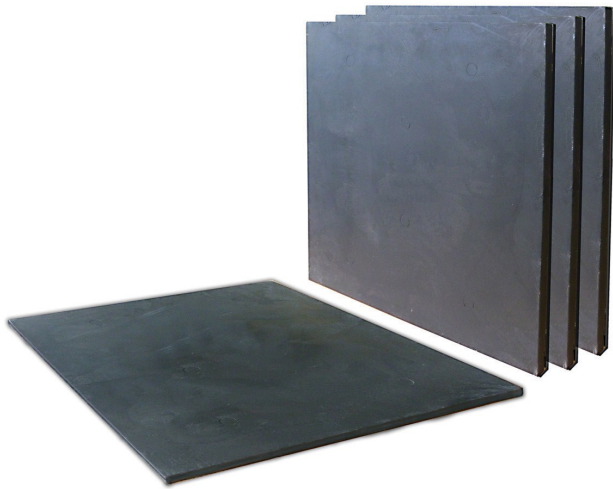




182IP  
01/13

### Vibration Damping Tile



**Vibradamp® Tile** is a unique product, engineered to reduce vibration in thick panel constructions. It was developed to meet market requirements in the industrial, marine, rail and heavy vehicle industries.

Being specifically engineered to reduce vibration in heavy gauge structures, **Vibradamp Tiles** are formulated using a blend of new generation polymer compounds which provide exceptional damping performance. This blend enables the tile to absorb the energy that causes vibration, therefore reducing structure and airborne noise.

Unlike traditional damping tiles, **Vibradamp Tiles** are available in various thicknesses and are engineered to offer a thinner and light-weight solution in reducing vibration.

The tiles are resistant to oil, grease and salt water and can be moulded into various shapes.

They can be simply bonded using **Vibradamp DC30** Damping Compound (refer Information Page 122IP) which, with its special formulation, enables the tile to maintain its acoustic properties. Due to the non-slumping properties of **Vibradamp DC30**, tiles can be installed without the use of mechanical aids such as screws or pins.

#### FEATURES

- No ozone-depleting substances generated during manufacture
- Free from lead, odour-producing oils, halogens and bitumen
- Increases transmission loss, reducing airborne noise
- Designed to damp substrates up to 20mm in thickness
- Operates within a broad temperature range allowing for diverse applications
- Low spread of flame and smoke emission, tested to UL94, FMVSS-302
- New light-weight formulation gives maximum performance for minimal weight
- Non-conductive, eliminating galvanic corrosion
- Easy to apply, mould and cut into various shapes

#### APPLICATIONS

- **Large enclosures**  
In air conditioning units, compressors and generators, vibration and noise levels are reduced and equipment longevity improved due to less fatigue caused by vibration.
- **Rail and bus**  
Floors, bulkheads and side panels, **Vibradamp Tile** will improve passenger comfort by reducing both vibration and internal noise levels.
- **Marine**  
Bulkheads, hull construction, tank tops, engine bed girders and the structure above props. Hull vibration in a ship or submarine excites a pressure field in the surrounding water. This field influences the noise level on board a vessel as well as radiating out. Applying **Vibradamp Tiles** to the inner surface of the hull, dissipates the vibrational energy, reducing internal and radiated noise levels.
- **Industrial**  
Heavy machinery, mining equipment, salvage equipment, hoppers and chutes can have radiated noise reduced and maintenance periods extended.

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## PRODUCT SPECIFICATIONS

THICKNESS (mm)	TILE SIZE (mm) x (mm)	WEIGHT (Kg/m <sup>2</sup> )
4mm	310 mm x 310mm	5.8 kg/m <sup>2</sup>
6mm	310 mm x 310mm	11.5 kg/m <sup>2</sup>
9mm	310 mm x 310mm	17.3 kg/m <sup>2</sup>
12mm	310 mm x 310mm	23.0 kg/m <sup>2</sup>
15mm	310 mm x 310mm	28.8 kg/m <sup>2</sup>

All thicknesses nominal

## APPLICATION GUIDE

SUBSTRATE	TILE THICKNESS
Steel	≥ 2/3 x T*
Aluminium	≥ 1/3 x T*
FRP	≥ 1/4 x T*

\*T : Substrate Thickness

## MATERIAL PROPERTIES

SPECIFIC GRAVITY	MINIMUM APPLICATION TEMPERATURE °C	MAXIMUM CONTINUOUS OPERATION TEMPERATURE °C	MAXIMUM INTERMITTENT OPERATION TEMPERATURE °C
1.5 (+/-10%)	15	100	110

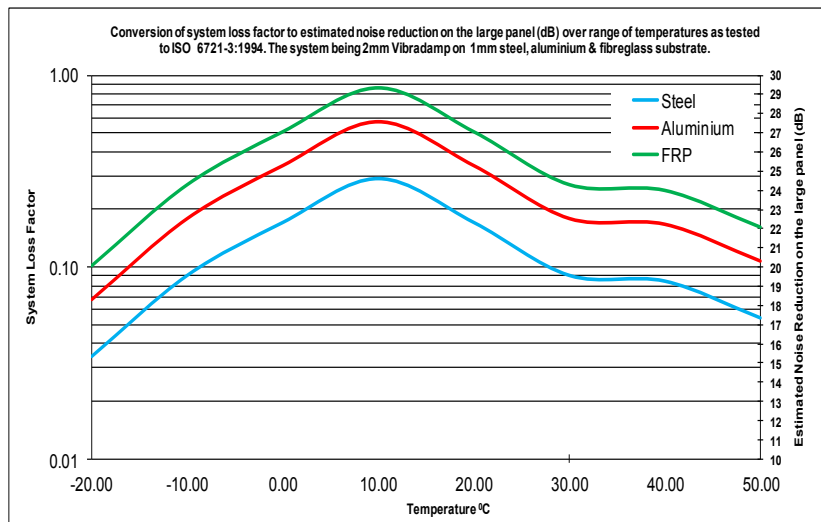
## DAMPING PROPERTIES - Decay Rate

TEST METHOD	INDEX	RESULT	DESCRIPTION
AS1937.10:1977 (Report No. 03712-MK3)	N/A	88dB/s*	Determination of Damping Coefficient by the Thick Plate Method@ 160Hz

\*Results for 6mm tile @ 25°C

## DAMPING PROPERTIES - System Loss Factor

(Report No. 03712-MK2 - Tested to ISO 6721-3:1994)



THICKNESS VIBRADAMP/SUBSTRATE 2:1			
Temperature °C	Steel	Aluminium	FRP
-20	0.03	0.07	0.10
-10	0.09	0.18	0.27
0	0.17	0.34	0.51
10	0.29	0.58	0.86
20	0.17	0.34	0.51
30	0.09	0.18	0.27
40	0.08	0.17	0.25
50	0.05	0.11	0.16

THICKNESS VIBRADAMP/SUBSTRATE 1:1			
Temperature °C	Steel	Aluminium	FRP
-20	0.02	0.03	0.05
-10	0.05	0.09	0.14
0	0.09	0.17	0.26
10	0.14	0.29	0.43
20	0.09	0.17	0.26
30	0.05	0.09	0.14
40	0.04	0.08	0.13
50	0.03	0.05	0.08

## FLAMMABILITY PROPERTIES

TEST METHOD	INDEX	RESULT	DESCRIPTION
ASTM D635-10 (Report No. 04412PH)	Burn rate	Self Extinguishing	Standard test method for rate of burning and/or extent of time of burn of plastics in horizontal positions.
UL94 (Report No. 03412-MK1)	After flame time ≤ 2 seconds	V-0	Vertical burn test for plastic materials.
FMVSS-302 (Report No. 03712-MK1)	Burn Rate - mm/min	Self-Extinguishing	Automotive burn rate test.

Caveats: Specifications are subject to change without notice. The data in this document are typical of average values based on tests by independent laboratories or by the manufacturer and are indicative only. Materials must be tested under intended service conditions to determine their suitability for purpose. The conclusions drawn from acoustic test results are as interpreted by qualified independent testing authorities. Nothing here releases the purchaser/user from responsibility to determine the suitability of the product for their project needs. Always seek the opinion of your acoustic or mechanical engineer on data presented by the manufacturer. Due to the wide variety of individual projects, Pyrotek NC is not responsible for differing outcomes from using their products. Pyrotek disclaims any liability for damages or consequential loss as a result of reliance solely on the information presented. No warranty is made that the use of this information or of the products, processes or equipment to which this Information Page refers will not infringe any third party's patents or rights. DISCLAIMER: This document is covered by Pyrotek standard Disclaimer, Warranty and © Copyright clauses. See [www.pyroteknc.com/disclaimer](http://www.pyroteknc.com/disclaimer).

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Vibradamp Tile

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**Pyrotek**  
noise control