



## Sound Damping Coating

# The Best Choice for Sound Environments

### Why paint and then insulate?

Specifically designed to reduce excessive sound from structural or mechanical noise, **Delta~dB Sound Damping Coating** is a flexible, enviro-friendly coating that bonds directly to a wide range of surfaces. Comprised of noise suppressants encased in an acrylic binder, Delta~dB is easily applied via brush, roll or spray methods.

Sound travels two ways – through structure and also through the air. To effectively reduce the conversion of sound energy from structurally-transmitted energy to airborne sound waves, the vibration effects on the surface must be dampened. Delta~dB employs its sound-damping technology at this point in the energy conversion process, reducing or “killing” the sound prior to its airborne transmission.

Its unique chemistry and proven Dispersion2™ technology allows Delta~dB to pack more sound-suppression materials into a flexible adhesive coating than ever thought possible. The result of this cutting-edge coating technology is a greater reduction of sound transmission at lower dry film weights compared to traditional damping solutions. In addition, application is normally 3-4 times faster than standard cut-and-paste-type damping materials. Another benefit over conventional wraps and bulky insulation is that equipment surfaces coated with Delta~dB are always viewable, allowing personnel to inspect surfaces without any tedious dismantling. Finally, because the coating bonds directly to all clean surfaces, there’s no risk of adhesion loss or water entrapment that can lead to Corrosion Under Insulation, common with conventional insulation.

Delta~dB can easily be applied to carbon and stainless steel (carbon steel requires a primer), aluminum, brass, fiberglass, plastic, and many other surfaces. A typical application of only two coats provides the most cost-effective sound damping control, but additional coats can be applied as needed. Delta~dB is enviro-friendly, with no toxic ingredients or volatile organic compounds (VOCs). Since it’s water-based, clean up is simple using just soap and water.

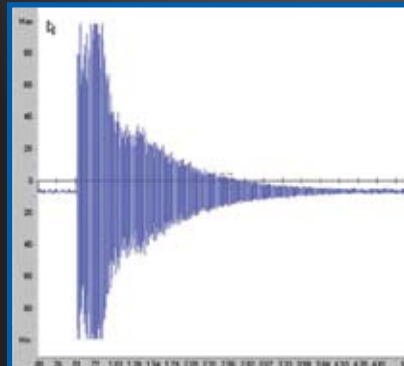
Delta~dB is a Class A (1) fire retardant coating approved for use on cars, buses, trains, boats and large industrial complexes. Combining Delta~dB with Delta T Marine thermal insulation coating achieves dramatic sound reduction and thermal qualities.

Delta~dB quiets even the noisiest sounds

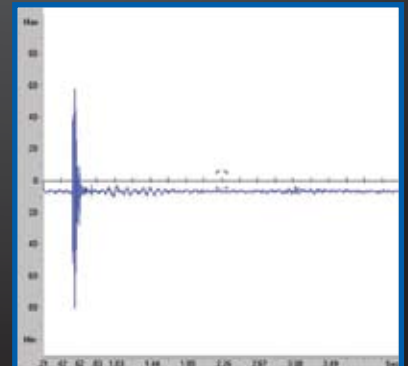


## Uncoated Surface vs. Coated Surface

Below are two identical surfaces in a before and after study. The graphics depict the sound waves expressed in Decibels over time. The left graphic shows the uncoated surface versus the right graphic showing the coated surface (at 40 mils or 1.0 mm).



Control - bare steel surface



Test surface - steel with 40 mils Delta dB in two coats





# Sound Damping Coating

## Brief Technical Data

- Packaged:** 5 gallon pails or 55 gallon drums
- Color:** White, Light Grey, Dark Grey, Tan. Tinting available
- Odor:** Little to none
- Base:** Water-based Acrylic
- VOC:** 0.0 lbs./gallon
- Shelf Life:** 1 year
- WPG (wet):** 13.9–14.1 lbs.
- Weight Dry:** 0.17 lbs./ft.<sup>2</sup> @ 20 mils (0.83 kg/m<sup>2</sup> @ 0.5 mm)
- Spec. Gravity (wet):** 1.60
- Volume Solids:** 73–75%
- Weight Solids:** 84%
- Viscosity:** 4200 cp
- Hardness:** Good to great
- Flexibility:** Great, capable of free film bend of 1/8" dia without cracking at 20 mils DFT
- Adhesion:** 5B
- Coat Thickness:** 20–60 mils (0.5–1.0 mm)
- Maximum Coats:** No upper limitation as long each coat does not exceed 40 mils wet.
- Dry time (80°F):** 1.0 hours @ 20 mils wet
- Application Temp:** 50°–250°F (10–110°C)
- Recoat:** 30–120 minutes
- Cure Time:** 24–72 hours

Sound Damping Effects Using Coatings							
Decrease in Decibels vs. Frequency							
Frequency Hz	188	366	585	881	1000	3000	5000
60 mils Delta~dB	9.3	11.5	10.7	11.6	10.8	10.9	11
40 mils Delta~dB	4.0	5.8	5.3	5.7	5.7	5.7	5.8
Delta~dB+Delta T Marine	10.2	11.8	11.7	12.9	12.9	12.9	12.9
Plain Panel (no coating)	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Explanation:** The numbers above show a **decrease** in decibels across the various frequencies of vibrational movement. The coatings demonstrate a very positive effect on damping of the surface. All tests were performed on like aluminum surfaces according to Loss Beam Factor Test performed at Noise Control Engineering, Inc.

**Note:** A plain aluminum panel that shows no damping or sound loss effects was used as the control for the test. Delta~dB and Delta T Marine is a typical system of both sound and thermal insulation. Delta T Marine is also a product of Mascoat Products USA.

### How Does The Coating Work?

Sound transfer is based upon three factors: the **source** (where the sound originates), the **path** (the vehicle that transfers the sound) and the **receiver** (how we perceive the sound). To effectively control sound, it is essential to control at least one of these factors. In most cases, it is difficult to control the source and inconvenient to control the receiver. Therefore, controlling the path is the most viable option.

Delta~dB incorporates special anti-vibrational fillers with a sound absorption resin. This unique formulation suppresses the vibrational movement of the sound path, in turn retarding sound/vibration transfer through the path. By controlling the vibration, less sound is transmitted through the surface.

**Typical Uses:** Delta~dB is an excellent lightweight material that can be applied to almost any surface to drastically reduce structural noise. Easily applied to a vehicle or marine vessel, Delta~dB dampens noises before they are released into the car, truck, bus, vessel, etc. Because the coating stays flexible after curing, its adhesion on vibrating surfaces is significantly better than typical glue-on damping materials.

**Other Applications:** Delta~dB can also be used on industrial and other equipment that produce high noise levels due to structural translation. The coating can be applied directly to most surfaces to lower noise prior to airborne release. Where noise level safety is concerned, Delta~dB is a very cost-effective, low-effort solution.

**Applying Delta~dB:** The coating can be applied via airless or conventional sprayer, brush or roller.

**Surfaces:** Delta~dB can be applied directly to almost any surface. Carbon steel requires a primer.

**Application Rate:** Delta~dB can be applied to 20–60 mils wet film thickness. Thinner coats promote faster dry times. Typical application is 2-3 coats.

**For a complete list of approvals, please call 800.549.0043.**

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