

AntiVibe® DL-10 Metal Damping Compound



Description

AntiVibe® DL-10 is a viscous water-based material formulated to provide vibration damping by converting the vibrational energy into heat, reducing resonant vibrations, and decreasing ringing of thin metals and plastics.

The material can be spray applied or troweled onto the surface.

Applications

Damping liquid is used to reduce vibration of thin materials and improve the sound quality of various equipment such as transit and off-road vehicles, fabricated metal cabinets, appliances, stainless steel sinks, ventilation ducting, computer printers, and various other applications.

Technical Characteristics

Color:	Beige
Total Solids:	62%
Viscosity (@ 25° C):	280,000 cP Thixotropic paste
Density:	1.43 g/cm ³ Wet 1.73 g/cm ³ Dry
Flash Point:	None
Hardness, Shore D	58
Flammability:	FMVSS 302 (Pass) UL 94V-0, 5VA (on substrate) ASTM E162: I _s = 2 ASTM E662: D _s (1.5) = 1 (flaming mode) D _s (4.0) = 25 (flaming mode) D _s (1.5) = 1 (non-flaming mode) D _s (4.0) = 3 (non-flaming mode)
Fungus / Mold:	0 Rating (ASTM G 21)
Shelf Life:	1 year

Resistance to Two Day Immersion

Diesel Fuel:	Beige
Mineral Spirits:	62%
Lubricating Oil:	280,000 cP Thixotropic paste
Gasoline:	1.43 g/cm ³ Wet 1.73 g/cm ³ Dry
Water:	None

The resistance of AntiVibe DL-10 to immersion in various substances is shown in the above table. There was no actual degradation after two days of exposure, but there was swelling and softening. After being allowed to dry at room temperature for a few days, complete recovery occurred.

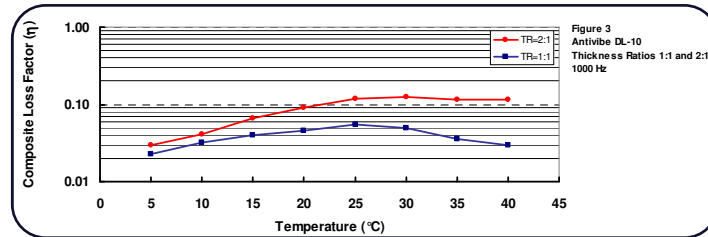
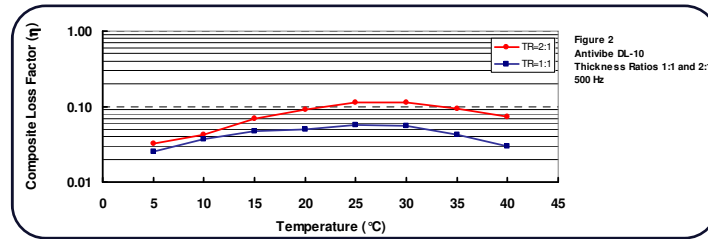
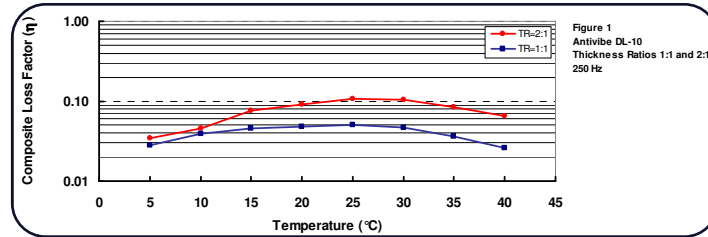
* The maximum continuous use temperature has not been established for this product, but we would not recommend use above 392 °F (200 °C).

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Weights and Thicknesses of AntiVibe DL-10 required for a Dry Thickness Ratio of 1:1

Sheet Metal		AntiVibe DL-10		
Thickness		Wet Weight	Wet Thickness	Dry Weight
Gauge	in.	lb/ft ²	in.	lb/ft ²
12	0.1046	1.11	0.149	0.65
14	0.0747	0.79	0.107	0.47
16	0.0598	0.63	0.085	0.37
18	0.0478	0.51	0.068	0.30
20	0.0359	0.38	0.051	0.22
22	0.0299	0.32	0.043	0.19
24	0.0239	0.25	0.034	0.15



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How to Apply Antivibe DL-10

For extensional damping applications, if the material is to be effective, it must be bonded well to the surface. In the case of Antivibe, the bond between the dry product and the substrate depends to a large extent on the nature of the substrate and how it has been cleaned and prepared prior to application of the damping material. Frequently, the substrate must be coated with a primer before the damping compound is applied. These products can be applied by trowel or with a stiff brush, but Antivibe is best applied by spraying to a maximum of 1/8" thick coating. Regardless of the application method used, all surfaces to be coated must be free from dirt and any film which would interfere with the bond to the substrate. Spray equipment suitable for the application of viscous materials is required to apply our DL products. The following is recommended by Graco Inc.:

For air assisted spraying: The 10:1 President Air Spray System, Model #225-886 equipped with a Heavy Fluid Reverse-a-Clean Air Spray Gun #204-000, with 1/4 - size round type cap.

For airless spraying: The 30:1 President Hydra Spray Package #231-063 with agitator or the 33:1 Bulldog Airless Spray Package #237-615 with a Hydramastic Reverse-a-Clean Spray Gun. A tip size of 0.043 inches is recommended.

To assist the flow of the damping liquid toward the intake of the pump, the use of a ram or follower plate is highly advisable. The internal hose connections should be ground smooth so as to eliminate blockage of material. When not in use, the gun must be kept immersed in water. Gun, feed lines, and pump must be cleaned after each shift.

Drying Rates for Antivibe DL-10

The rate of drying depends very much on the following variables: thickness of coating and velocity, temperature, and relative humidity of the air. When the wet weight of Antivibe DL-10 is 0.63 lb/ft² (approx. 0.085" or 2.17 mm), drying is complete after several hours at room temperature and low relative humidity. Thick one pass applications sometimes skin over and dry very slowly. Fast drying can be achieved with high air temperatures and high air flow rates. For example, if the wet weight of Antivibe DL-10 is 0.15 lb/ft² (approx. 0.02" or 0.6 mm), the air temperature is 150°F and the air flow rate is 700 ft/min, the material is dry after about 8 minutes. When the air temperature is increased to 290°F, the drying time is about 2 minutes in this case.

Note: This data sheet provides general information only. All statements and recommendations are offered in good faith but without guarantee. Users of our products are responsible for compliance with any legal provisions including those relating to patent laws and accident prevention.

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