

Vibration Damping: Megasorber D14

Self-Adhesive Constrained Layer Damping Sheet

OVERVIEW

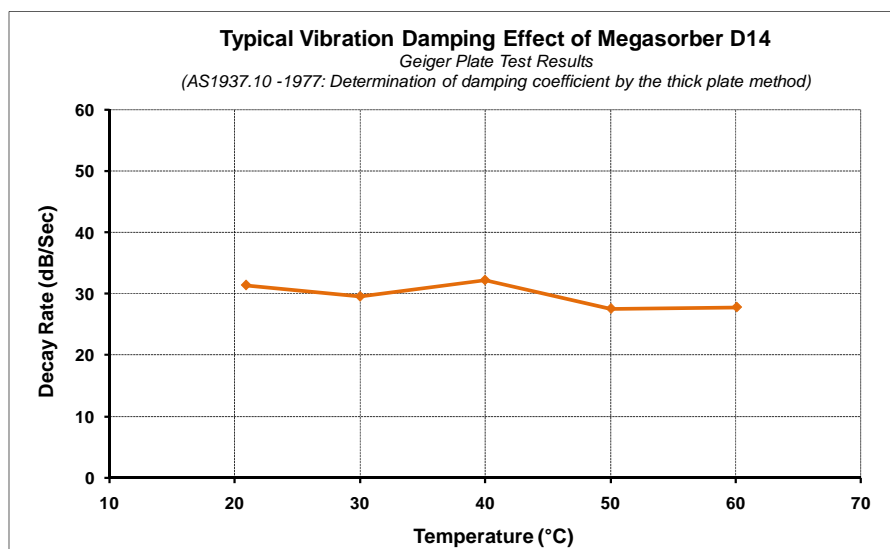
Megasorber D14 is a unique constrained layer vibration damping material, as it provides consistent damping performance over a wide temperature range. Using the latest polymer alloy technology, Megasorber D14 is a blend designed to provide high viscous damping properties combined with built-in self-adhesive technology (there is no separate glue or adhesive applied to the product).

This built-in self-adhesive technology enables the product to withstand temperatures up to 180°C. In addition to this, Megasorber D14 has excellent adhesion to primed steel, lacquered steel, aluminium and low surface energy substrate such as polypropylene and polyethylene.

Megasorber D14 complies with IMO Resolution A653(16) for marine applications.

Megasorber D14 is a light weight vibration damping material. It is designed to provide maximum damping without adding much weight. It is one of the most suitable damping material for weight sensitive applications, such as automotive, boats and buses and trains.

The aluminium foil provides excellent heat reflection. Megasorber D14 is widely used as a self-adhesive vibration damping material, an acoustic sealer to seal holes and openings as well as heat shield patches.



FEATURES

- High Damping efficiency: Damping Co-efficient (C_d) over 0.10;
- The latest built-in adhesive technology – excellent adhesion to most substrates including polypropylene;
- Complying with IMO Resolution A653(16) for marine applications;
- High temperature resistance – it can stand up to 180°C in overhead and vertical positions;
- Low flammability: AS1530.3: 0,0,0,0.
- Aluminium foil for thermal insulation or heat reflection;
- Non-toxic;

BENEFITS

- Reduce panel vibration and resonant noise effectively;
- Ease to apply – just peel and stick.
- Suitable for high temperature applications up to 180°C;
- Low or non-fire hazard;
- Excellent heat reflector and thermal insulator;
- Safe and environmentally friendly.

TYPICAL APPLICATIONS

High efficiency vibration damping material for reducing impact or vibration induced noise. Typical applications include:

- Metal roof panel damper – reduce rain drop impact noise.
- Reduce impact and vibration induced noise of metal panels in enclosure, metal housing and so on.
- Marine industries – sound deadener for aluminium panels.
- Disk drives damper;
- Medical equipment;
- Vehicle metal panel damper;
- Trim panel damping in locomotives, trains and trucks etc..
- Heat shield patches near exhaust or heat source in motor vehicles.

(1) Megasorber D14 for soundproofing of metal roof panels.



(2) Megasorber D14 for enclosure metal panel damping to reduce structure-borne low frequency noise.



TECHNICAL SPECIFICATIONS

PHYSICAL:

- 1. Specific Gravity 1.4 g/cm³ (±10%)
- 2. Nominal Thickness 2.0 mm (±0.5mm)
- 3. Odour Free of noxious or toxic odour
- 4. Constraining layer: Aluminium

A. Product Code

Product Name	Nominal Thickness* (mm)	Width (mm)	Length (mm)
Megasorber D14-500	2.0	260	500
Megasorber D14-1000	2.0	260	1,000

* Note: (1) The tolerance is ±0.5mm for thickness and ±10mm for width and length.
 (2) Standard colour is green. Black colour is also available upon request.

B. Flammability

- 1. IMO Resolution A.653(16) as amended by IMO Resolution MSC 61(67): Annex 1, part 5: compliant and certified.
- 2. AS1530.3. 1989 Early Fire Hazard Properties:
 - Ignitability: 0
 - Spread of Flame: 0
 - Heat Evolved: 0
 - Smoke Developed: 0
- 3. MVSS 302: Self-extinguishing

4. Geiger Plate Test Results:

Tested to AS1937.10-1977: Determination of Damping Coefficient by The Thick Plate Method.
Product: Megasorber D14:

Temperature (°C)	Plate Frequency at Testing Temp (Hz)	Clean Plate Decay Rate (dB/S)	Product Decay Rate (dB/S)	160 Hz Decay Rate (dB/S)
60	136.8	3.1	23.8	27.8
50	137.5	2.7	23.7	27.6
40	138.6	2.3	27.9	32.2
30	139.6	1.7	25.8	29.5
21	140	1.6	27.5	31.4

C. Ozone depleting substance: Nil

D. Volatile Organic Compounds (VOC): Nil

E. Restricted and reportable substance as per GMW3059: Nil

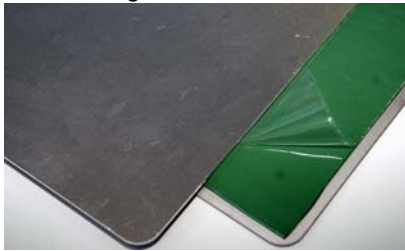
F. APPLICATION INSTRUCTIONS:

- 1. Surface preparation:
The surface must be dry, free of oil, dust, grease and other contaminants.
- 2. Application method:
After the initial contact, apply firm hand pressure or use a roller to push the damping sheet onto the substrate. The damping sheet must be in full contact with the substrate and free of any trapped air bubbles. Test the bond strength only after 24 hours.
- 3. Recommended coverage: 60% to 80% of total area
- 4. Recommended application temperature: above 10°C

Related products:

- Megasorber DT2A (Aluminium damping tile) and Megasorber DT2S (Steel damping Tile) are self-adhesive vibration damping tiles. They are designed to provide vibration damping for thick metal plates from 4mm up to 12mm thick.

Megasorber DT2A



Megasorber DT2S



To view the test and hear the noise reduction before and after applying DT2A, please click the video link :

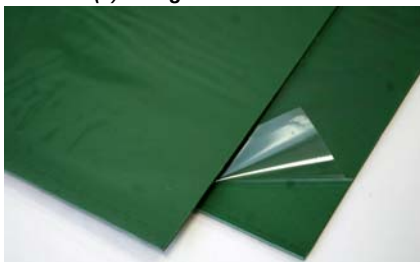
<http://www.youtube.com/watch?v=kuN30QsFbVo&feature=endscreen;>

To view the test and hear the noise reduction before and after applying DT2S, please click the video link :

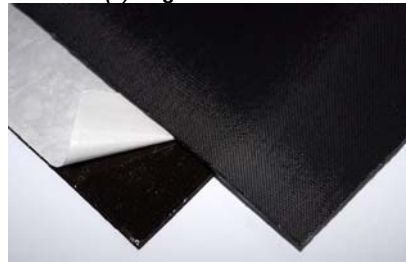
<http://www.youtube.com/watch?v=vddZN05FF1k&feature=channel>

- Megasorber DIS8 is 2mm thick self-adhesive vibration isolation and damping sheet with plastic release paper on both sides. Megasorber D10 is self-adhesive vibration damping sheet with a fireproof Soundmesh G8 facing.

(1) Megasorber DIS8



(2) Megasorber D10-2A



Please contact us or visit our website www.megasorber.com for more details



Important notice and disclaimer:

Specifications are subject to change without notice. Please contact us for the latest version.

Patent applied for Soundmesh G8 (U.S. Patent No. 8167085). "Fireproof", "Non-flammable", "Non-combustible" means the product has successfully passed AS/NZS 3837, ISO 5660-1, ASTM E1354 Group 1 fire rating (AWTA test report No. 7-566397-CV). The data listed in this data sheet are typical or average values based on tests conducted by independent laboratories or by the manufacturer. They are indicative only of the results obtained in such tests and should not be considered as guaranteed maximums or minimums. Materials and installation methods must be tested under actual service to determine their suitability for a particular purpose. "Aussie engineered and made" means the products are engineered and made in Australia with globally sourced materials.