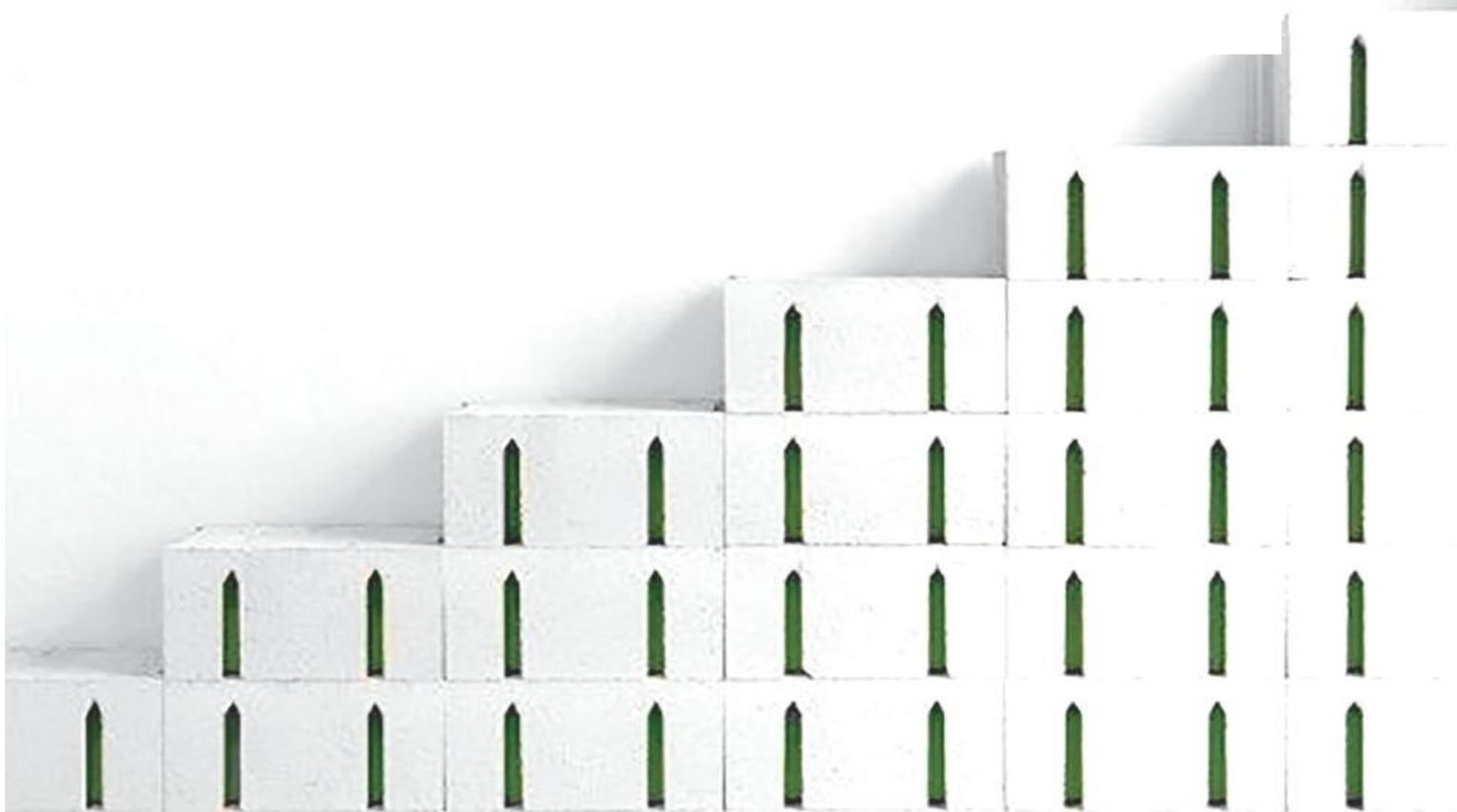


SOUNDBLOX CARBSTONE

THE NEXT GEN ACOUSTIC BUILDING BLOCKS

Circular - Cement-free - CO2-negative



Soundblox Carbstone

SUSTAINABLE ACOUSTICS

Soundblox Carbstone

Soundblox offers the possibility to combine the solution for sound absorption, sound insulation and fire resistance into one stable wall construction in any application (both inside and outside) where stability and robustness is just as important as room acoustics. Soundblox acoustic concrete blocks have been applied for 30 years to improve room acoustics.

Soundless Acoustics now presents the next level acoustic building blocks **Soundblox Carbstone** as a **Circular, Cement-free and CO2-negative** alternative for the traditional concrete block. Considering that cement production is responsible for about 10% of global CO2 emissions, this new carbonation technology is a huge step forward towards sustainable building! This makes Soundblox an excellent solution to fight noise pollution as well as the emission of CO2!.

Revolutionary Technology

Soundblox Carbstone in the new carbonised form, has the same appearance as the traditional Soundblox made of concrete. It shares the same sound absorptive and sound insulating properties with the same characteristic Helmholtz resonators, designed to reduce reverberation and absorb excess noise. Carbstone has the advantages of concrete blocks in terms of density, compression strength and fire resistance but without the ecological disadvantages. Unlike concrete, these blocks are manufactured with the applied carbonation technology, using CO2 as binding agent in this process, eliminating the use of cement entirely. This allows Soundblox to absorb sound as well as CO2 and as such contribute to a healthier environment.

The same technology can be applied for the production of regular 'concrete' blocks (hollow or solid) in various dimensions.

Soundblox Carbstone

SUSTAINABLE ACOUSTICS



What is carbonation?

This patented carbonation technique converts metal slag deriving from steel production into circular building materials. Carbonation is the natural process by which Ca-containing materials react with carbon dioxide and transform into calcium carbonate.

Besides CO₂, it also requires a source of **calcium oxide**, in this case; slag. Slag is the by-product of steel production and has been recycled for years to recover the metal and gravel. What remained had no industrial use at all. However, thanks to this **patented process**, it can now be converted into **high-quality building materials**, containing high-purity (using > 92%) recycled material, adding CO₂ which is actively extracted from the air.

After production, these blocks are transferred into a special CO₂ chamber, where they are being dried and hardened within 24 hours, with a minimum of energy, using available solar energy to reduce the ecological foot print even further



The CO₂ chamber is the beating heart of the Carbstone production. In this chamber, the blocks are bound with CO₂ and then hardened. After 24h - depending on the size - they are ready for installation.

Soundblox Carbstone

SUSTAINABLE ACOUSTICS

The Carbstone Technology in a nutshell:



CO2-negative

During the production of our Soundblox Carbstone blocks, more CO₂ is absorbed than emitted. Moreover, the blocks also extract CO₂ from the air afterwards, which they will retain forever.



Cradle-to-cradle

In the production process, valorised metal slag is converted into useful material. This makes Soundblox Carbstone building blocks 100% recyclable, time after time. When the blocks are crushed after the demolition of a building, only sand and gravel remain.



High compressive strength

As the Soundblox Carbstone keep absorbing CO₂ from the air even after they have been installed, they become harder and harder. This results in walls with an extremely high load-bearing capacity.

Soundblox Types available

Soundblox Type A

Three cavity block
Dimensions : (lwxh) 495x187x190 (mm)



Soundblox type N:

Dimensions: (lwxh) 320x190x190 mm



Matching concrete block

Regular (non acoustic) hollow block
Dimensions (lwxh) 320x190x190



Soundblox type W

Dimensions: (lwxh) 390x140x190 mm



Matching concrete block

Dimensions: (lwxh) 390x140x190 mm



Soundblox type G

Dimensions: (lwxh) 390x90x190 mm



Matching concrete block

Dimensions: (lwxh) 390x90x190 mm



FREQUENTLY ASKED QUESTIONS

What happens when you drill the Carbstone Acoustic blocks?

The composition of the material will not expand as a result of drilling. The CO2 will therefore remain captured in the material.

Is it healthy living in a building that was built with Soundblox Carbstone blocks?

Absolutely! The blocks will continue to absorb CO2. However, this does not mean that they release it into the room. The blocks will retain the CO2, continuously hardening them.

Are Soundblox building blocks as solid as traditional Soundblox concrete blocks?

Yes, they meet the exact same specifications. In addition, Both Soundblox and regular Carbstones, when used outdoors, will continue to absorb CO2, hardening them continuously and, as a result, improve their compressive strength in the process..

What is the average production/lead time of Carbstone?

The minimum curing time in the CO2chamber is 24 h, unlike traditional concrete blocks that require several weeks. The production time varies according to the order size. Please contact us for more information.

