entertainment rooms, theatres and convention centers.



SorbShield

A unique hydrophobic solution without solids for use with porous and nonporous materials, SorbShield renders acoustical materials sound absorptive during wet weather conditions, dramatically and continually repelling water. Sound enters the porous cement-based surface but rain drops cannot, thus maintaining the material's acoustic qualities. Ultraviolet light does not deteriorate SorbShield as it does other water repellants, but actually enhances its performance. Concrete Solutions, Inc. is a distributor of SorbShield.



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