



*Durisol*®

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# NEXCEM RAIL SILENCERS PRODUCT GUIDE

ACOUSTIC RAILWAY SILENCER WITH PROVEN SOUND ATTENUATION

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SOUND ABSORPTION

—  
LIGHTWEIGHT

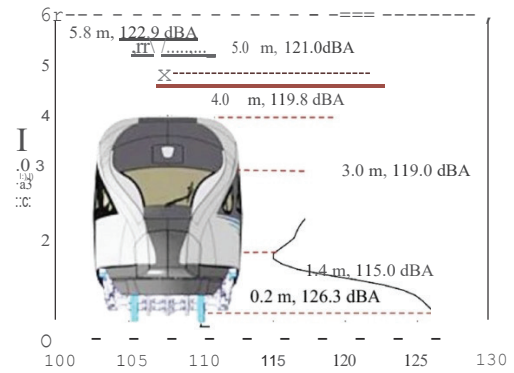
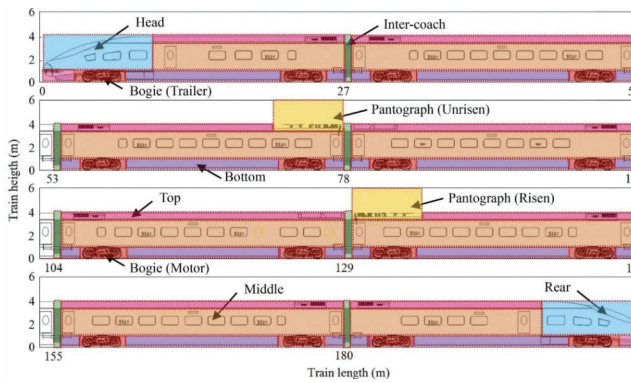
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FAST INSTALLATION

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SUSTAINABLE MATERIAL

## MINIMIZE NOISE AT THE SOURCE.

A train can be heard coming from miles away.

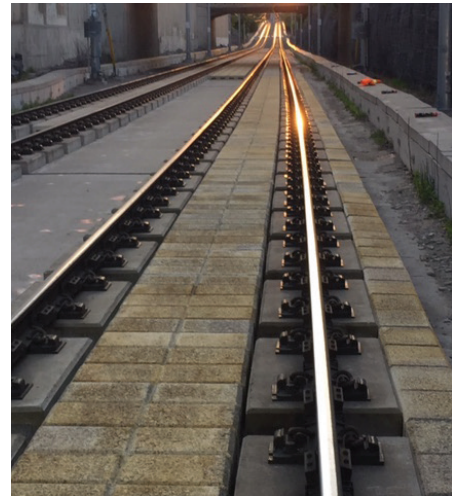
When researchers assessed where the sound comes from on a train specifically, 75% of the total sound generated came from 3 areas: the Bottom, the Bogie, and the Middle of the train (as seen in the diagram below).



Tested at both high-speed and regular metro train speeds, the profile distribution of sound is similar across all trains. The speed at which it travels simply elevates the overall sound level (intensity/frequency).

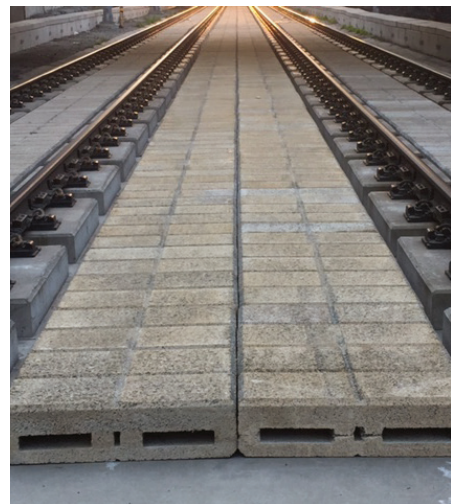
The search for an effective way to minimize the noise generated by trains of all shapes and sizes is certainly not new. However, Nexcem's findings around specific frequency targeting reveals the solution lies in how well the sound absorption profile matches the noise generated.

By reducing noise generated by trains at the source, we are better able to protect both the travelers on the train and the surrounding residents from excessive noise.



## INTRODUCING: NEXCEM'S PATENTED RAIL SILENCER

The Nexcem Acoustic Railway Silencer is a unique patented system that has been designed, tested and proven to eliminate railway noise directly at the source. The Silencers are placed between the railway lines and come in various configurations of Nexcem material, air chambers and/or low frequency acoustic materials. Each configuration is designed to target specific frequency ranges of noise that may be of special concern.



## A NEXCEM SILENCER TYPE FOR VARYING TARGET ABSORPTION FREQUENCY RANGES:

Nexcem Silencer Type	Total Height (H) mm / in	Top Layer Nexcem (T) mm / in	Absorptive Core (C) mm / in	Bottom Layer Nexcem (B) mm / in	Core Fill (Air / Ins)	Tested NRC	Tested SAA	Tested Alpha w	Peak Absorption Freq. Range (Hz)
RS 100	100 / 4	n/a - Solid	n/a - Solid	n/a - Solid	n/a - Solid	0.80	0.78	0.70 (M,H)	(450 - 950), (1700 - 4000)
RS 150	150 / 6	n/a - Solid	n/a - Solid	n/a - Solid	n/a - Solid	0.95	0.91	0.95	(250 - 600), (950 - 4000)
RS 200	200 / 8	100 / 4	50 / 2	50 / 2	Air	0.90	0.90	0.80 (L, H)	(200 - 475), (950 - 4000)
RS 200 AP	200 / 8	100 / 4	50 / 2	50 / 2	Insulation	0.95	0.98	0.90 (L)	(125 - 500), (1000 - 4000)
RS 250	250 / 10	100 / 4	100 / 4	50 / 2	Air	0.95	0.89	0.75 (L, M, H)	(150 - 275), (950 - 4000)
RS 250 AP	250 / 10	100 / 4	100 / 4	50 / 2	Insulation	0.95	0.90	1.00	All Frequencies

### NOISE PROTECTION

The sound absorptive properties of the material targets a peak frequency range using a mineral fibre acoustic insulation

- NRC rating of 0.95.
- Coupled with noise walls, potential for greater overall noise reduction.
- 200 or 250 AP insulation inserts are available to protect against lower frequency noise.

### FIRE RESISTANCE

The material has been tested to all applicable standards and is suitable for non-combustible construction, with a:

- 4 hour fire rating
- 0 flame spread / smoke developed

### DURABILITY

Tested for impact, weather and moisture resistance, the material is backed by a 25-year guarantee.

- +1 MPa compressive strength.
- Each silencer can withstand loads of 2000 kg / 4400 lbs.

### INSTALLATION

Nexcem is easily cut, nailed and screwed with simple carpentry tools and skills.

### A MORE SUSTAINABLE OPTION

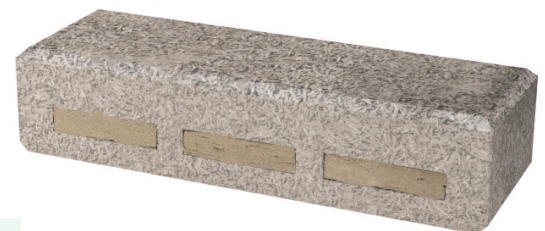
A unique composite material made from recycled waste wood (100% natural clean lumber) that is bonded with standard Portland Cement.

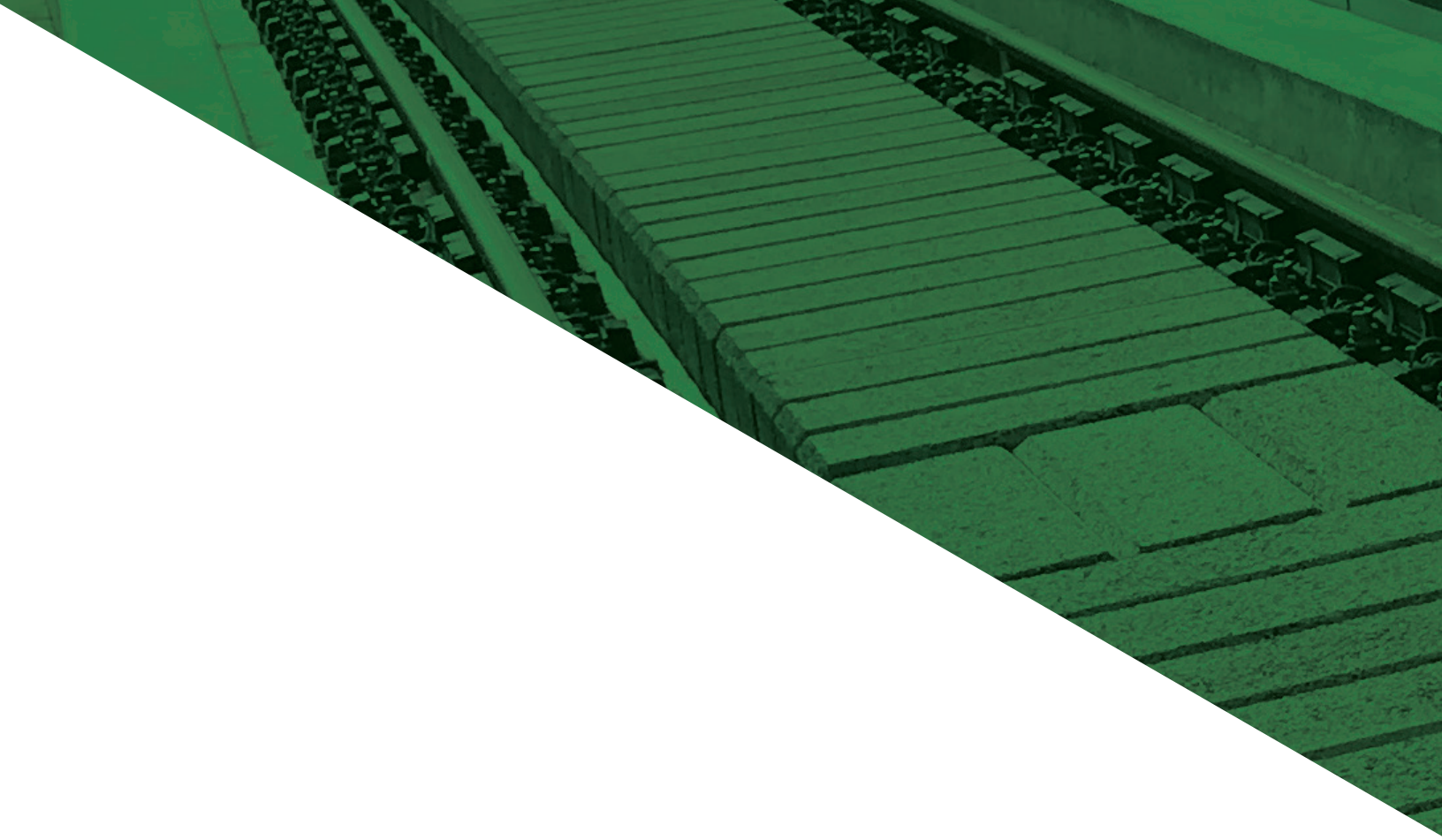
- Lightweight, easy to transport to site and install.
- 80% recycled content (by volume)
- No VOCs or offgassing

### SPECIFICATIONS

Nexcem Railway Silencers are:

- 915 mm (36") wide
- 305 mm (12") long
- Various heights and absorption core sizes are available.





Drawings and product details are for information and/or illustrative purposes only, and may vary. Please contact your local Durisol representative for the most current product information.

Durisol is an official distributor of:



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***Durisol***<sup>®</sup>

As industry leaders, Durisol<sup>®</sup> models the highest standards of noise & retaining wall systems to serve the robust needs of the transportation, building and energy sectors across North America.

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