

DECIDAMP® CLD PRO

constrained layer, vibration damping pad

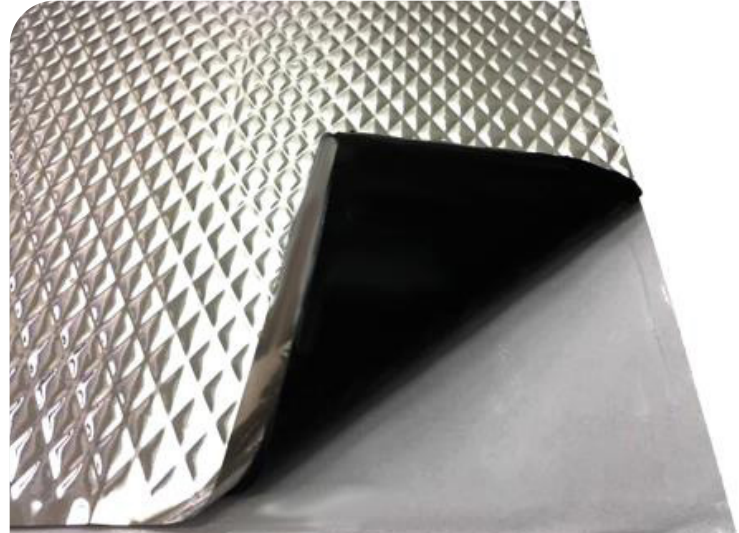
Decidamp CLD PRO is a constrained layer, visco-elastic damping material, designed to reduce structural vibration and sound transmission within light gauge materials. Decidamp CLD PRO was developed to meet market noise reduction requirements in the automotive, industrial and OEM markets.

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

Vibration is reduced due to the introduction of shear forces between the substrate and the constraining layer on Decidamp CLD PRO. These shear forces convert vibrational energy to heat, resulting in a damping effect.

Lightweight panel constructions such as sheet metal (steel, alloy, tin etc.) and rigid plastics (ABS and FRP etc.) can easily transmit noise when vibrational energy is introduced to the structure.

By applying Decidamp CLD PRO to lightweight structures, the damping of the construction will increase, therefore lowering radiated noise (vibration) and improving the transmission loss.



applications

- Most effective when applied to lightweight panels and steel substrates of up to 2 mm, aluminium substrates up to 4 mm and FRP (solid) up to 6 mm thick
- Automotive floors, firewalls, doors, ceiling and boot panels
- Generators, compressor covers and machine housing guards
- Metal air-conditioning ducts and compressor housings
- Laundry and garbage chutes, hoppers, lids and bins
- Whitegoods and under sink bowls

SPECIFICATIONS

Colour	Silver
Available	Sheet sizes: 500 mm x 1000 mm (19.68 in x 39.37 in) Thickness: 1.5 mm to 2.0 mm (0.06 in to 0.08 in)

features

- Free from lead and bitumen
- Performance across a broad temperature range
- Lightweight and easy to handle
- Easy to install, high-tack self-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
- Resistant to weather and UV light



PRODUCT SPECIFICATIONS

Thickness	Sheet sizes	Nominal density	Peel strength	Application temperature	Operating Temperature
1.5 mm to 2.0 mm (0.06 in to 0.08 in)	500 mm x 1000 mm (19.68 in x 39.37 in)	1.5 g/cm ³	≥ 0.2 N/mm (1.14 lbf/in)	-5°C to 45°C (23°F to 113°F)	-10 to 100 °C (14 to 212 °F) Continuous -40 to 150 °C (14 to 248 °F) Intermittent

Tolerances: Length: -0/+50 mm (2 in); Width: -0/+5 mm (0.2 in); Thickness: +/- 0.5 mm (0.02 in); Weight: -0/+10%

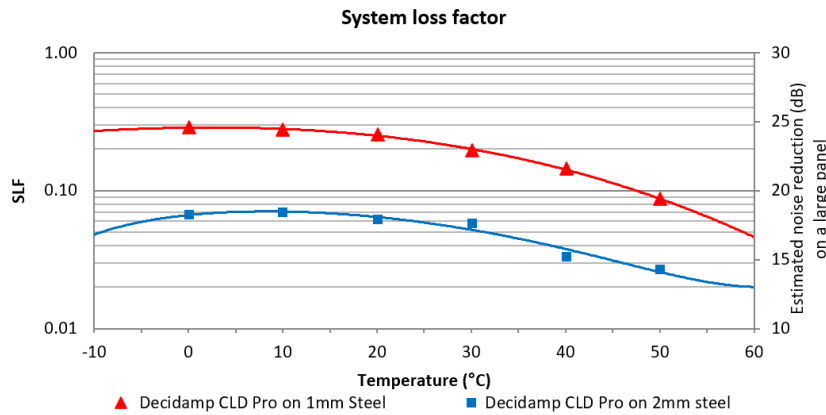
MATERIAL PROPERTIES

Test method	Property	Report No.	Results
Experimental modal analysis	Average damping ratio over modes from 50 Hz to 1.75 kHz	29921CD	ζ (%): 5.5% when applied to a 1 mm thick steel sheet. 10.3% when applied to a 1 mm thick Aluminum sheet
UL94	Flammability of plastic materials	02821JY	HF-1
FMVSS-302	Flammability of interior materials	02821JY2	Complies to the requirements of US (DOT) Department of transportation for occupant compartments of motor vehicles.
EN 45545-2 (EN ISO 5659-2 : 50 kWm ⁻²)	Smoke generation (optical density)	043.1IS0040-22	R1 (HL1, HL2, HL3)
EN 45545-2 (EN ISO 5658-2)	Spread of Flame		
EN 45545 -2 (EN 17084 (1) : 50 kWm ⁻²)	Gas Toxicity		
EN 45545-2 (EN ISO 5660-1 : 50 kWm ⁻²)	Heat release rate by cone calorimeter		

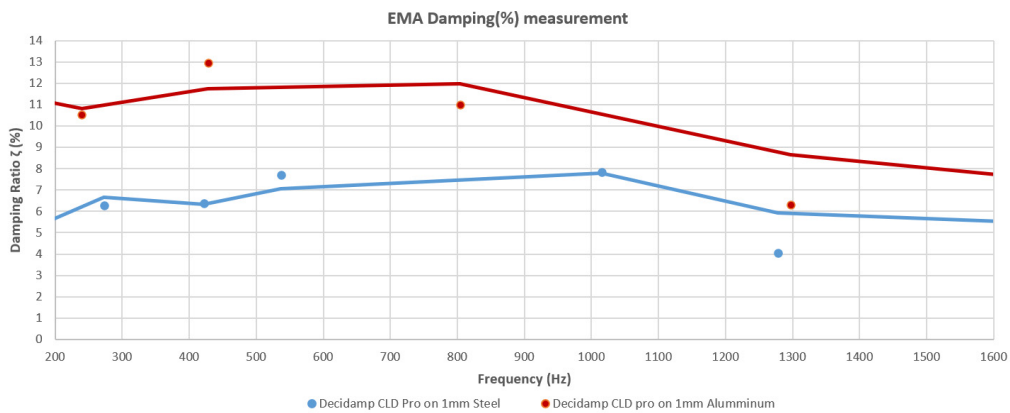
ACOUSTIC PERFORMANCE

Temperature (°C)	Decidamp CLD Pro on 1mm Steel		Decidamp CLD Pro on 2mm steel		Decidamp CLD Pro on 1mm Aluminium		Decidamp CLD Pro on 2mm Aluminium	
	System Loss Factor/ Flexural Loss Factor Tan δ	Estimated noise reduction (dB) on a large panel	System Loss Factor/ Flexural Loss Factor Tan δ	Estimated noise reduction (dB) on a large panel	Estimated System Loss Factor/ Flexural Loss Factor Tan δ	Estimated noise reduction (dB) on a large panel	Estimated System Loss Factor/ Flexural Loss Factor Tan δ	Estimated noise reduction (dB) on a large panel
0	0.29	24.6	0.07	18.3	0.57	27.6	0.13	21.3
10	0.28	24.4	0.07	18.5	0.55	27.4	0.14	21.5
20	0.26	24.1	0.06	17.9	0.51	27.1	0.12	20.9
30	0.20	22.9	0.06	17.6	0.39	25.9	0.12	20.6
40	0.14	21.6	0.03	15.2	0.29	24.6	0.07	18.2
50	0.09	19.4	0.03	14.3	0.17	22.4	0.05	17.3

Tested to ISO 6721-3. Report Number: 23622CD



Report Number 23622CD



Report Number: 29921CD

For further information and contact details, please visit our website pyroteknc.com

Caveats: Specifications are subject to change without notice. The data in this document is 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, mechanical and fire engineer on data presented by the manufacturer. Due to the wide variety of individual projects, Pyrotek 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 pyroteknc.com/disclaimer.

