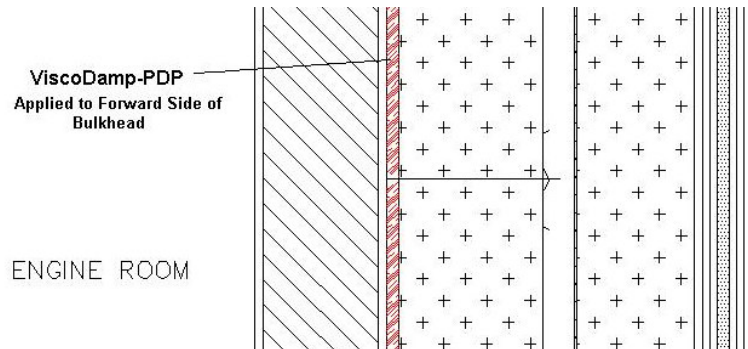


THERMAL- ACOUSTIC CONTROL MATERIALS



ViscoDamp-PDP
Constrained Layer Interlaminar Damping Sheet



GUEST

NVT continues to deliver innovative acoustic solutions that are integrated directly into vessel construction.

ViscoDamp-PDP constrained layer damping sheet provides lightweight, specific localized damping of resonant GRP structure. Unlike surface applied heavy mass damping sheet, **ViscoDamp-PDP** is a thin lightweight self contained laminate inter- layer designed to raise a composite sandwich panel's loss factor by 5 – 10 times over a wide range of frequencies. Reducing structural resonance by such a simple means results in huge labor, material and weight savings, eliminates the need for excessive stiffening and heavy mass layer damping treatments. **ViscoDamp-PDP** is very cost effective, costing no more than the layer of chop fiber mat it replaces.

ViscoDamp-PDP is applied completely within the GRP lay-up using standard lay-up resins. A counter-plate overlay laminate of 25-30% of the total lay-up thickness is applied over the ViscoDamp-PDP layer. When applied to cored sandwich construction, the counter-plate overlay is considered to be 25-30% of the skin thickness, not the total sandwich thickness. **ViscoDamp-PDP** can be pre-cut to shape and laid into just the flatter areas of the structure covering just 70-80% of the flat surface areas.

Excellent results in the reduction of bleed through noise on GRP wet exhaust mufflers, tubes and other GRP piping and ducts is a highly effective and very exciting new application for **ViscoDamp-PDP**. Other common damping applications with **ViscoDamp-PDP** are:

Damping of hull and tunnel over propeller, strut and rudder.

Wrapping GRP propeller stern tube and bow thruster tubes and adjoining hull interface.

Bilge stringers in way of machinery foundations to isolate and reduce structure noise radiation.

Damping of large flat bulkheads, deck surfaces and underside of hardtop overhead panels.

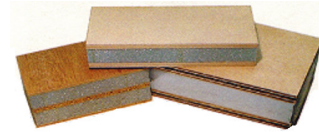
Lamination into cabin door joiner panels to reduce thin skin rattle and drumming effect.

Lamination into GRP enclosures on generators and outboard motors.

Weight		Thickness		Temperature Range		Fire Resistance
0.25 oz/ft2	160 grams/m2	0.006"	0.15mm	-40 to 250°F	-40 to 120°C	Resistance depends on characteristics of GRP layup

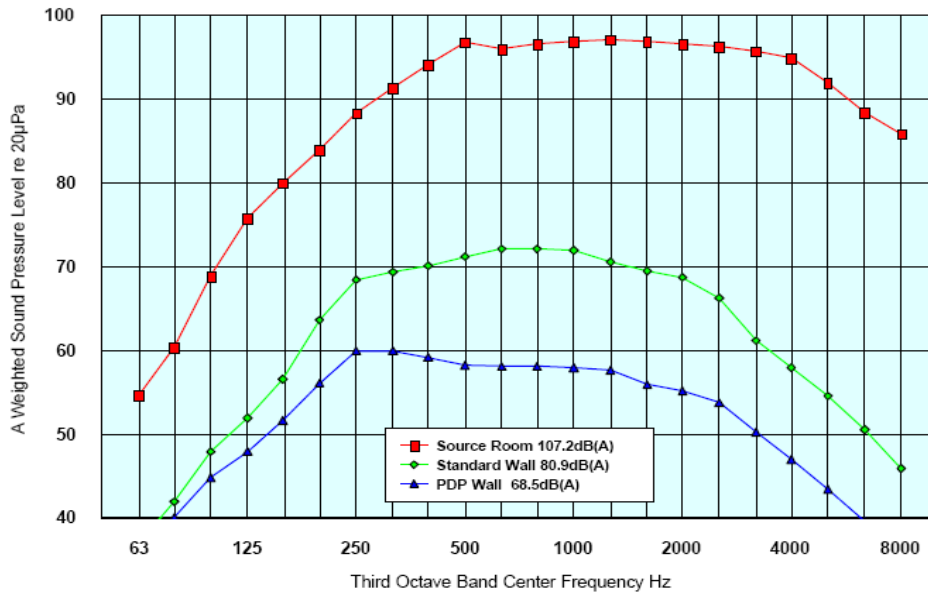
©2009 Donovan Marine, Inc. All Rights Reserved.

Product specifications and other information have either been provided by our Vendors or collected from publicly available sources. While Donovan Marine, Inc. makes every effort to ensure that the information contained in this document is accurate, we can make no representations or warranties as to the accuracy or reliability of any information provided. Donovan Marine, Inc. makes no warranties or representations whatsoever with regard to any product provided or offered by any Vendor, and you acknowledge that any reliance on representations and warranties provided by any Vendor shall be at your own risk.

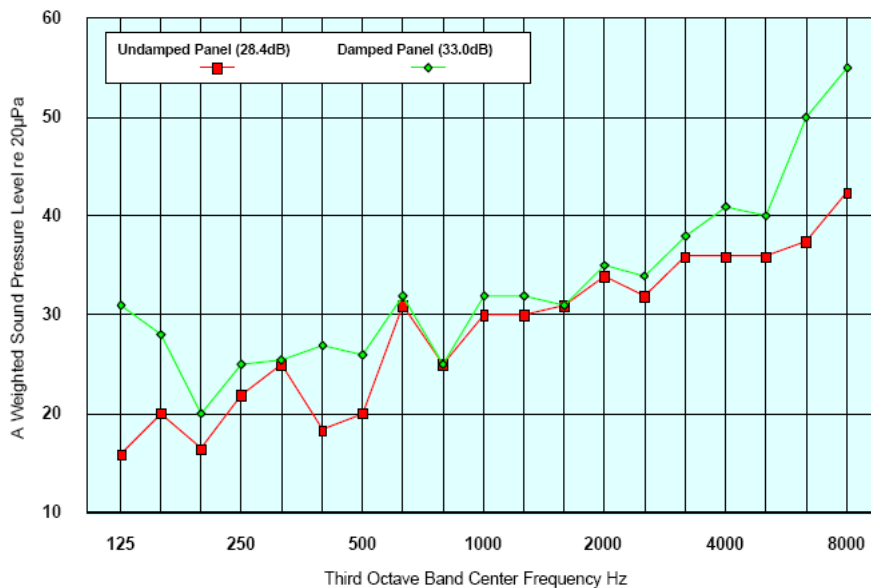


ViscoDamp-PDP Constrained Layer Interlaminar Damping Sheet

Comparison of Noise Reduction between Two Cabin Bulkheads



Insertion Loss of 4 Ply FRP panel
Figures in Brackets = Average Insertion Loss dB



©2009 Donovan Marine, Inc. All Rights Reserved.

Product specifications and other information have either been provided by our Vendors or collected from publicly available sources. While Donovan Marine, Inc. makes every effort to ensure that the information contained in this document is accurate, we can make no representations or warranties as to the accuracy or reliability of any information provided. Donovan Marine, Inc. makes no warranties or representations whatsoever with regard to any product provided or offered by any Vendor, and you acknowledge that any reliance on representations and warranties provided by any Vendor shall be at your own risk.