DECIDAMP® SP450

water-based vibration damping compound for interior and exterior rail applications

Decidamp is a fast-drying, water-based viscoelastic vibration damping compound.

Optimised to suit transport and industrial applications, the advanced formula was developed for the acoustic improvement of structures that are exposed to vibration and impact sound.

Decidamp damping compound is a lightweight, non-hazardous structural damping material that is suitable for interior and exterior use with an easy application by simply spraying, rolling or trowelling onto surfaces. Once dry, the cured film is chip resistant and exhibits low combustibility. It effectively absorbs and dissipates vibrational energy from the flexural stress of the base structure and reduces panel coincidence dip and resonance effects.

An advanced extensional damping compound, it is suitable for application to structures (fibreglass, aluminium, and steel, including stainless steel) where sound damping is required. Compliance with the latest international fire rail regulations, such as EN45545, makes Decidamp SP450 the ideal choice for interior and exterior transport applications.

VOC, ODP, HEALTH AND SAFETY

Decidamp SP450 is non-toxic and safe to handle by methods prescribed in the Safety Data Sheet.

SPECIFICATIONS

Colour	Grey
Available	Pail: 20 kg, 5 gal Drum: 300 kg, 55 gal
	Custom colours available depending on MOQ. Store between 10 °C to 45 °C (50 °F to 113 °F).

applications

- Rail carriages, body panels, locomotive, cabin walls and roofing, shells and flooring
- Machinery or industrial enclosures
- HVAC applications, plant rooms, substations
- Automotive, trucks and bus underbodies
- Exit ways, smoking areas, stairwells

features

- Water-based vibration damping compound
- Compliance with EN 45545
- Advanced, non-sag formulation
- Excellent adhesion to fibreglass, aluminium, and steel - including stainless steel
- Reduces vibrational structural wear/tear
- Suitable for interior and exterior applications
- Reduce noise and dynamic stress
- Excellent flame-resistance, ignition retardant
- Broad temperature and frequency range
- Ideal for weight-sensitive applications - lightweight
- High chip resistance

PRODUCT SPECIFICATIONS

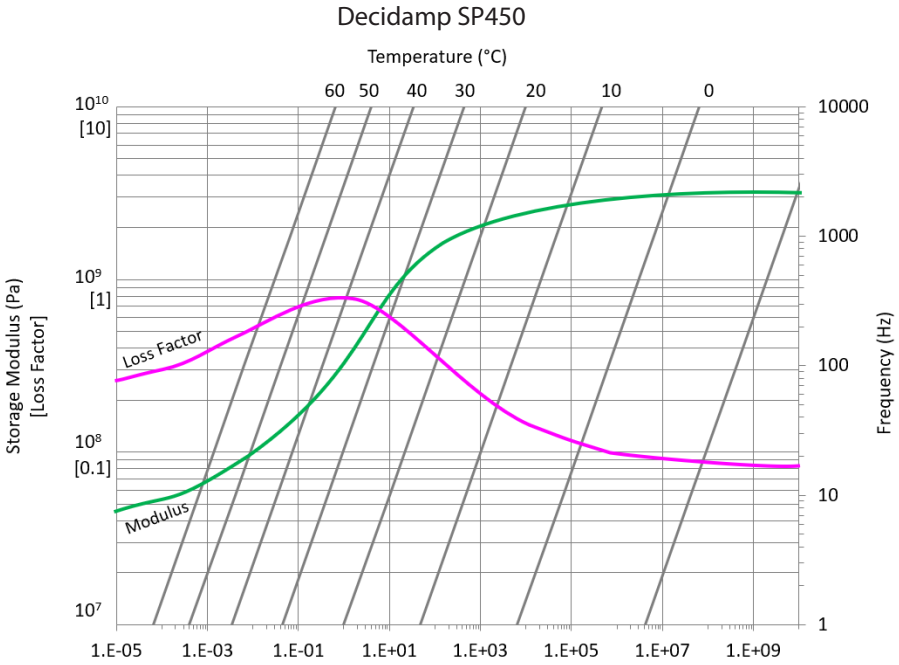
Colour	UOM	Weight	Service temperature (max short term)	pH	Chemical resistance			
					UV	Water	Petrol	Diesel
Grey	Pail: 20 kg (5 gal)	1.5 kg/m²/mm DFT (1.6 g/ml wet)	-40 °C to 120 °C (-40 °F to 248 °F)	8-10	Excellent	Very good	Good	Good
	Drum: 300 kg (55 gal)							

To achieve a desired dry film thickness (DFT), provision for material shrinkage of up to 15% on average should be included when applying wet coating.
When coating thickness requirement is not specified, general recommended coating thickness (dry film) is >= 1.0 x T for steel, >= 0.5x T for aluminium, >= 0.3 x T for FRP, where T = substrate thickness.
Other thicknesses may be installed to achieve desired damping performance.
Storage: Store between 10 °C to 45 °C (50 °F to 113 °F).
Shelf Life: 24 months from receiving goods (when stored under recommended conditions).

MATERIAL PROPERTIES

Test method	Property	Report no.	Results
Brookfield T-D spindle 1RPM	Viscosity	-	140 to 270 Pa.s
EN 45545-2 (ISO 5658-2)	Spread of flame	0095-23-F	R1, R7 and R8 HL3 (Suitable for most interior surfaces and cavities in railway vehicles of operation categories 1, 2 & 3)
EN 45545-2 (ISO 5660-1 : 50 kWm^{-2})	Heat release rate by cone calorimeter		
EN 45545-2 (ISO 5659-2 : 50 kWm^{-2})	Smoke generation (optical density)		
EN 45545 -2 (EN 17084 (1): 50 kWm^{-2})	Gas Toxicity		
ASTM E 162	Surface flammability	101731845MID-001d	Complies for US (FRA) Federal Railroad Administration requirements and requirements of NFPA 130 Complies for US (DOT) Department of Transportation requirements for acoustic insulation of transit bus and vans (Docket 90A)
ASTM E 662	Optical density of smoke generated during fires	101731845MID-002d	
ASTM E 800 (SMP 800-C)	Gases present or generated during fires	101731845MID-003d	
FMVSS 302	Flammability of interior materials	25716BD1	Complies to the requirements of US (DOT) Department of Transportation for occupant compartments of motor vehicles
BSS 7239	Toxic gas generation by materials on combustion	g102774171MID-001	No test criteria Results available upon request
ASTM D3170	Chipping resistance of coating	RES 154479-02	10A

ACOUSTIC PERFORMANCE



Tested to ISO 6721-5:1996
Report Number: 07824CD

HOW TO READ A REDUCED FREQUENCY NOMOGRAM:

1. Start by selecting the frequency (Hz) on the right-hand vertical axis.
2. Follow this value horizontally to the left to where the diagonal temperature isotherm intersects.
3. Draw a vertical line through the frequency and isotherm intersection, find the point where this line intersects the modulus and loss factor curves.
4. Draw horizontal lines from these points to the left-hand vertical axis to read the values.

ACOUSTIC DATA: SYSTEM LOSS FACTOR

Temperature (°C)	Application ratio of Decidamp® SP450 DFT on 1 mm steel (Product thickness: substrate thickness)	
	1:1	2:1
0	0.06	0.06
10	0.06	0.08
20	0.09	0.21
30	0.07	0.24
40	0.05	0.1

Tested to ISO 6721-3:1994 | Report Number: 32318AR

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