gyproc
SAINT-GOBAIN

GYPSUM CEILINGS PRODUCT BROCHURE

SAINT-GOBAIN

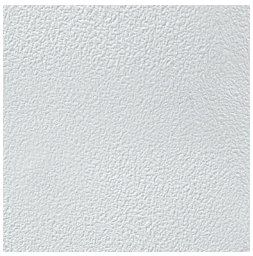
Durban North Coast Beach Shack, South Africa

Gyproc provides a comprehensive range of ceiling products that combine aesthetic appeal, acoustic control, and environmentally friendly features for outstanding performance. Our solutions offer extensive design possibilities, enabling seamless transitions from concepts to reality in sectors such as office spaces, healthcare, residential, industrial, and hospitality.

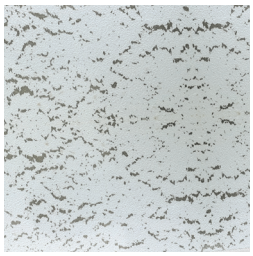
CONTENT

Gyprex®

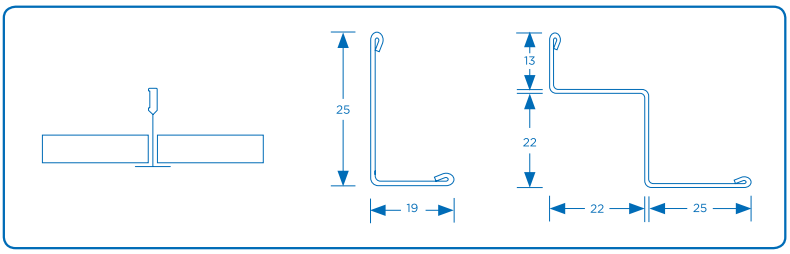
Gyprex® is a vinyl-faced tile with a gypsum core used with exposed grid to form a suspended ceiling. It has a tough washable vinyl finish bonded to the board and is ideal for use in a range of commercial and residential ceiling applications. Available in a White and Fissured finish. The gypsum core is 100% recyclable.



White



Fissured



Edge Detail for Exposed Grid

Trim Detail for Wall Angle

Trim Detail for Recessed Wall Angle

Material Code	Finish	Edge Type	Size (mm)	Thickness (mm)	Weight (kg/m²)	Reaction to Fire
25901	White	Square	1200 x 600	6.4	3.3	Combustible B/B1/2 classification as per SANS 10177-5
25903	Fissured	Square	1200 x 600	6.4	3.3	
22928	White	Square	1200 x 600	9	4.8	Combustible B classification as per SANS 10177-5
22925	Fissured	Square	1200 x 600	9	4.8	
18171	White	Square	600 x 600	12.5	3.1	Non-combustible classification as per SANS 10177-5
17966	White	Square	1200 x 600	12.5	6.3	
18173	Fissured	Square	600 x 600	12.5	3.1	
18172	Fissured	Square	1200 x 600	12.5	6.3	

Cape Town Stadium, South Africa

Fibrotone™

Mineral Fibre ceiling tiles with either a Fine Fissured and Pin Perforated finish, providing a good combination of sound adsorption and attenuation.

Fine Fissured

Pin Perforated

Product Code	Finish	Edge Type	Size (mm)	Thickness (mm)	Acoustic Class	NRC (up to)	Weight (kg/m²)
23265	Fine Fissured		1195 x 695	16	D	0.55	
23266	Pin Perforated		1195 x 695	16	D	0.55	

Innovation and Education Center of International School of Prague, Czech Republic

Gyptone®

The Gyptone® range includes acoustic gypsum boards and tiles with a specialized sound absorption tissue backing. Designed with four tapered edges, the boards ensure easy installation and a quality finish. All Gyptone® boards and tiles incorporate Activ'Air® technology. The boards are supplied unpainted, while the tiles come pre-painted in white.

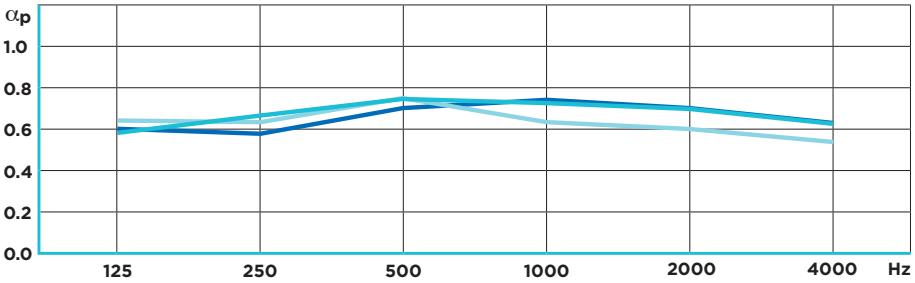
Gyptone® BIG Quattro 41

Acoustic gypsum boards with square perforations and a special sound-absorbent tissue backing, designed with four tapered edges for easy installation and quality finishing. Sound insulation performance up to Dncw = 39 dB.

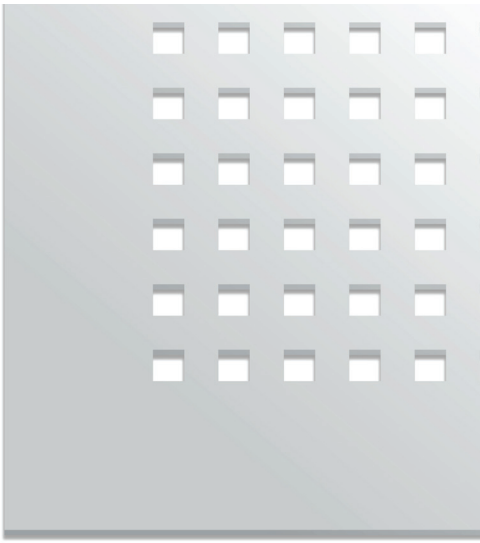
Product Code	Colour	Edge Type	Size (mm)	Thickness (mm)	Light Reflectance	Fire Resistance	Moisture Resistance	Weight (kg/m²)
18322	Natural	Tapered	2400 x 1200	12.5	-	A2-s1, d0	Up to 70% RH	8

Acoustics

Practical absorption coefficient αp

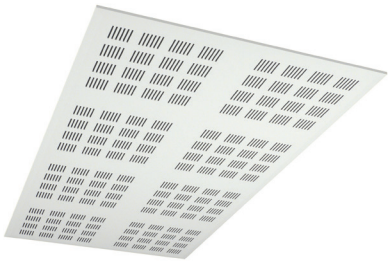


	Suspension distance	Mineral Wool	Frequency						αw value	NRC value	Absorption class
			125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz			
	58 mm	50 mm	0.58	0.66	0.74	0.72	0.69	0.62	0.70	0.70	C
	200 mm	-	0.64	0.63	0.75	0.63	0.60	0.53	0.65	0.65	C
	400 mm	50 mm	0.61	0.58	0.70	0.74	0.70	0.63	0.75	0.65	C



Acoustic Class	NRC (up to)	αw value	Perforated Area
C	0.70	0.70	16%

Gyptone® BIG
Line 6

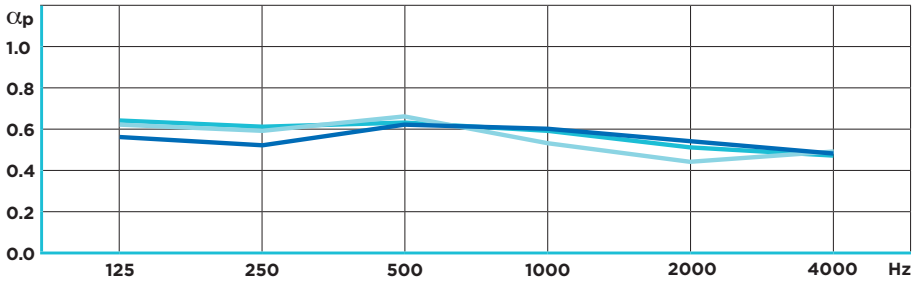


Acoustic gypsum boards with a linear pattern and a special sound-absorbent tissue backing that provide a jointless finish. All Gyptone® boards are capable of giving sound insulation performance up to Dncw = 39 dB.

Product Code	Colour	Edge Type	Size (mm)	Thickness (mm)	Light Reflectance	Fire Resistance	Moisture Resistance	Weight (kg/m²)
18323	Natural	Tapered	2400 x 1200	12.5	-	A2-s1, d0	Up to 70% RH	8

Acoustics

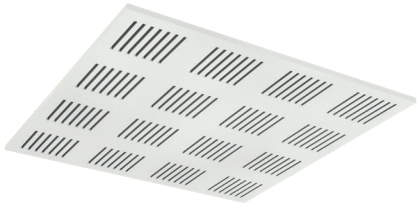
Practical absorption coefficient αp



	Suspension distance	Mineral Wool	Frequency						αw value	NRC value	Absorption class
			125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz			
	58 mm	50 mm	0.64	0.61	0.63	0.59	0.51	0.47	0.55	0.55	D
	200 mm	-	0.62	0.59	0.66	0.53	0.44	0.41	0.50	0.55	D
	400 mm	50 mm	0.56	0.52	0.62	0.60	0.54	0.48	0.60	0.55	C

Acoustic Class	NRC (up to)	αw value	Perforated Area
D	0.55	0.55	13%

Gyptone® Tile
Line 4

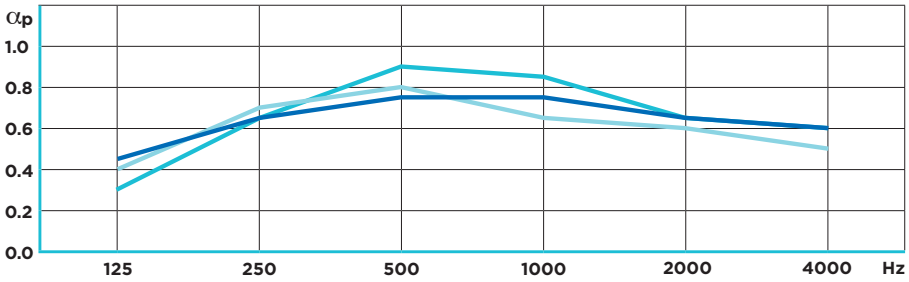


Pre-finished white tiles with line perforations, backed by a special sound-absorbent tissue. All Gyptone® boards are capable of giving sound insulation performance up to Dncw = 39 dB.

Product Code	Colour	Edge Type	Size (mm)	Thickness (mm)	Light Reflectance	Fire Resistance	Moisture Resistance	Weight (kg/m²)
18327	White	Square	600 x 600	10	0.70	A2-s1, d0	Up to 70% RH	6.6

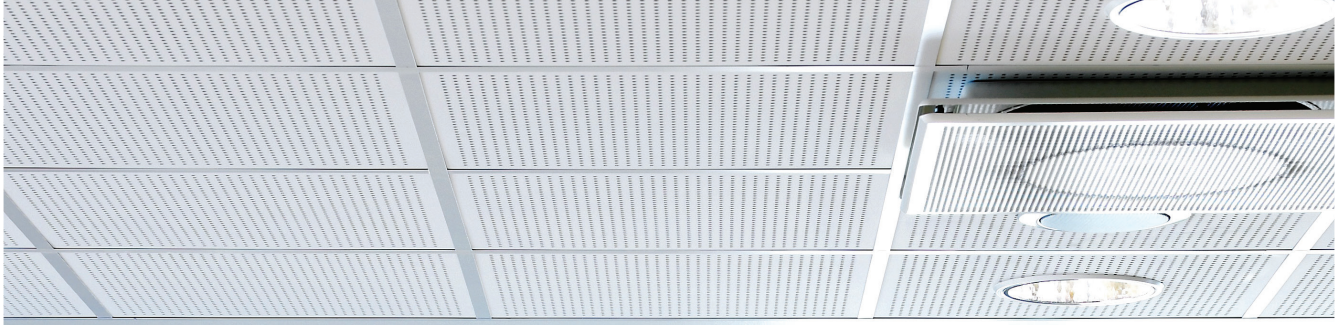
Acoustics

Practical absorption coefficient αp



	Suspension distance	Mineral Wool	Frequency						αw value	NRC value	Absorption class
			125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz			
	58 mm	45 mm	0.30	0.65	0.90	0.85	0.65	0.60	0.60	0.75	C
	200 mm	-	0.40	0.70	0.80	0.65	0.60	0.50	0.65	0.70	C
	300 mm	70 mm	0.45	0.65	0.75	0.75	0.65	0.60	0.70	0.70	C

Acoustic Class	NRC (up to)	αw value	Perforated Area
C	0.70	0.70	18%



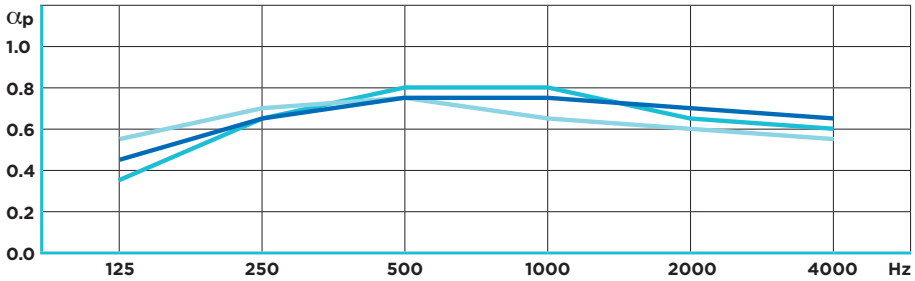
Gyptone® Tile
Point 11

A range of tiles with round perforations, backed by special sound-absorbent tissue. All Gyptone® boards are capable of giving sound insulation performance up to Dncw = 39 dB.

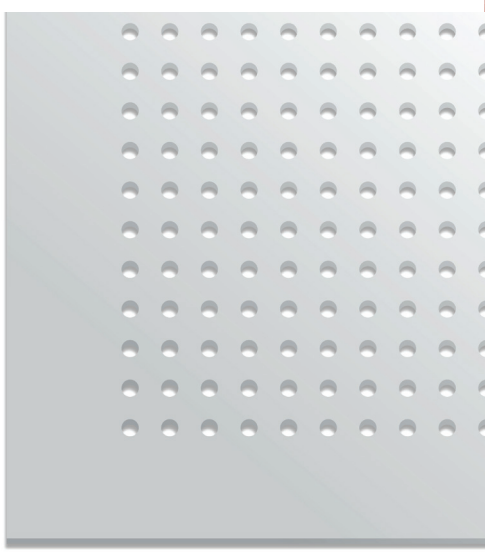
Product Code	Colour	Edge Type	Size (mm)	Thickness (mm)	Light Reflectance	Fire Resistance	Moisture Resistance	Weight (kg/m²)
18326	White	Square	600 x 600	10	0.70	A2-s1, d0	Up to 70% RH	6.6

Acoustics

Practical absorption coefficient αp



	Suspension distance	Mineral Wool	Frequency						αw value	NRC value	Absorption class
			125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz			
	58 mm	45 mm	0.35	0.65	0.80	0.80	0.65	0.60	0.70	0.70	C
	200 mm	-	0.55	0.70	0.75	0.65	0.60	0.55	0.65	0.65	C
	300 mm	70 mm	0.45	0.65	0.75	0.75	0.70	0.65	0.75	0.70	C



Acoustic Class	NRC (up to)	αw value	Perforated Area
C	0.70	0.70	12%

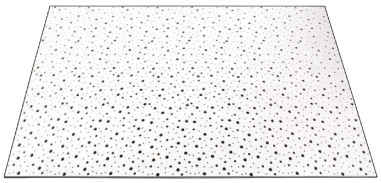
Rigips Headquarters

Rigitone® Edge

Rigitone® Edge

The Rigitone® Edge board range comprises perforation designs with Regular and Regularly Staggered Round perforations, Irregular Scattered perforations and Square perforations. They are fitted with black acoustic tissue as standard and demonstrate very good sound-absorbing properties, particularly in the frequency range of the human voice. All Rigitone® Edge boards have Activ'Air® technology.

Rigitone® Edge
8-15-20 SUPER

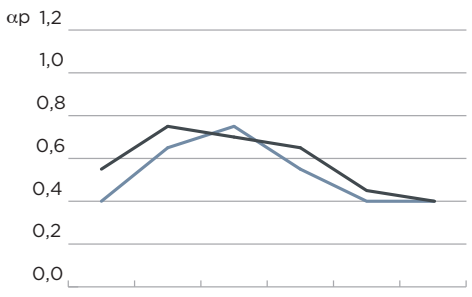


Rigitone® Edge Activ'Air® 8-15-20 SUPER has a random pattern of 8 mm, 15 mm and 20 mm round perforations. The reverse of the board incorporates an acoustic fleece which provides sound absorption performance. Use in larger ceiling installations for striking visual effect.

Product Code	Acoustic tissue	Edge Type	Size (mm)	Thickness (mm)	Light Reflectance	Fire Resistance	Moisture Resistance	Weight (kg/m²)
31647	Black	Chamfered	1204 x 1961	12.5	-	A2-s1, d0	Up to 70% RH	10

Acoustic

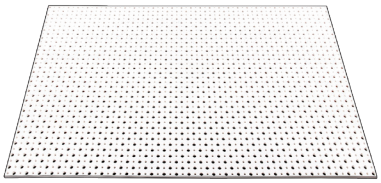
Practical absorption coefficient αp



	125	250	500	1000	2000	4000	αw
200 mm plenum / 60 mm wool	0.55	0.75	0.70	0.65	0.45	0.40	0.50 (L)
200 mm plenum / without wool	0.40	0.65	0.75	0.55	0.40	0.40	0.50 (LM)

Acoustic Class	NRC (up to)	αw value	Perforated Area
D	0.70	0.50	10%

Rigitone® Edge
12-20/66

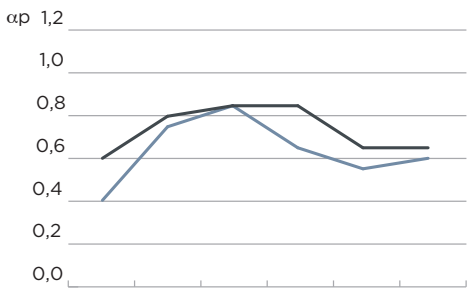


Rigitone® 12-20/66 has a regular diagonal pattern of 12 mm and 20 mm round perforations at 66mm centres, with excellent acoustic absorption. It's a popular choice for large expansive interiors.

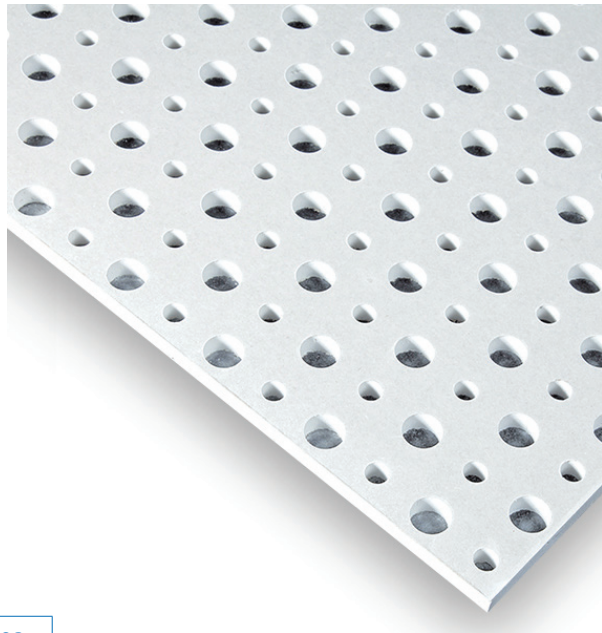
Product Code	Acoustic tissue	Edge Type	Size (mm)	Thickness (mm)	Fire Resistance	Moisture Resistance	Weight (kg/m²)
31671	Black	Chamfered	1188 x 1980	12.5	A2-s1, d0	Up to 70% RH	9.5

Acoustic

Practical absorption coefficient αp

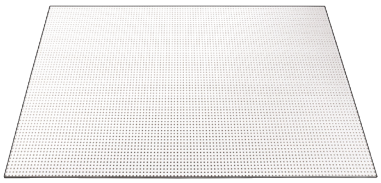


	125	250	500	1000	2000	4000	αw
200 mm plenum / 60 mm wool	0.60	0.80	0.85	0.85	0.65	0.65	0.75 (L)
200 mm plenum / without wool	0.40	0.75	0.85	0.65	0.55	0.60	0.65 (LM)



Acoustic Class	NRC (up to)	αw value	Perforated Area
D	0.70	0.75	19.6%

Rigitone® Edge
8/18

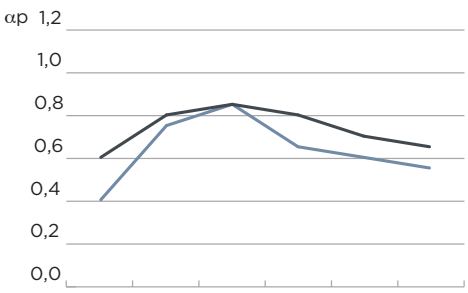


Rigitone® Edge 8/18 has a regular pattern of 9 mm round perforations at 18mm centres combining to provide Class C sound adsorption. Used to create an effortless visual flow across the plane of the ceiling.

Product Code	Acoustic tissue	Edge Type	Size (mm)	Thickness (mm)	Fire Resistance	Moisture Resistance	Weight (kg/m²)
31670	Black	Chamfered	1188 x 1998	12.5	A2-s1, d0	Up to 70% RH	10

Acoustic

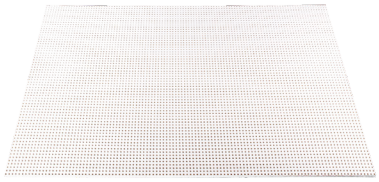
Practical absorption coefficient αp



	125	250	500	1000	2000	4000	αw
200 mm plenum / 60 mm wool	0.60	0.80	0.85	0.80	0.70	0.65	0.75 (L)
200 mm plenum / without wool	0.40	0.75	0.85	0.65	0.60	0.55	0.65 (LM)

Acoustic Class	NRC (up to)	αw value	Perforated Area
C	0.70	0.75	15.5%

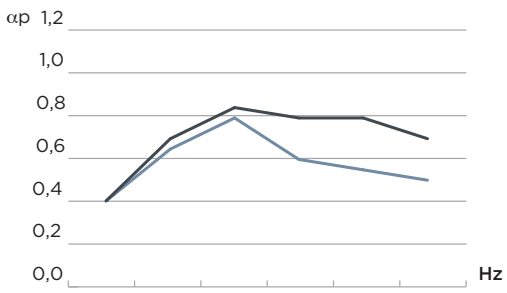
Rigitone® Edge
8/18 Q



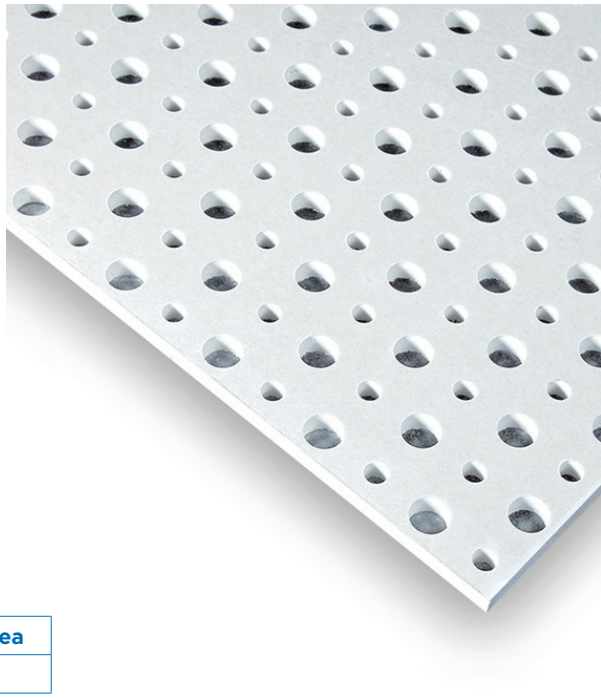
Rigitone® Edge 8/18 Q has a regular pattern of 8 mm square perforations at 18 mm centres combining to provide Class B sound absorption. Used to create an effortless visual flow across the plane of the ceiling.

Product Code	Acoustic tissue	Edge Type	Size (mm)	Thickness (mm)	Fire Resistance	Moisture Resistance	Weight (kg/m²)
31673	Black	Chamfered	1188 x 1998	12.5	A2-s1, d0	Up to 70% RH	9.5

Acoustic
Practical absorption coefficient αp

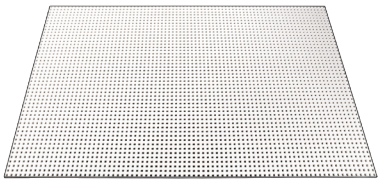


	125	250	500	1000	2000	4000	αw
200 mm plenum / 60 mm wool	0.40	0.70	0.85	0.80	0.80	0.70	0.80
200 mm plenum / without wool	0.40	0.65	0.80	0.60	0.55	0.50	0.60



Acoustic Class	NRC (up to)	αw value	Perforated Area
B	0.70	0.80	19.8%

Rigitone® Edge
12/25 Q

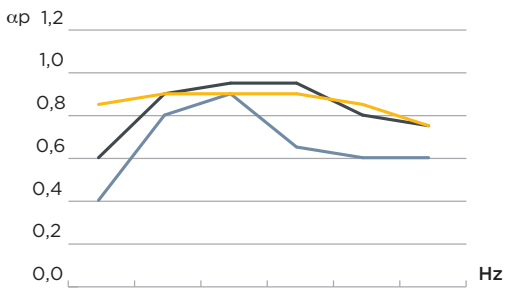


Rigitone® Edge 12/25 Q has a regular geometric pattern of 12 mm square perforations at 25 mm centres combining to provide Class B sound absorption. It is ideal for large, high ceilings.

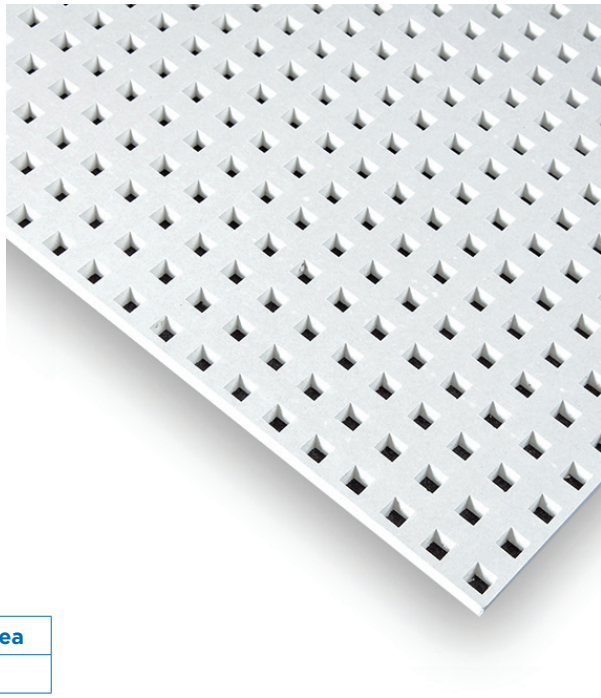
Product Code	Acoustic tissue	Edge Type	Size (mm)	Thickness (mm)	Fire Resistance	Moisture Resistance	Weight (kg/m²)
31672	Black	Chamfered	1200 x 2000	12.5	A2-s1, d0	Up to 70% RH	9.5

Acoustic

Practical absorption coefficient αp



	125	250	500	1000	2000	4000	αw
200 mm plenum / 140 mm wool	0.85	0.90	0.90	0.90	0.85	0.75	0.90
200 mm plenum / 60 mm wool	0.60	0.90	0.95	0.95	0.80	0.75	0.85 (L)
200 mm plenum / without wool	0.40	0.80	0.90	0.65	0.60	0.60	0.65 (L)



Acoustic Class	NRC (up to)	αw value	Perforated Area
A	0.70	0.90	23%

REACTION TO FIRE

Fire behaviour is assessed according to two criteria, reaction to fire and resistance to fire

REACTION TO FIRE

The concept of reaction to fire characterises the ability of a material to participate or not in the development of fire.

ACCORDING TO THE EUROCLASSES APPLICABLE TO BUILDING PRODUCTS:

- **A1, A2:** very low or no contribution to fire even in the case of a very large fire.

Classification for smoke production:
- **s1:** very limited smoke production.

Classification d for the production of flaming droplets and particles:
- **d0**: no droplets (SBI test).

FIRE RESISTANCE

Fire resistance characterises the time during which the building elements can perform their intended function despite the action of a fire.

The degrees of fire resistance are expressed in duration:

- European system in minutes: 15, 20, 30, 45, 60, 90, 120, 180, 240, 360.

THE MAIN CLASSIFICATIONS ARE AS FOLLOWS:

- **Load-bearing capacity - R (European classification):** time during which a load-bearing building element assumes its structural function (mechanical resistance).

- **Fire resistance - E (European classification):** time during which a building element is fire-stable, tight to flames, hot or flammable gases.

- **Fire tightness and thermal insulation - I (European classification):** time during which a building element is stable to fire, flame-block and where the temperature rise does not exceed an average of 140°C and 180°C at any point.

ACOUSTIC COMFORT

Acoustics concerns the emission, propagation and reception of sounds and noises within the same room or between different rooms. Good acoustic insulation contributes in a harmonious way to the creation of a healthy and pleasant atmosphere.

- **Internal acoustics:** this enables to ensure the acoustic quality of premises. This can be a place where listening must be eased (auditoriums, teaching rooms, etc.), a place where the noise level must be reduced (offices, industrial premises, entrance halls, etc.) or a place where the acoustics are specific (sports halls, restaurants, home cinema rooms and other private areas).

These are the essential performances required and possible thanks to the entire range of Gyproc decorative ceilings.

- **Acoustic insulation:** this enables to limit or control the sound transmission between different premises.

Noises can be:
- Airborne: speech, television, sound animations
- Impacts: walking, shocks, vibrations
- Equipment: ventilation, taps, air conditioning

By their very nature, Gyproc decorative ceilings meet the requirements for acoustic insulation.

- **Decibel (dB):** the decibel is the unit of measurement for noises. It is equal to 10 times the logarithmic ratio between the measured intensity and the reference intensity.

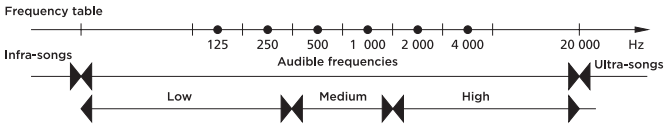
- **Frequency:** this quantifies the pitch of a sound. It is expressed in Hertz (Hz).

There are three types of frequencies:
- Low frequencies (from 20 to 400 Hz)
- Medium frequencies (400 to 1,600 Hz)
- High frequencies (1,600 to 20,000 Hz)

There are six frequency groups, each with a centre frequency.

These 6 groups, called octaves, are centred on 125 Hz, 250 Hz, 500 Hz, 1,000 Hz, 2,000 Hz and 4,000 Hz.

Frequency table:



- **Absorption coefficient (α_w):** this index corresponds to the ratio of the absorbed acoustic energy to the incident acoustic energy.

When an acoustic wave hits a surface, a very small fraction of the incident energy passes through the surface (acoustic insulation). The other, larger fraction of the wave is partly reflected and partly absorbed.

If a material has a α_w **= 0**, it is totally reflective; if its α_w **= 1**, it is absorbing.

According to the standards, five product classes are defined as follows:

ABSORPTION CLASSES	REQUIREMENT (α_w)
A	0.90/0.95/1
B	0.80/0.85
C	0.60/0.65/0.70/0.75
D	0.30/0.35/0.40/0.45/0.50/0.55
E	0.15/0.20/0.25
Not classified	0.15/0.20/0.25

The quality of absorption is also measured by the ability of the material to absorb across the entire range of frequencies, which is the main characteristic of plasterboard-based ceilings.

- **Speech intelligibility:** this characterises the quality of speech perception and understanding and depends on several parameters, such as the geometric configuration of the room, the nature of the walls, floors and ceilings, and the ambient noise level. The RASTI (Rapid Speech Transmission Index) is used and ranges from 0 (poor understanding) to 1 (good understanding).

- **Equivalent absorption area A in m2** of a room (wall, ceiling, floor): this is the sum of the products of the surface areas of the walls of a room by their respective α_w absorption assessment index: $A = \alpha_{wi} S_i$.

- **Reverberation time T in seconds:** the reverberation time is the time it takes for a sound to decrease by 60 dB after the sound source has stopped.

It is expressed in seconds and defines the acoustic characteristics of the room.

Saint-Gobain Tower

Saint-Gobain Construction Products South Africa (Pty) Ltd (SGCPSA) is a limited liability company registered in South Africa under company registration number 1937/010220/07.

SGCPSA reserves the right to revise product specification without notice.

The information herein should not be read in isolation as it is meant only as guidance for the user, who should always ensure that they are fully conversant with the products and systems being used and their subsequent installation prior to the commencement of work.

For a comprehensive and up-to-date library of information visit the Gyproc SA website www.gyproc.co.za

Jarnac, France