Constrained Layer Vibration Damping Pad

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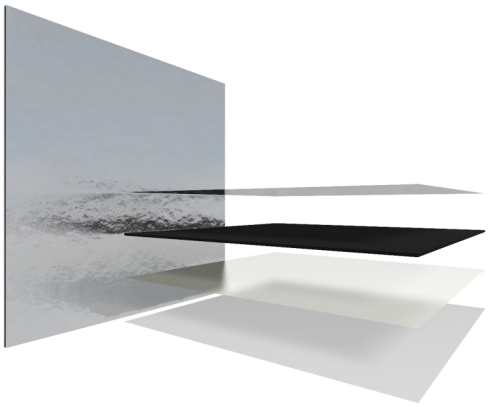


Decidamp® CLD is a constrained layer, visco-elastic damping material, designed to reduce structural vibration and sound transmission within light gauge materials. **CLD** was developed to meet market noise reduction requirements in the automotive, marine, industrial and OEM markets.

To achieve this high performance, the Pyrotek engineering team developed a product that thermally bonds three layers; a rigid outer metal layer, a visco-elastic membrane and a high-tack adhesive layer, hence the name **CLD** (Constrained Layer Damping).

The product achieves the highest fire ratings complying with **International Marine Organisation** standards for low spread of flame, as well as **British** standards, achieving **Class "0"**

Vibration is reduced by allowing the visco-elastic layer to flex, which creates shear strains between two rigid substrates, hence noise-creating energy is lost.

Lightweight panel constructions such as sheet metal (steel, alloy, tin etc.) and rigid plastics (ABS and FRP etc.) easily transmit noise when affected by natural resonance from vibration energies.

By applying **CLD** to rigid lightweight structures, the natural frequency of the vibrating surface is changed, lowering radiated noise (vibration), and increasing the transmission loss of the product.

Decidamp materials contain no ozone-depleting substances and comply with European and Australian standards for Volatile Organic Compound emissions.

FEATURES

- No ozone-depleting substances are generated during manufacture
- Free from lead, odour-producing oils and bitumen
- Performance across a broad temperature range
- Lightweight, only 75% surface coverage is required to obtain maximum results
- Easy to install, high-tack acrylic adhesive backing, simply peel and apply pressure to position
- Easily conforms to irregular surfaces without the use of heat guns
- Remains flexible, does not become brittle
- Complies with UL94 HF-1 , IMO 653.16 low spread of flame and British standards 476.6 / 7– **Class "0"**
- Resistant to weather and UV light
- Available in various weights, widths and roll lengths

APPLICATIONS

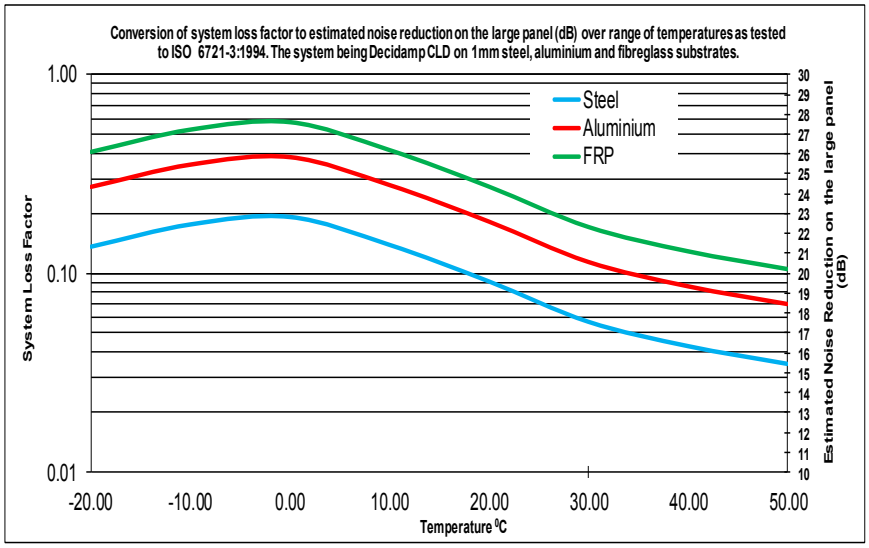
- Maximum performance achieved when applied to lightweight panels and steel substrates of up to 2mm, aluminium substrates up to 4mm and FRP (solid) up to 6mm thick
- Automotive floors, firewalls, doors, ceiling and boot panels
- Marine vessels: bulkheads, deckheads and hull construction
- Under metal deck roofs to reduce rain noise
- Generators, compressor covers and machine housing guards
- Metal air-conditioning ducts and compressor housings
- Laundry and garbage chutes, hoppers, lids and bins
- White goods and under sink bowls

PRODUCT SPECIFICATIONS

THICKNESS (mm)	SHEET SIZES (mm)	WEIGHT (Kg/m^2)	PEEL STRENGTH (180°/ Stainless Steel) (N/25mm) AFERA 4001	OPERATING TEMPERATURE RANGE (°C)
1.3	1000 X 1300 500 X 1300	2.5	>24	-10 to 100 (Continuous) -10 to 120 (Intermittent)

Tolerances: Length: -0/+50mm; Width: -0/+5mm; Thickness: +/- 0.5mm; Weight: -0 /+10%

VIBRATION DAMPING PROPERTIES



SYSTEM LOSS FACTOR FOR DECIDAMP CLD ON 1MM SUBSTRATES			
Temperatures °C	Steel	Aluminium	FRP
-20	0.14	0.27	0.41
-10	0.18	0.35	0.53
0	0.19	0.38	0.58
10	0.14	0.28	0.42
20	0.09	0.18	0.27
30	0.06	0.11	0.17
40	0.04	0.09	0.13
50	0.04	0.07	0.11
Maximum estimated noise reduction (dB)	23.0	26.0	28.0

System loss factor is a dimensionless figure representing how well a particular system is damped. Standard ASTM E756-23/ISO 6721-3 is used to test for system loss factor. A system is a combination of the substrate, be it steel, aluminium or fibreglass and the damping material itself. System loss factor is system specific, hence the composition of the tested system needs to be provided.

FLAMMABILITY PROPERTIES

TEST METHOD	INDEX	RESULTS	DESCRIPTION
UL94	After flame time ≤ 2 seconds	HF-1	Horizontal burn test for foam materials.
FMVSS-302	Burn Rate - mm/min	Self Extinguishing	Automotive burn rate test.
IMO Res A 653(16) IMO Res MSC 61(67) Annex 1 Part 5 & Annex 2 IMO Res MSC 61(67) Annex 1 Part 2 & Annex 2 (Report No. 327545)	CFE = Critical flux at extinguishment; Qsb = Heat of sustained burning; Qt = Total heat release; Qp = Peak heat release rate	>50.5kW/m^2; >30.3MJm^{-2}; <0.2kW; 0.4MJ Complies for bulkhead, wall, ceiling and floor coverings	Surface flammability of bulkhead, wall, ceiling, floor covering
EC type Examination Certificate Module B (MED B) + Module D (MED (D) (Certificate No. 164.112/1121/WCL MED0325TE; MED-D-1639)	-	Complies. USCG Type approval granted	**WHEELMARK**
BS476 part 6 :1989+A1:2009 (Report No. 315528)	Fire Propagation Index	I = 1.3	Fire Propagation of products.
BS476 part 7: 1997 (Report No. 315529)	Class1 Class2 Class3	Class 1	Surface spread of flame.
Summary Report	UK Building Regulations	**Class 0**	**Class 0** being the highest fire standard required by the British building code

Pyrotek noise control

CONTACT DETAILS:
for further information and contact details,
please visit our website at **www.pyroteknc.com**

LOCATIONS:
AUSTRALIA, CHINA/HONG KONG, CZECH REPUBLIC, UAE - DUBAI, INDIA, INDONESIA, JAPAN, KOREA, MALAYSIA/SINGAPORE, NEW ZEALAND, TAIWAN, THAILAND, TURKEY, UNITED KINGDOM, USA VIETNAM