

megasorber®

# case study

Soundproofing Trams



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# project

## Bombardier Transport Australia

As part of ongoing state of the art tram manufacture, the Bombardier engineering team required locally made damping tiles to meet stringent design requirements.

## products

### DT2S

2.5mm thick self-adhesive steel vibration damping tile.

The Megasorber engineering team worked closely with Bombardier engineers and developed the unique damping tiles for the application.



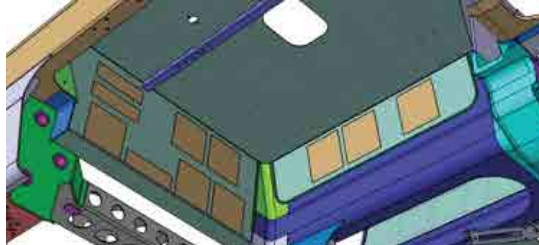
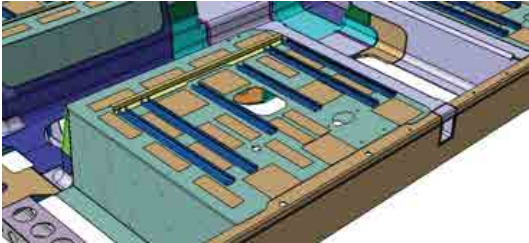
## product requirements

1. High vibration damping capacity
2. Self-adhesive for easy installation
3. Suitable for outdoor application
4. High temperature resistance
5. The product must pass thermal exposure tests
6. Cost effective

# installation

## 1. Pin-point the vibration "hot-spots"

The self-adhesive damping tiles are positioned at these vibration 'hot spots', to maximise the acoustic performance of the product.



## 2. The DT2S damping tile was customised into two sizes



## 3. Durability test: thermal exposure

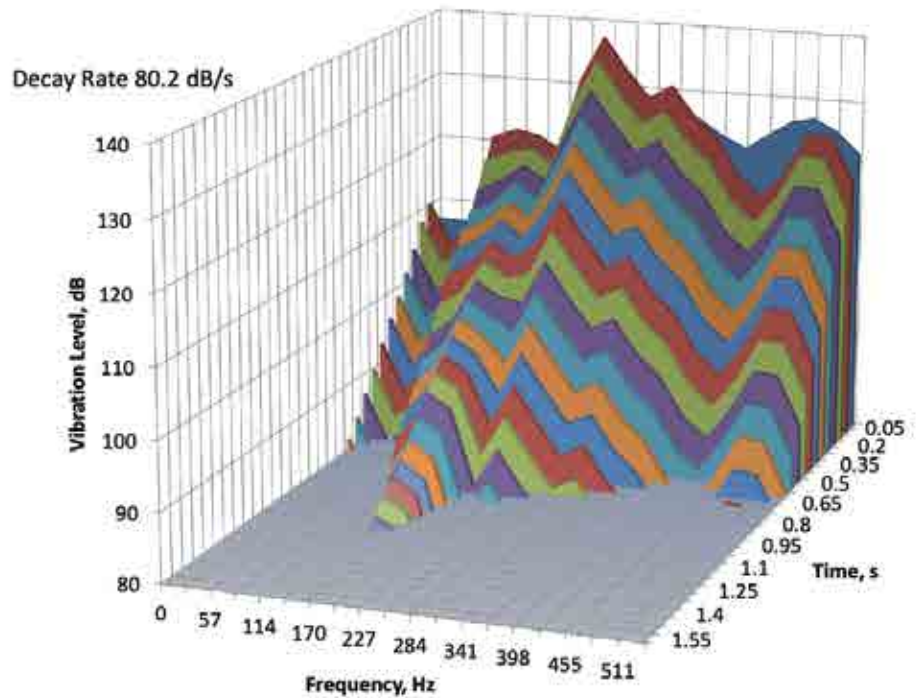
- 1) 24 hours oven test at 90°C
- 2) 24 hours oven test at 130°C
- 3) 24 hours oven test at 150°C
- 4) 24 hours oven test at 180°C

Samples were not cooled in between individual stages of the testing process, i.e. after 24 hours exposure to 90°C the temperature was raised to 130°C and the test was continued. It took oven about 30 minutes to get to the new temperature level.



## 4. Validation of the damping performance

The damping decay rate of 80.2 dB per second, well exceeded the target of 75dB per second.



## 5. Easy, simple installation: peel and stick



# results

Megasorber DT2S-S5 has been successfully installed, and continues to be a critical part of new tram construction.

### The key advantages are as follows:

1. Superior acoustic performance
2. Reduction in installation cost, simple, easy to install
3. Products are locally made
4. Shorter lead time
5. Reduce inventory with JIT delivery



## contact

Megasorber Pty Ltd  
Building 3, 621 Whitehorse Road, Mitcham, Victoria 3132

[info@megasorber.com](mailto:info@megasorber.com)  
+ 61 3 9077 2918

[megasorber.com](http://megasorber.com)