

# Making room for knowledge

with Ecophon Master™ Rigid



**Ecophon**<sup>®</sup>  
SAINT-GOBAIN

A SOUND EFFECT ON PEOPLE



# Classroom excellence

*Kindergarten; primary school; lower, middle and upper secondary school; university – as our children grow up, they spend many years in school. But today much of the educative process takes place in classrooms that are not optimised for learning.*

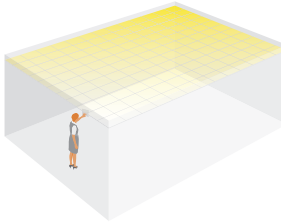
Studies show that students in poor sound environments cannot hear their teacher clearly, experience a reduction in short-term and long-term memory, are less focused, have lower reading ability and ultimately, lower test scores.

For students in a healthy sound environment, the opposite is true. Their understanding of what the teacher is saying can increase by as much as 25%, they remember more, they are more focused, they read better and they get higher scores in tests.

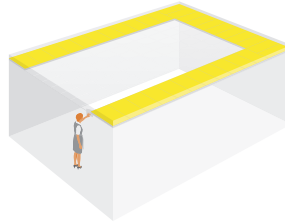
A crucial factor in achieving a classroom that is up to the task is to reduce low-frequency background noise that distorts speech and makes students and teachers lose focus and become tired, such as echoes, murmurs, movements and sound from ventilation fans and projectors. That's why Ecophon has developed Ecophon Master™ Rigid. By adding extra low-frequency absorption on top of the wall-to-wall ceiling, the system effectively absorbs background noise. And when you combine it with Ecophon Akusto™ Wall you get the ideal solution for classrooms.

**Ecophon Master™ Rigid** is specially developed for classrooms, where good acoustics and speech intelligibility are vitally important. The system consists of a combination of Master Rigid panels, a unique low-frequency absorber, Ecophon Extra Bass, and a Connect™ grid system. The absorbing material for Master Rigid consist of minimum 45% post-consumer recycled content. Master Rigid has a reinforced, durable and impact-resistant surface and is secured in the grid system with patented Connect™ accessories. But don't worry; even though the ceiling is secured, it can still be removed, allowing you access to the void above.

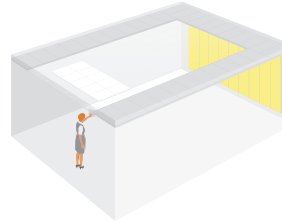
## How does it work?



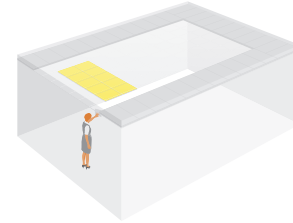
**Master Rigid** wall-to-wall ceiling absorbs sound in the whole classroom and reduces the sound level.



**Extra Bass** is a unique, specially designed 50 mm low-frequency absorber that is placed on top of the ceiling. It absorbs disturbing background noise. Extra Bass should cover at least 50% of the ceiling area.



**Akusto Wall** absorbs the sound that otherwise would bounce off walls and create echoes. In a traditional teaching setting, Akusto Wall should be installed on the back wall, and for group work it should be installed on two adjacent walls.



**Master Rigid/gamma** ensures total speaker comfort, by adding a small speech-reflecting zone in the ceiling above the area where the teacher normally stands.



## Acoustics

Edge	$\alpha_p$ , Practical sound absorption coefficient						$\alpha_w$
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	
A	0.70	1.00	1.00	1.00	1.00	1.00	1.00
Dp	0.65	0.80	0.85	0.90	1.00	1.00	0.90
E	0.75	0.95	1.00	1.00	1.00	1.00	1.00

The values are valid for Master Rigid in sizes 600x600, 1200x600 and 1200x1200 mm, in combination with Extra Bass.

## Superior surface

Reinforced Akutex™ FT is a painted and porous surface developed by Ecophon. It is easy to clean, has superior acoustic qualities, a light reflectance of 85% and a great visual appearance overall. One unique aspect of Akutex FT is its near-optimal retro-reflection value, meaning it will not reflect colours throughout a space. Reinforced Akutex FT looks exactly the same as standard Akutex FT, but is ten times stronger.



## Secure impact resistance

Master Rigid is certified as impact-resistant to Class 3A, according to the European standard EN13964.

## Safe products

Good indoor air quality is essential if teachers and students are to perform at their best. For information on indoor air certifications, please visit: [www.ecophon.com/exp](http://www.ecophon.com/exp).



Want to see how it's done? Watch our installation films on [youtube.com/ecophontv](http://youtube.com/ecophontv) and [www.ecophon.com/exp](http://www.ecophon.com/exp).

## Edges and sizes

Edge design	Edge	600x600	1200x600	1600x600	1800x600	2000x600	2400x600
	A	•	•	•	•	•	•
	Dp	•	•				
	E	•	•				

## Perfect for corridors

Thanks to its impact-resistant surface, Master Rigid is also suitable for corridors and breakout spaces, where unexpected things happen from time to time. The large Master Rigid XL panels make wall-to-wall installations in corridors easy and fast.

## Remember the rest of the school

Every school has many different spaces, where a lot of different activities take place. To help you choose the right solution for every activity, Ecophon has developed a comprehensive package for education. Learn more at [www.ecophon.com/exp](http://www.ecophon.com/exp).

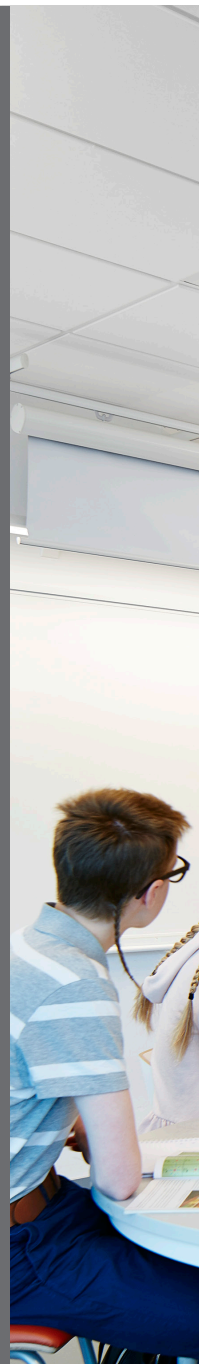


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*Ecophon dates back to 1958, when the first sound absorbers from glass wool were produced in Sweden to improve the acoustic working environment. Today the company is a global supplier of acoustic systems that contribute to good room acoustics and a healthy indoor environment with the focus on offices, education, health care and industrial manufacturing premises. Ecophon is part of the Saint-Gobain Group and has sales units and distributors in many countries.*

*Ecophon efforts are guided by a vision of earning global leadership in room acoustic comfort through sound-absorbing systems, enhancing end-user performance and wellbeing. Ecophon maintains an ongoing dialogue with government agencies, working environment organisations and research institutes, and is involved in formulating national standards in the field of room acoustics where Ecophon contributes to a better working environment wherever people work and communicate.*

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