



Acoustics

Good acoustics - the key to successful spaces

How do you define a comfortable space? What are the elements that make it so enjoyable? Aesthetic design, yes. Natural light and strong temperature control, too. But above everything sits acoustic comfort.

A lack of acoustic comfort often means too much noise. Unwanted sound that has a negative impact on a community's ability to live, learn or work in a given space. Good acoustic comfort, on the other hand, with appropriate acoustic reverberation times and high speech clarity, creates a functioning, calming environment that is pleasant for all users.

An important part of a good and healthy indoor climate is efficient sound absorption. The effects of poor acoustics are well recognised and particularly unpleasant: Unfavourable acoustic environments and high noise levels can lead to an increase in heart rate and blood pressure, as well as discomfort, annoyance and an increased risk of inappropriate behaviour.

* SafeWork SA. "Noise & vibration in the workplace": Government of South Australia



Strengthen your communication

Beside from its damaging effects on health and behaviour, poor acoustics can also be a major impediment to effective communication. Whether you're building a school, healthcare facility, office or hotel, communication and speech clarity is key.

Studies from the United States have shown that classrooms often have speech intelligibility ratings of 75% or less, meaning every fourth word is either misunderstood or not understood at all. Now imagine the impact that has a child's ability to concentrate and learn.

But what is the answer? Significantly reducing the number of noise sources is unrealistic. So too – in the short-term at least – is decreasing the amount of hard surface materials used in modern construction methods.

There is, though, another way. By using high-class, sound absorbent materials such as Gyptone® Tiles, it is possible to improve the control of noise levels and create positive and healthy acoustic environments and indoor climates.

^{*} Seep, B., Glosemeyer, R., Hulce, E., Linn, M., & Aytar, P. "Classroom acoustics: A resource for creating learning environments with desirable listening conditions." NY: Acoustical Society of America (2000).

Acoustics

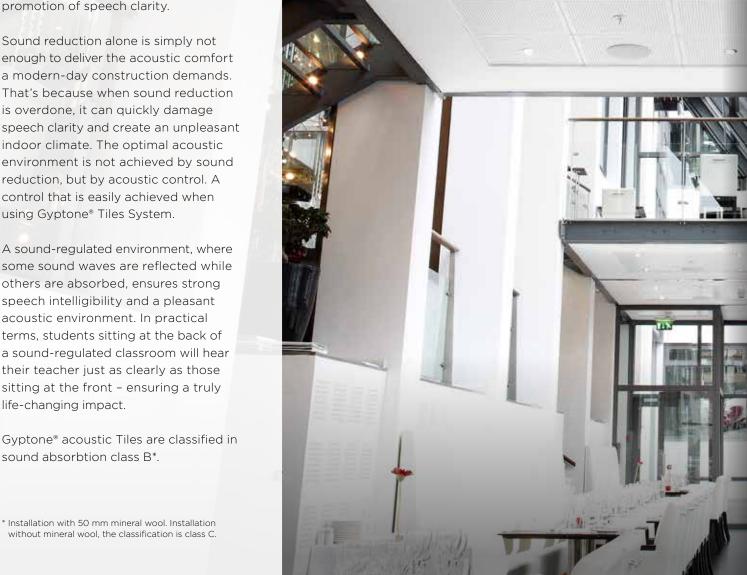
A life-changing impact

Within our acoustic gypsum portfolio we can absorb up to 85% of the sound that hits the surface, creating the perfect balance between sound absorption, sound diffusion and sound reflection. It is within this balance that you find the optimal acoustic comfort and the best promotion of speech clarity.

Sound reduction alone is simply not enough to deliver the acoustic comfort a modern-day construction demands. That's because when sound reduction is overdone, it can quickly damage speech clarity and create an unpleasant indoor climate. The optimal acoustic environment is not achieved by sound reduction, but by acoustic control. A control that is easily achieved when using Gyptone® Tiles System.

A sound-regulated environment, where some sound waves are reflected while others are absorbed, ensures strong speech intelligibility and a pleasant acoustic environment. In practical terms, students sitting at the back of a sound-regulated classroom will hear their teacher just as clearly as those sitting at the front - ensuring a truly life-changing impact.

sound absorbtion class B*.











Gyptone®Tiles are available in a series of standard designs. Special designs can be made on request.





Edge design

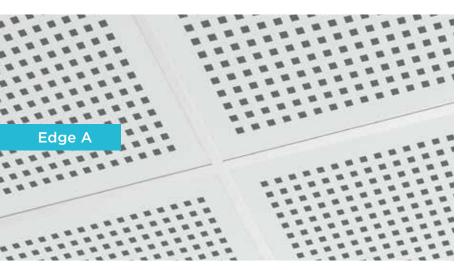
Designed for the installation of your choice

Gyptone® edge A is removable and mounted in an exposed grid system (T15 or T24). The visible width of the grid system is 15 or 24 mm. Gyptone® edge A is a fully demountable ceiling that provides good opportunities for inspection in the cavity above the ceiling.

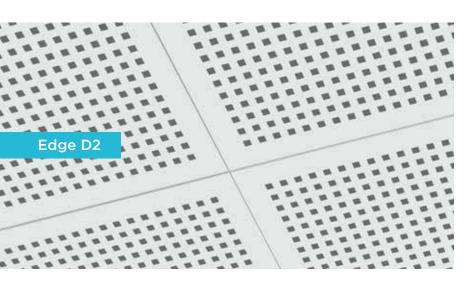
Gyptone® edge D2 is fitted into a concealed grid system. Beams and profiles are easily clicked together and have fewer hangers than similar systems. The hidden T24 grid system Cross-Lock Unipro is easily mounted.

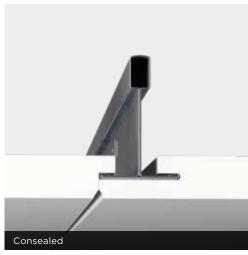
Gyptone® Edge E15 and E24 is a suspended ceiling mounted in an semi exposed grid system. The visible width of the grid system is either 15 mm or 24 mm. Gyptone® edge E15 and E24 is a fully demountable ceiling that provides good opportunities for inspection in the cavity above the ceiling.

Edge B - Gyptone® edge B is a screw mounted and non-demountable ceiling. The ceiling can be used for many applications like schools, offices and commercial settings.

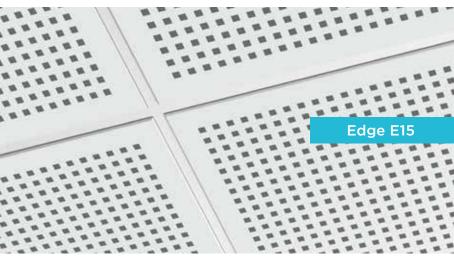




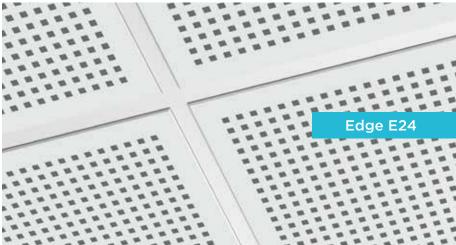




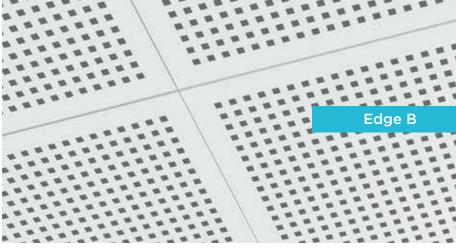












Indoor air quality

Cleaner indoor air quality

You may not know it, but invisible pollutants surround us at almost every turn - especially indoors.

Traditional air pollution concerns have focused on high-density urban areas, where traffic is busy and CO₂-emission levels are considered dangerous. But there is still an indoor danger to tackle.

Construction materials, furniture, carpets, electronic equipment and items of clothing all emit volatile organic compounds (VOCs) such as formaldehyde. According to the World Health Organization (WHO), formaldehyde affects our health. High concentrations can cause cancer, nausea, headaches and other unpleasant symptoms – none of which should be part of a modern construction of a school, hospital, workplace or public space.

Today, Gyptone® ceilings feature Activ'Air, a patented technology that actively breaks down up to 70% of the formaldehyde into harmless, non-volatile compounds. The effectiveness of the Activ'Air technology has been tested by the accredited Eurofins laboratory, and it has been proven to promote good health and wellbeing.

In fact, its effect has been shown to last for more than 50 years – creating a safe, welcoming and healthy indoor environment for generations to come. This best-in-class development also contributes to success in certifications such as Leadership in Energy and Environmental Design (LEED) and Building Research Establishment Environmental Assessment Method (BREEAM).







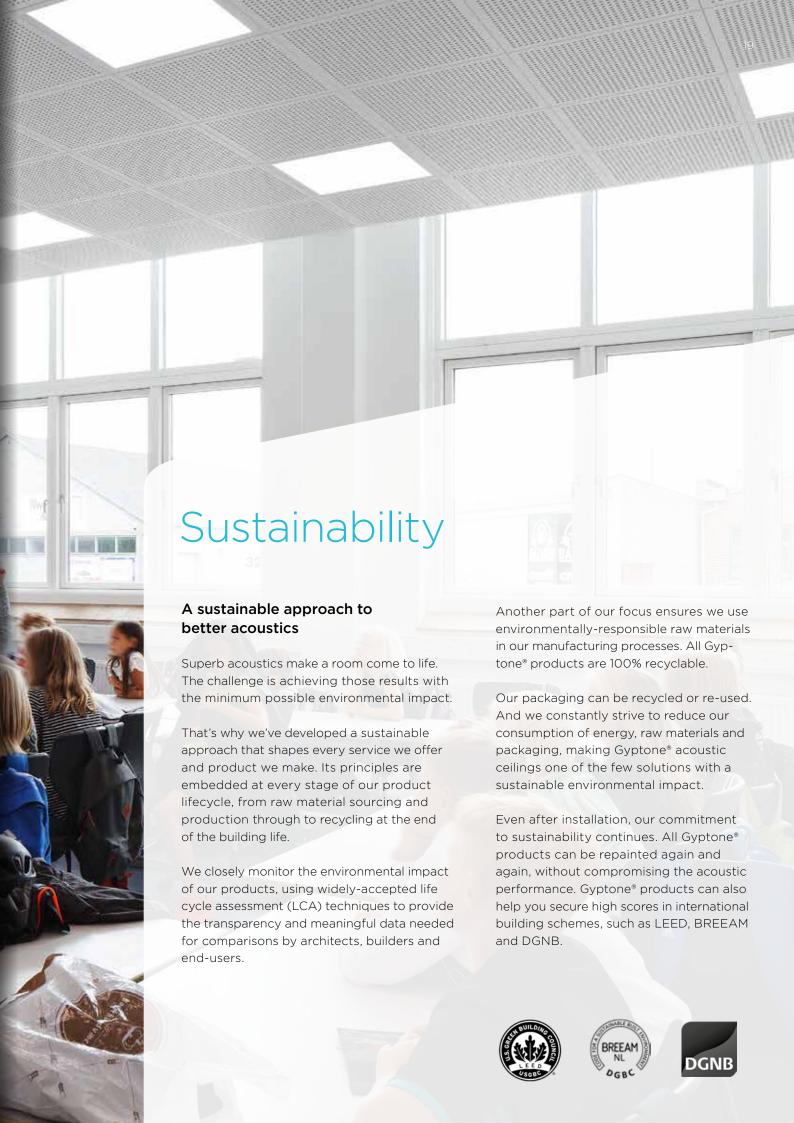




^{*} Based on a comparison of six published EPDs for different types of ceilings, with results verified by COWI A/S.















Robustness, durability and fire safety

The strong and safe choice

When strength matters, Gyptone® is the only solution to consider.

All Gyptone® solutions, including Gyptone® Tiles, are strong, robust, and provide excellent pressure resistance. What's more, Gyptone® Tiles do not decompose over time - so you won't face the unwelcome prospect of paying for costly replacements in just a few years' time.

Gyptone® Tiles' flexibility is especially useful if you have a range of different installations to consider. But whatever design you choose, strength will not be a concern. Tiles with Edge A, E and B can be point loaded with up to 3 kg/m². Tiles with Edge D2 can be point loaded with up to 1 kg/m².

Finally, Gyptone® Tiles come complete with excellent reaction to fire properties A2-s1, d0. Our solutions are tested according to both EN 13501-1 and ASTM E84 standards, meeting and exceeding all the necessary fire safety requirements both in terms of their reaction to fire and their fire protection qualities.

When it comes to ceilings, Gyptone® solutions are not just the strong, smart choice – they're the safe choice, too.





Product details

Specifications

Dimensions	600 x 600 mm
Thickness	Edge A & E: 10 mm, Edge B & D2: 12,5 mm
Weight	6 kg/m²
Edge	A, D2, E & B
Colour	Painted* (NCS 0500)
Reaction to fire	A2-s1, d0

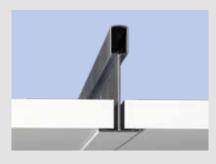
^{*} Edge B Tiles are unpainted.

Gyptone® Tiles acoustic solutions allow you to create a demountable ceiling.

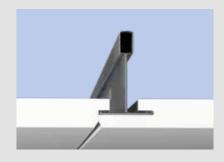
The perforation provides, in combination with the underlying acoustic tissue, good acoustic properties.

Edges - installation

Edge A



Edge D2

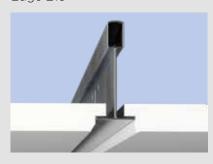


Gyptone® Tiles are produced in five different edge design, suitable for both exposed and concealed grids.

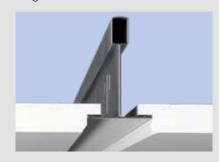
Edge A, D2, E15 and E24 are demountable.

Edge B is not demountable.

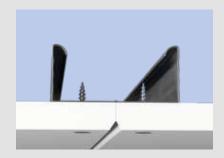
Edge E15



Edge E24

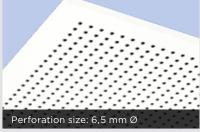


Edge B

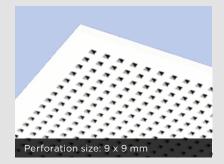


Patterns

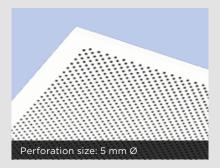
Point



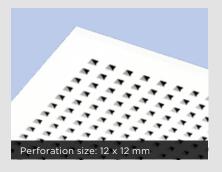
Quattro



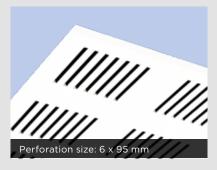
Point



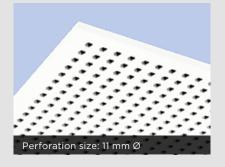
Quattro



Line



Sixto

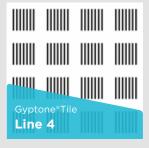


Gyptone® Tiles range includes circular, oblong, hexagonal or square perforations which comes in different designs.

> See complete overview of **Gyptone® Tiles** on the next page...

Standard Products

Gyptone® Tiles



Edge: A, D2, E & B



Edge: A, D2, E & B



Edge: A, D2, E & B





Gyptone® ceilings feature Activ'Air®, a patented technology that actively breaks formaldehyde down into harmless, non-volatile compounds.



Edge: A, D2, E & B



Edge: A, D2, E & B



Edge: A, D2, E & B







Gyptone[®]

Gyptone®acoustic solutions can be used in nearly any room that requires excellent acoustics and design. Our systems provide a good indoor air quality and strong surfaces with a very long lifespan based on sustainable manufacturing. Gyptone®is produced and marketed by Saint-Gobain.

Gyptone® Systems include:

- · Gyptone®Tiles
- · Gyptone®BIG boards
- · Gyptone®BIG Curve

For more information visit:

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