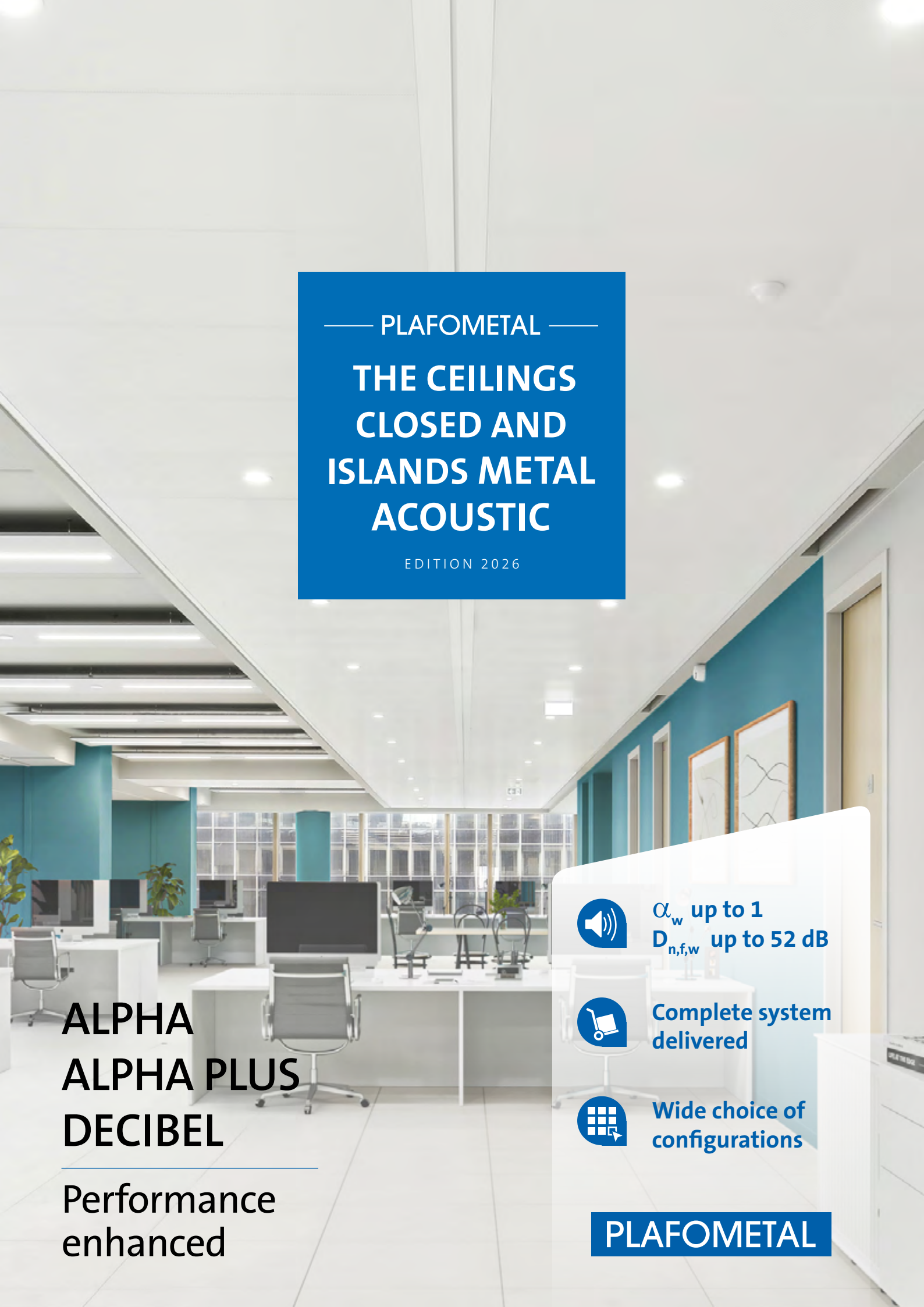


PLAFOMETAL

# THE CEILINGS CLOSED AND ISLANDS METAL ACOUSTIC

EDITION 2026

$\alpha_w$ up to 1
$D_{n,f,w}$ up to 52 dB

Complete system delivered

Wide choice of configurations

## ALPHA
## ALPHA PLUS
## DECIBEL

Performance enhanced

PLAFOMETAL

# Fully express your architectural creativity!

A specialist in the design of metal ceilings, Plafometal offers a range of solutions able to meet all layout projects, including the most creative ones. Offices, hospitals, stations, shopping centers... every project is unique. Whether it is a standard or custom solution, our design office supports you throughout the project to guide your technical choices regarding ceilings and suspended islands.

Our systems are manufactured and assembled at a single site in France, a real advantage:
this ensures both proximity to our contacts, better responsiveness on site, and optimized logistics.

## Metal, a material full of resources

A noble and durable material, metal no longer needs to prove its remarkable ability to adapt to all desires, even the boldest ones. Identifiable at a glance, metal enhances the building by giving it a decidedly modern and high-end character.
Another advantage: its robustness. It is such that maintenance operations in the ceiling void are no longer a constraint. The panels can be dismantled multiple times without suffering any damage.

### OPTIMAL ENVIRONMENTAL QUALITIES

*Designed in steel or aluminum, Plafometal ceilings are a concrete and sustainable response to the environmental challenges faced by building professionals and their clients. As part of this approach, verified (EPD) are available and downloadable from the national INIES database (www.inies.fr).*

*Steel is today the most recycled material in the world and the one with the most efficient recycling channels (no landfill cost, it is 100% recyclable without altering its qualities...)*

The Plafometal line of acoustic ceilings is covered (including insulation) by verified EPD certificates.

Manufacturing French

# Control noise
to improve
acoustic comfort

## Rethink preconceived ideas about acoustics!

Plafometal has been able to take advantage of the natural properties of metal, while optimizing them, to make the ceiling a true architectural element with high acoustic performance.

To give metal its acoustic properties, it is necessary to perforate the panels to allow the passage of sound waves. Common sense would suggest that the more numerous and larger the perforations, the better the absorption.

It's a common misconception: the open area ratios typically used have little effect on absorption. The choice of perforation pattern is primarily aesthetic.

The new range of acoustic metal ceilings has been designed to address all issues related to acoustic comfort, by controlling the propagation of sound waves

## The ceiling is the free surface best suited for acoustic treatment

As the ceiling is generally the largest free surface in a room, it primarily contributes to the treatment of sound reverberation. This makes it easier to understand why its ability to absorb sound waves is essential when seeking acoustic comfort.

A good acoustic environment makes a place more comfortable but also more conducive to serenity, work, and healing...

**More than 50%**
of employees report being regularly disturbed by noise.

**35 to 55 dB(A)**
is the recommended sound level in offices depending on usage.

**Up to 15%**
loss of productivity caused by noise in open-plan offices.

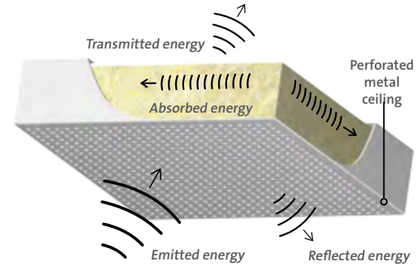
**Only 30%**
of employees are satisfied with the acoustic comfort of their office.

**Improving acoustics directly enhances well-being and concentration and team efficiency.**

*Sound is a vibration that propagates in the form of a spherical wave. When it encounters an obstacle, it is either absorbed by it or reflected. In the latter case, it can mix with other waves and create a sense of noise that causes discomfort.*

# Better understand
# **the rules of acoustics**

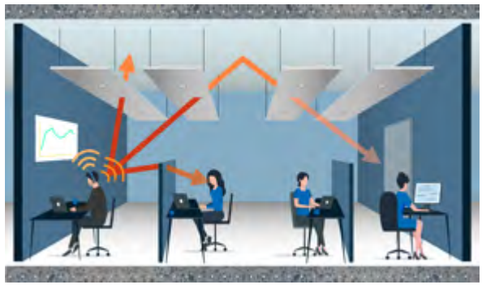
## Absorption




The sound absorption of a suspended ceiling is defined by its ability to reduce sound energy by absorbing it totally or partially (this is referred to as a reduction in reverberation time).

Sound absorption is assessed by the Sabine Alpha coefficient ($\alpha_s$), calculated by frequency bands according to EN ISO 354, resulting in a single $\alpha_w$ (EN ISO 11654) or NRC (ASTM C423) for comparing acoustic performance, from 0 (no absorption, high reverberation) to 1 (total absorption, no sound reflection).

**PLAFOMETAL metal ceilings are made of materials that have the property of absorbing sound energy. They improve the acoustic comfort of a room by reducing wave reflection.**



## Equivalent absorption area (Aeq)

The Aeq (m² sabin) expresses the capacity of an acoustic element (island, baffle) to absorb sound. It corresponds to the equivalent surface area of a perfectly absorbing material ($\alpha_w$= 1) providing the same performance. Unlike a continuous ceiling that only absorbs through its visible face, these open solutions capture sound on all their faces and sides, thus increasing their efficiency. Measured according to EN ISO 354, Aeq objectively evaluates performance.

**PLAFOMETAL islands and baffles have the property of providing an equivalent sound absorption area that ensures a strong reduction in reverberation and better acoustic comfort.**

## Lateral attenuation

The lateral attenuation of a suspended ceiling is defined by its ability to reduce the propagation of sound waves between adjacent rooms sharing the same ceiling void (a common type of construction in buildings intended for tertiary activities). Their performance is expressed by a standardized sound insulation index $D_{n,f,w}$ given in decibels.

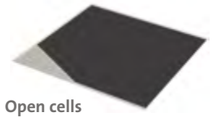
**PLAFOMETAL offers a range of metal ceilings specially designed to provide high lateral attenuation performance, in addition to sound absorption.**

# Technical and acoustic performance

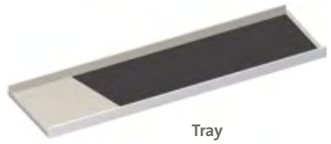
With its experience in the field of suspended ceilings, PLAFOMETAL places innovation at the heart of its approach. Furthermore, to ensure maximum efficiency, the performance of PLAFOMETAL products is systematically evaluated by the Scientific and Technical Center for Building (CSTB). All tests were carried out in a certified and independent laboratory, over a short period of time and under similar conditions for consistent results. More than 300 measurements have been carried out since 2014, which has made it possible to improve the range and develop new solutions.

## A complete range to meet all needs

- **ALPHA** + **INTELLIGIBILITY** Ceiling panels or trays fitted with a new generation thermally bonded veil **for a sound absorption coefficient $\alpha_w$ up to 0.85.**

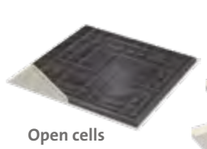


Open cells

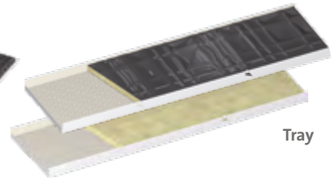


Tray

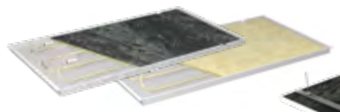
- **ALPHA PLUS** + **FOR ACOUSTIC COMFORT** Ceiling panels, trays, or islands filled with high-density bagged or surfaced mineral wool **for a sound absorption coefficient $\alpha_w$ up to 1 or a significant equivalent absorption area (Aeq) with a ratio of m² sabin per m² of the product up to 1.8 in speech frequencies** with the possibility of including the absorption area in radiant ceilings.



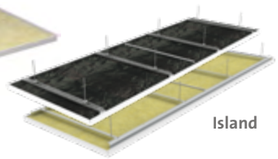
Open cells



Tray

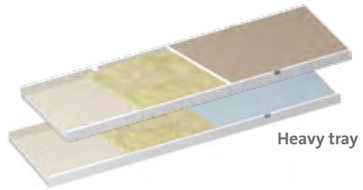


Radiant ceiling ZENITH®



Island

- **DECIBEL** + **FOR CONFIDENTIALITY** Trays filled with mineral wool and a rear cover **for lateral sound insulation $D_{n,f,w}$ up to 52 dB and a sound absorption coefficient $\alpha_w$ up to 0.75** with the possibility of including the absorption area in radiant ceilings.



Heavy tray

Radiant ceiling ZENITH®

# **ALPHA offer** for
# ⊕ speech intelligibility

## The advantages:

- **Exclusive sound absorption: $\alpha_w$ up to 0.85**
- Easy handling: lightweight and easy to cut
- All-in-one ceiling, ready to install

## The best solution for all circulation areas

Because ceiling void access is in high demand, the ALPHA ceiling panels are particularly sturdy and easy to handle during technical work. Circulation areas, as their name suggests, are only transitional spaces. Unlike an office or a meeting room where comfort is a priority, the need for acoustic treatment here is lower. Class B sound absorption is therefore more than sufficient to achieve a very good acoustic level.

- Available in cassettes, self-supporting bins and hinged bins
- 10 types of perforation

## Acoustic performance according to configurations:

Below you will find the $\alpha_w$ absorption coefficients depending on the products and their perforation.

| | | Class C | Class B | | Class A | | |
|---|---|---|---|---|---|---|---|
| | $\alpha_w$ | 0,75 | 0,80 | 0,85 | 0,90 | 0,95 | 1,00 |
| **Open cells** | | | | | | | |
|  | H0 H2<br>H8 H9 | 22% ø1,5<br>46% 5,5x5,5 | 10% ø2,5<br>11% ø1,5<br>12% ø2,5<br>16% ø2,5<br>23% ø2,5 | | | | |
| | MONOBAC<br>MONOBAC SF | 22% ø1,5 | | | | | |
| **Self-supporting** | | | | | | | |
|  | PM12<br>PM10<br>PM3 PM4 | 22% ø1,5 | 10% ø2,5<br>11% ø1,5<br>12% ø2,5<br>16% ø2,5<br>23% ø2,5<br>40% 61x4 [1] | 18% IRR<br>20% 61x4 [1] | | | |
| | PM2 Horus | | | | | | |
| | PM8 SF [2] | | | | | | |
| **Linear trays** | | | | | | | |
|  | PM300 | 22% ø1,5 | 10% ø2,5<br>11% ø1,5<br>23% ø2,5 | | | | |
| **Opening trays** | | | | | | | |
|  | Orial<br>Aries<br>Axess<br>Translabac | 22% ø1,5 | 10% ø2,5<br>11% ø1,5<br>12% ø2,5<br>16% ø2,5<br>23% ø2,5<br>40% 61x4 | 18% IRR<br>20% 61x4 | | | |
| | ORIAL SF | | 10% ø2,5<br>11% ø1,5 | | | | |

[1] *Perforation available only on PM2 and Horus, not compatible with SF versions (Fire Stable)*
[2] *Perforation available except for SF trays (Fire Stable)*

*Other perforation are available on request, details of absorption by frequency band ($\alpha_p$) are available in the summary table on page 19. For more details on the products, please refer to the PLAFOMETAL catalog.*

THE TECHNICAL DATA SHEETS ARE AVAILABLE AT WWW.PLAFOMETAL.FR

# **ALPHA PLUS offer** for + acoustic comfort

## The advantages:

- **Optimal sound absorption class A, $\alpha_w$ up to 1.00**
- **High equivalent absorption area (Aeq) for islands with a ratio of m² sabine per m² of the product up to 1.8 in speech frequencies**
- Robust and durable
- All-in-one ceiling

## Peace of mind in the broadest sense in offices, classrooms...

The ALPHA PLUS offer is perfectly suited to spaces where the need for intelligibility is important. It is indeed difficult to have a quality phone conversation when a colleague sitting opposite is also in the middle of a conversation... ALPHA PLUS is PLAFOMETAL's answer to benefit from optimal acoustic comfort.

- A flexible range for all projects (standard ceiling panels, self-supporting trays, opening trays, ceiling islands, custom design...)
- 6 types of perforation
- 2 types of specific absorption filling
- Reversible radiant ceiling possible
- Ceilings ready-to-install or in kit form depending on models
- All ready-to-install ceilings have a filling mechanically held inside the trays: dismantling and handling are simple and without risk of product alteration.

## Acoustic performance depending on configurations:

Below you will find the sound absorption coefficients $\alpha_w$ depending on the products, their perforations, and their types of filling.

| | Class C | Class B | | Class A | | |
|---|---|---|---|---|---|---|
| $\alpha_w$ | 0,75 | 0,80 | 0,85 | 0,90 | 0,95 | 1,00 |
| **Open cells** | | | | | | |
| H0* H2* H8* H9* MONOBAC* MONOBAC SF* | | | | 10% ø2,5 | 16% ø2,5 | 11% ø1,5<br>22% ø1,5<br>23% ø2,5 |
| **Self-supporting trays** | | | | | | |
| PM12** PM10** PM2** Horus** | | | | 10% ø2,5<br>18% IRR | 16% ø2,5 | 11% ø1,5<br>22% ø1,5<br>23% ø2,5 |
| | | | | | | 10% ø2,5<br>11% ø1,5<br>16% ø2,5<br>22% ø1,5<br>23% ø2,5<br>18% IRR |
| PM3* PM4* PM8 SF** | | | | 10% ø2,5<br>18% IRR | 16% ø2,5 | 11% ø1,5<br>22% ø1,5<br>23% ø2,5 |
| **Opening trays** | | | | | | |
| ORIAL** Aries** Axess** TRANSLABAC** | | | | 10% ø2,5<br>18% IRR | 16% ø2,5 | 11% ø1,5<br>22% ø1,5<br>23% ø2,5 |
| | | | | | | 10% ø2,5<br>11% ø1,5<br>16% ø2,5<br>22% ø1,5<br>23% ø2,5<br>18% IRR |
| **Linear trays** | | | | | | |
| PM300 | | | | 10% ø2,5 | | 11% ø1,5<br>22% ø1,5<br>23% ø2,5 |
| | | | | | | 10% ø2,5<br>11% ø1,5<br>22% ø1,5<br>23% ø2,5 |
| **Islands** | | | | | | |
| STEEL B & STEEL F island | | | | | | 11% ø1,5<br>22% ø1,5 |
| | | | | | | 11% ø1,5<br>22% ø1,5 |
| **ZENITH® Ceilings and islands Reversible Radiant** | | | | | | |
| | 11% ø1,5 | 16% ø2,5 | 22% ø1,5 | 16% ø2,5 | 22% ø1,5 | |

* Ceiling supplied as a kit
** Ceiling delivered ready-to-install

Specific surfaced insulation

Specific bagged insulation

*The expanded metal MESH has a sound absorption coefficient $\alpha_w$ of 1, as its open area ratio systematically exceeds 33%, which is higher than that of a perforated sheet at 23%.*

*The details of absorption by frequency band ($\alpha_p$) are available in the summary table on page 19. For the islands, the equivalent absorption areas (Aeq) are indicated in the table on page 21. For more details on the products, please refer to the PLAFOMETAL catalog.*

THE TECHNICAL DATA SHEETS ARE AVAILABLE AT WWW.PLAFOMETAL.FR

# **Décibel offer** for confidentiality

## The advantages:

- **Optimal lateral attenuation: $D_{n,f,w}$ up to 52 dB**
- Great partitioning flexibility
- All-in-one ceiling, ready to install

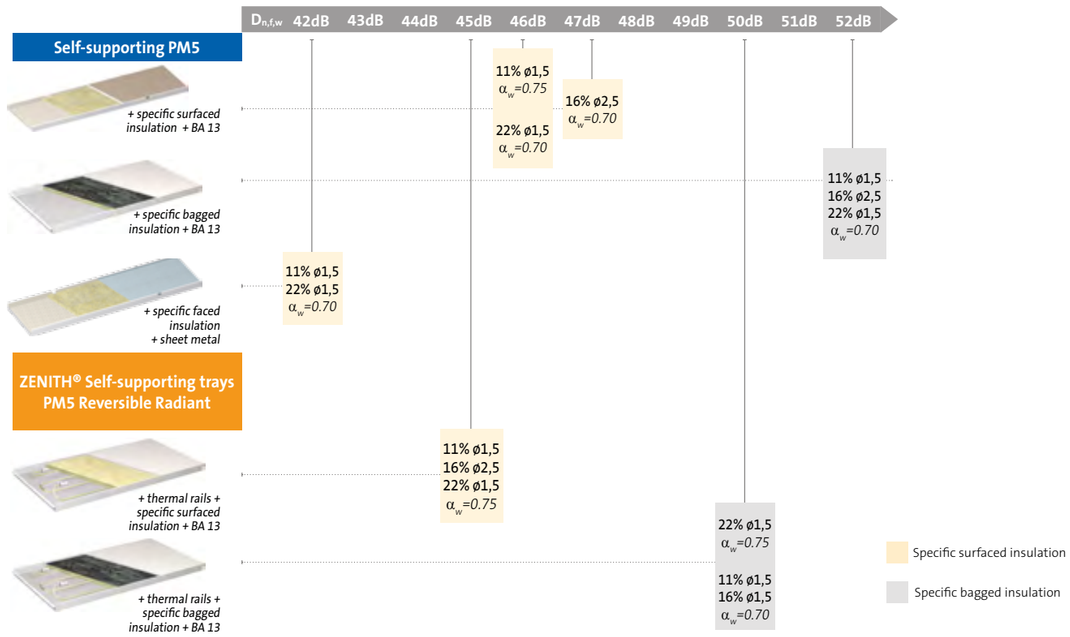
## Guaranteed confidentiality between partitioned offices

The combination of sound absorption and lateral attenuation performance of the Décibel offer is extremely effective in ensuring confidentiality in partitioned offices sharing the same ceiling void.
It is also the ideal solution for office floors with removable partitions. Indeed, the rails are designed to accommodate all types of partitions according to the company's developments.

- 1 highly customizable range of self-supporting trays
- 3 types of perforation
- 2 types of specific sound absorption filling
- 2 types of covers for attenuation (BA13 or sheet metal)
- Reversible radiant ceiling possible

## Acoustic performance according to configurations:

Below you will find the lateral attenuation indices $D_{n,f,w}$ and the sound absorption coefficients $\alpha_w$ depending on the chosen solution (type of filling, perforation, activation)




*The lateral attenuation indices $D_{n,f,w}$ (C;Ctr) and the details of absorption by frequency band ($\alpha_p$) are available in the summary table on page 19. For more details on the products, please refer to the PLAFOMETAL catalog.*

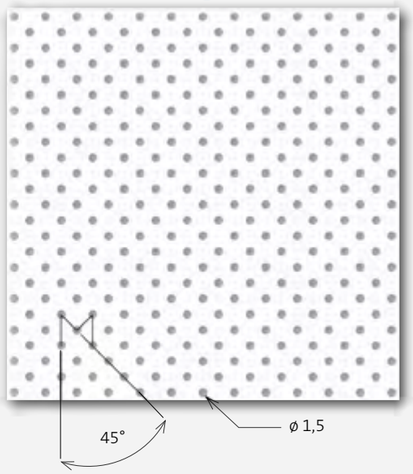
THE TECHNICAL DATA SHEETS ARE AVAILABLE AT WWW.PLAFOMETAL.FR

# An aesthetic and acoustic range

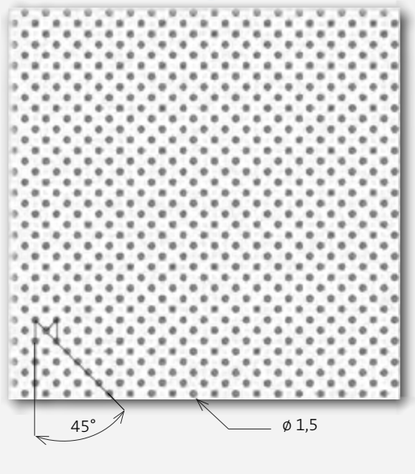
The perforation contributes to the acoustics of the metal ceiling.
PLAFOMETAL offers a wide choice of perforation allowing for varied ceiling aesthetics.

## PERFORATION AVAILABLE FOR ISLANDS AND CLOSED CEILINGS

**11% ø 1,5[3]**
**M arrangement**

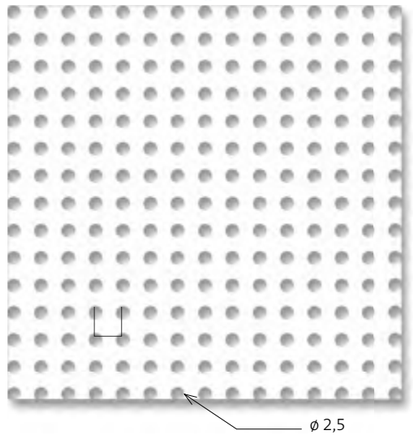



**22% ø 1,5[3]**
**M arrangement**

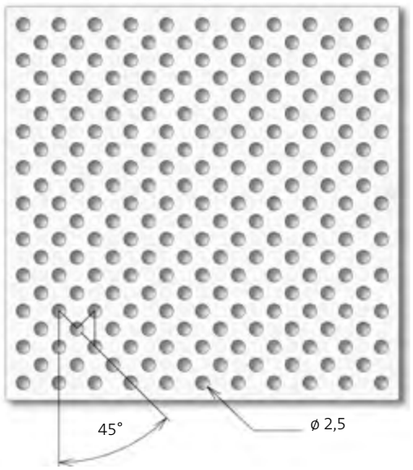



## PERFORATION AVAILABLE ONLY FOR CLOSED CEILINGS

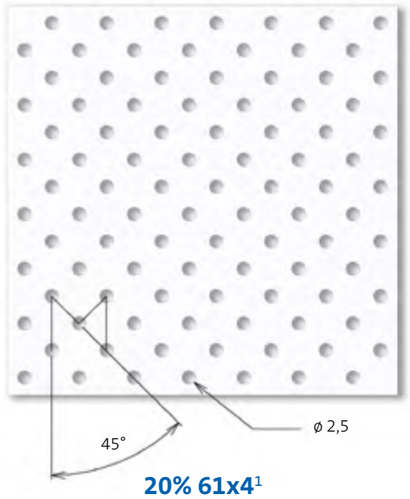
**16% ø 2,5[3]**
U arrangement



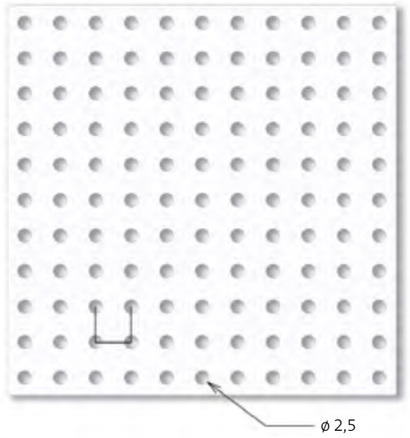

**23% ø 2,5[2]**
M arrangement



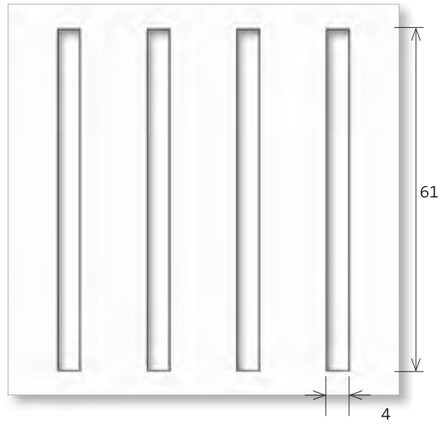

**10% ø 2,5[2]**
M arrangement



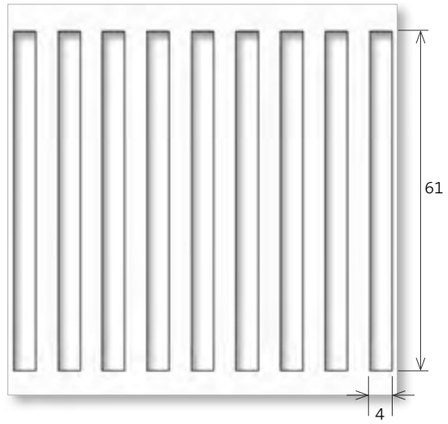

**12% ø 2,5[1]**
U arrangement



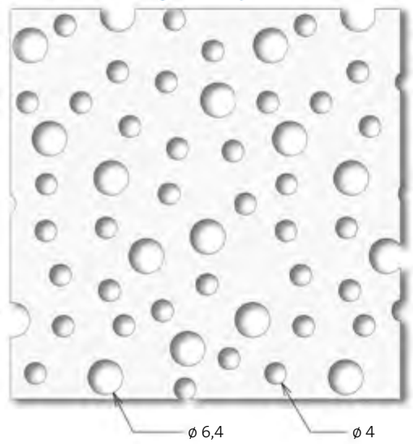

**20% 61x4[1]**
U arrangement



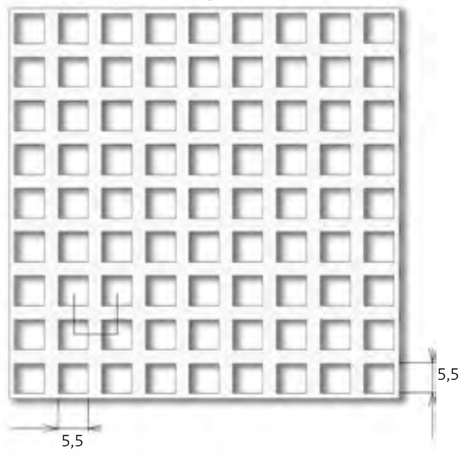

**40% 61x4[1]**
U arrangement




**18% IRR[2]**
Irregular layout




**46% 5,5x5,5[1]**
U arrangement




[1] laboratory tested for the ALPHA range [2] laboratory tested for the ALPHA and ALPHA PLUS ranges
[3] laboratory tested for the ALPHA, ALPHA PLUS and Décibel ranges

# Acoustic comfort
# **Closed suspended ceilings**

| Systems | Acoustic Range | Perforation | Configuration | SOUND ABSORPTION | | | | | | | | LATERAL SOUND INSULATION | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $\alpha_w$ | NRC | $\alpha_p$ - Frequency Hz by octave bands | | | | | | $D_{n,f,w}$ (C;Ctr) | $D_{n,f,w}$ + C | $D_{n,f,w}$ + Ctr |
| | | | | | | 125 | 250 | 500 | 1000 | 2000 | 4000 | | | |
| PLAFOMETAL<br>THE ACOUSTIC METAL CEILING | ALPHA<br>αw up to 0.85 | 10% Ø2,5 mm | Specific veil | 0,80 | 0.80 | 0,50 | 0,80 | 0,95 | 0,75 | 0,75 | 0,70 | - | - | - |
| | | 12% Ø2,5 mm | Specific veil | 0,80 | 0.80 | 0,45 | 0,80 | 0,95 | 0,75 | 0,80 | 0,75 | - | - | - |
| | | 16% Ø2,5 mm | Specific veil | 0.80(L) | 0.80 | 0,50 | 0,85 | 0,95 | 0,75 | 0,80 | 0,80 | - | - | - |
| | | 23% Ø2,5 mm | Specific veil | 0,80 | 0.80 | 0,35 | 0,75 | 0,95 | 0,75 | 0,80 | 0,75 | - | - | - |
| | | 11% Ø1,5 mm | Specific veil | 0,80 | 0.80 | 0,40 | 0,80 | 0,95 | 0,75 | 0,75 | 0,70 | - | - | - |
| | | 22% Ø1,5 mm | Specific veil | 0,75 | 0.75 | 0,30 | 0,75 | 0,90 | 0,70 | 0,75 | 0,75 | - | - | - |
| | | 18% IRR | Specific veil | 0.85(L) | 0.85 | 0,45 | 0,90 | 0,95 | 0,80 | 0,80 | 0,80 | - | - | - |
| | | 11% 61x4 mm | Specific veil | 0.70(L) | 0.70 | 0,50 | 0,75 | 0,85 | 0,70 | 0,65 | 0,55 | - | - | - |
| | | 20% 61x4 mm | Specific veil | 0.85(L) | 0.85 | 0,45 | 0,90 | 1,00 | 0,80 | 0,80 | 0,75 | - | - | - |
| | | 40% 61x4 mm | Specific veil | 0.80(L) | 0.80 | 0,40 | 0,85 | 1,00 | 0,75 | 0,80 | 0,85 | - | - | - |
| | | 46% 5,5x5,5 mm | Specific veil | 0,75 | 0.75 | 0,35 | 0,70 | 0,90 | 0,65 | 0,75 | 0,70 | - | - | - |
| | ALPHA PLUS<br>αw up to 1.00 | 10% Ø 2,5 mm | Specific bagged insulation | 0,90 | 0.90 | 0,40 | 0,85 | 1,00 | 0,90 | 0,95 | 0,70 | - | - | - |
| | | | Specific surfaced insulation | 1,00 | 1.00 | 0,40 | 0,90 | 1,00 | 1,00 | 1,00 | 0,95 | - | - | - |
| | | 16% Ø 2,5 mm | Specific bagged insulation | 0,95 | 0.95 | 0,60 | 0,85 | 0,95 | 0,95 | 1,00 | 0,85 | - | - | - |
| | | | Specific surfaced insulation | 1,00 | 1.00 | 0,50 | 0,85 | 1,00 | 0,95 | 1,00 | 1,00 | - | - | - |
| | | 23% Ø 2,5 mm & MESH* | Specific bagged insulation | 1,00 | 0.95 | 0,45 | 0,90 | 1,00 | 0,95 | 1,00 | 0,85 | - | - | - |
| | | | Specific surfaced insulation | 1,00 | 1.00 | 0,45 | 0,90 | 1,00 | 0,95 | 1,00 | 1,00 | - | - | - |
| | | 11% Ø 1,5 mm | Specific bagged insulation | 1,00 | 0.95 | 0,55 | 0,85 | 1,00 | 1,00 | 1,00 | 0,90 | - | - | - |
| | | | Specific surfaced insulation | 1,00 | 1.00 | 0,45 | 0,90 | 1,00 | 0,95 | 1,00 | 1,00 | - | - | - |
| | | 22% Ø 1,5 mm | Specific bagged insulation | 1,00 | 0.95 | 0,55 | 0,85 | 0,95 | 0,95 | 1,00 | 0,95 | - | - | - |
| | | | Specific surfaced insulation | 1,00 | 0.95 | 0,45 | 0,85 | 1,00 | 0,95 | 1,00 | 1,00 | - | - | - |
| | | 18% IRR | Specific bagged insulation | 0,90 | 0.95 | 0,50 | 0,90 | 1,00 | 0,90 | 0,95 | 0,70 | - | - | - |
| | | | Specific surfaced insulation | 1,00 | 1.00 | 0,45 | 0,90 | 1,00 | 0,95 | 1,00 | 1,00 | - | - | - |
| | Décibel<br>Dn,f,w up to 52dB | 16% Ø 2,5 mm | Specific bagged insulation + BA13 | 0.70(M) | 0.75 | 0,25 | 0,40 | 0,75 | 0,95 | 0,90 | 0,75 | 52 (-3;-11) dB | 49 dB | 42 dB |
| | | | Specific surfaced insulation + BA13 | 0.70(MH) | 0.80 | 0,25 | 0,40 | 0,70 | 1,00 | 1,00 | 1,00 | 47 (-4;-12) dB | 43 dB | 35 dB |
| | | 11% Ø 1,5 mm | Specific bagged insulation + BA13 | 0.70(MH) | 0.75 | 0,20 | 0,40 | 0,75 | 1,00 | 0,95 | 0,70 | 52 (-3;-11) dB | 49 dB | 41 dB |
| | | | Specific surfaced insulation + BA13 | 0.75(MH) | 0.85 | 0,35 | 0,45 | 0,80 | 1,00 | 1,00 | 1,00 | 46 (-3;-11) dB | 43 dB | 35 dB |
| | | | Specific faced insulation + sheet metal | 0.70(MH) | 0.80 | 0,35 | 0,40 | 0,85 | 1,00 | 1,00 | 1,00 | 42 (-3;-9) dB | 39 dB | 33 dB |
| | | 22% Ø 1,5 mm | Specific bagged insulation + BA13 | 0.70(MH) | 0.75 | 0,25 | 0,40 | 0,70 | 0,95 | 1,00 | 0,85 | 52 (-3;-11) dB | 49 dB | 41 dB |
| | | | Specific surfaced insulation + BA13 | 0.70(MH) | 0.75 | 0,25 | 0,40 | 0,70 | 0,95 | 1,00 | 1,00 | 46 (-3;-11) dB | 43 dB | 35 dB |
| | | | Specific faced insulation + sheet metal | 0.70(MH) | 0.80 | 0,35 | 0,40 | 0,80 | 1,00 | 1,00 | 1,00 | 42 (-3;-9) dB | 39 dB | 33 dB |
| ZENITH®<br>THE RADIANT CEILING BY PLAFOMETAL | ALPHA PLUS<br>αw up to 1 | 16% Ø 2,5 mm | Reversible radiant + Specific bagged insulation | 0,85 | 0.90 | 0,45 | 0,85 | 0,95 | 0,95 | 0,90 | 0,65 | - | - | - |
| | | | Reversible radiant + Specific surfaced insulation | 0,95 | 0.95 | 0,40 | 0,90 | 1,00 | 1,00 | 0,95 | 0,80 | - | - | - |
| | | 22% Ø 1,5 mm | Reversible radiant + Specific bagged insulation | 0,90 | 0.90 | 0,45 | 0,85 | 0,95 | 0,95 | 0,90 | 0,70 | - | - | - |
| | | | Reversible radiant + Specific surfaced insulation | 1,00 | 0.95 | 0,45 | 0,90 | 1,00 | 1,00 | 0,95 | 0,85 | - | - | - |
| | Décibel<br>Dn,f,w up to 50dB | 16% Ø 2,5 mm | Reversible radiant + Specific bagged insulation + BA13 | 0.70(M) | 0.80 | 0,25 | 0,45 | 0,90 | 1,00 | 0,80 | 0,60 | 50 (-2;-9) dB | 48 dB | 41 dB |
| | | | Reversible radiant + Specific surfaced insulation + BA13 | 0.75(M) | 0.80 | 0,25 | 0,45 | 0,85 | 1,00 | 0,95 | 0,75 | 45 (-3;-10) dB | 42 dB | 35 dB |
| | | 11% Ø 1,5 mm | Reversible radiant + specific bagged insulation + BA13 | 0.70(M) | 0.75 | 0,20 | 0,45 | 0,90 | 0,95 | 0,85 | 0,60 | 50 (-2;-9) dB | 48 dB | 41 dB |
| | | 22% Ø 1,5 mm | Reversible radiant + Specific bagged insulation + BA13 | 0,75 | 0.80 | 0,20 | 0,45 | 0,90 | 0,95 | 0,90 | 0,70 | 50 (-2;-9) dB | 48 dB | 41 dB |
| | | | Reversible radiant + Specific surfaced insulation + BA13 | 0.75(MH) | 0.80 | 0,25 | 0,45 | 0,85 | 1,00 | 1,00 | 0,85 | 45 (-3;-10) dB | 42 dB | 35 dB |

*Above is the essential acoustic performance of metal ceilings. The results are valid only for products defined, controlled, and fully delivered by PLAFOMETAL.*

**The expanded metal MESH has a sound absorption coefficient $\alpha_w$ of 1, because its open area ratio systematically exceeds 33%, which is higher than that of a perforated sheet at 23%.*

*The communicated values are subject to change depending on additional tests that may be carried out. It is the responsibility of the user to check the values in effect at the date of purchase and before using the product.*
*The sound absorption values for the ALPHA and ALPHA PLUS ranges were all obtained with a mounting height of E200.*

# Acoustic comfort
# **Suspended ceiling islands**

| Systems | Acoustic offering | Perforation | Configuration | Suspension height*mm | Shape | Dimension mm | m² product | Equivalent absorption area (Aeq) per island (m² sabine) - Frequency Hz by octave bands | | | | | | Aeq average** (m² sabine) | | Ratio m² sabine / m² of the product** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 125 | 250 | 500 | 1000 | 2000 | 4000 | Between 125 and 4000 Hz | Between 500 and 2000 Hz | Between 125 and 4000 Hz | Between 500 and 2000 Hz |
| PLAFOMETAL<br>THE ACOUSTIC METAL CEILING | ALPHA PLUS<br>Ratio m² sabine / m² of the product up to 1.8 in speech frequencies | 11% Ø1.5 mm | Specific bagged insulation | 400 | Rectangle | 600 x 1200 | 0,72 | 0,20 | 0,70 | 1,00 | 1,40 | 1,30 | 1,20 | 0,97 | 1,2 | 1,3 | 1,7 |
| | | | | 200 | | | | 0,20 | 0,80 | 1,10 | 1,30 | 1,20 | 1,10 | 0,95 | 1,2 | 1,3 | 1,7 |
| | | | Specific surfaced insulation | 400 | | | | 0,20 | 0,70 | 0,90 | 1,40 | 1,60 | 1,60 | 1,07 | 1,3 | 1,5 | 1,8 |
| | | | | 200 | | | | 0,00 | 0,70 | 1,10 | 1,30 | 1,40 | 1,40 | 0,98 | 1,3 | 1,4 | 1,8 |
| | | | Specific bagged insulation | 500 | | 600 x 2400 | 1,44 | 0,80 | 1,20 | 1,60 | 2,40 | 2,50 | 2,10 | 1,77 | 2,2 | 1,2 | 1,5 |
| | | | | 400 | | | | 0,70 | 1,40 | 1,50 | 2,30 | 2,40 | 2,10 | 1,73 | 2,1 | 1,2 | 1,4 |
| | | | | 200 | | | | 0,50 | 1,40 | 1,80 | 2,10 | 2,20 | 1,90 | 1,65 | 2,0 | 1,1 | 1,4 |
| | | | Specific surfaced insulation | 500 | | | | 0,60 | 1,30 | 1,80 | 2,70 | 3,00 | 2,90 | 2,05 | 2,5 | 1,4 | 1,7 |
| | | | | 400 | | | | 0,50 | 1,50 | 1,80 | 2,60 | 2,90 | 2,80 | 2,02 | 2,4 | 1,4 | 1,7 |
| | | | | 200 | | | | 0,40 | 1,50 | 2,10 | 2,40 | 2,70 | 2,60 | 1,95 | 2,4 | 1,4 | 1,7 |
| | | | | 50 | | | | 0,20 | 0,90 | 2,00 | 2,40 | 2,30 | 2,10 | 1,65 | 2,2 | 1,1 | 1,6 |
| | | | Specific bagged insulation | 400 | | 800 x 1800 | 1,44 | 0,70 | 1,50 | 1,90 | 2,50 | 2,50 | 2,10 | 1,87 | 2,3 | 1,3 | 1,6 |
| | | | | 200 | | | | 0,40 | 1,50 | 2,00 | 2,30 | 2,20 | 1,70 | 1,68 | 2,2 | 1,2 | 1,5 |
| | | | Specific surfaced insulation | 400 | | | | 0,60 | 1,40 | 1,80 | 2,50 | 2,80 | 2,80 | 1,98 | 2,4 | 1,4 | 1,6 |
| | | | | 200 | | | | 0,40 | 1,40 | 2,00 | 2,30 | 2,50 | 2,40 | 1,83 | 2,3 | 1,3 | 1,6 |
| | | | Specific bagged insulation | 400 | | 1200 x 2400 | 2,88 | 1,20 | 2,80 | 3,50 | 4,60 | 4,50 | 3,60 | 3,37 | 4,2 | 1,2 | 1,5 |
| | | | | 200 | | | | 0,90 | 2,90 | 3,70 | 4,10 | 4,00 | 3,30 | 3,15 | 3,9 | 1,1 | 1,4 |
| | | | Specific surfaced insulation | 400 | | | | 0,90 | 2,80 | 3,40 | 4,70 | 5,10 | 4,90 | 3,63 | 4,4 | 1,3 | 1,5 |
| | | | | 200 | | | | 0,80 | 2,70 | 3,70 | 4,20 | 4,50 | 4,40 | 3,38 | 4,1 | 1,2 | 1,4 |
| | | | Specific bagged insulation | 500 | Square | 1200 x 1200 | 1,44 | 0,80 | 1,30 | 1,60 | 2,20 | 2,20 | 1,70 | 1,63 | 2,0 | 1,1 | 1,4 |
| | | | | 400 | | | | 0,80 | 1,30 | 1,60 | 2,20 | 2,20 | 1,60 | 1,62 | 2,0 | 1,1 | 1,4 |
| | | | | 200 | | | | 0,70 | 1,30 | 1,80 | 1,90 | 1,90 | 1,50 | 1,52 | 1,9 | 1,1 | 1,3 |
| | | | Specific surfaced insulation | 500 | | | | 0,90 | 1,20 | 1,60 | 2,30 | 2,60 | 2,50 | 1,85 | 2,2 | 1,3 | 1,5 |
| | | | | 400 | | | | 0,50 | 1,30 | 1,80 | 2,50 | 2,70 | 2,60 | 1,90 | 2,3 | 1,3 | 1,6 |
| | | | | 200 | | | | 0,50 | 1,20 | 1,80 | 2,00 | 2,30 | 2,30 | 1,68 | 2,0 | 1,2 | 1,4 |
| | | 22% Ø1.5 mm | Specific bagged insulation | 400 | Rectangle | 600 x 2400 | 1,44 | 0,60 | 1,40 | 1,80 | 2,60 | 2,60 | 2,00 | 1,83 | 2,3 | 1,3 | 1,6 |
| | | | Specific surfaced insulation | 400 | | | | 0,50 | 1,40 | 1,80 | 2,60 | 2,90 | 2,90 | 2,02 | 2,4 | 1,4 | 1,7 |
| | | | | 200 | | | | 0,30 | 1,50 | 2,10 | 2,50 | 2,70 | 2,60 | 1,95 | 2,4 | 1,4 | 1,7 |
| | | | Specific bagged insulation | 400 | | 1200 x 2400 | 2,88 | 1,10 | 3,00 | 3,50 | 4,40 | 4,70 | 4,00 | 3,45 | 4,2 | 1,2 | 1,5 |
| | | | Specific surfaced insulation | 400 | | | | 0,80 | 2,80 | 3,40 | 4,50 | 5,00 | 5,10 | 3,60 | 4,3 | 1,3 | 1,5 |
| ZENITH®<br>THE RADIANT CEILING BY PLAFOMETAL | ALPHA PLUS<br>Ratio m² sabine / m² of the product up to 1.7 in speech frequencies | 11% Ø1.5 mm | Reversible radiant + Specific bagged insulation | 400 | Rectangle | 600 x 2400 | 1,44 | 0,60 | 1,40 | 1,90 | 2,60 | 2,40 | 1,80 | 1,78 | 2,3 | 1,2 | 1,6 |
| | | | Reversible radiant + Specific surfaced insulation | 400 | | | | 0,50 | 1,40 | 1,90 | 2,70 | 2,70 | 2,30 | 1,92 | 2,4 | 1,3 | 1,7 |
| | | | | 200 | | | | 0,30 | 1,60 | 2,10 | 2,40 | 2,40 | 2,10 | 1,82 | 2,3 | 1,3 | 1,6 |
| | | | Reversible radiant + Specific bagged insulation | 400 | | 1200 x 2400 | 2,88 | 1,00 | 2,70 | 3,60 | 4,40 | 4,00 | 3,10 | 3,13 | 4,0 | 1,1 | 1,4 |
| | | | Reversible radiant + Specific surfaced insulation | 400 | | | | 1,00 | 2,70 | 3,50 | 4,50 | 4,60 | 4,00 | 3,38 | 4,2 | 1,2 | 1,5 |
| | | 22% Ø1.5 mm | Reversible radiant + Specific bagged insulation | 400 | Rectangle | 600 x 2400 | 1,44 | 0,50 | 1,50 | 1,90 | 2,60 | 2,40 | 1,90 | 1,80 | 2,3 | 1,3 | 1,6 |
| | | | Reversible radiant + Specific surfaced insulation | 400 | | | | 0,60 | 1,40 | 1,90 | 2,70 | 2,80 | 2,50 | 1,98 | 2,5 | 1,4 | 1,7 |
| | | | | 200 | | | | 0,30 | 1,50 | 2,10 | 2,40 | 2,50 | 2,10 | 1,82 | 2,3 | 1,3 | 1,6 |
| | | | Reversible radiant + Specific bagged insulation | 400 | | 1200 x 2400 | 2,88 | 1,10 | 2,80 | 3,70 | 4,50 | 4,20 | 3,30 | 3,27 | 4,1 | 1,1 | 1,4 |
| | | | Reversible radiant + Specific surfaced insulation | 400 | | | | 0,90 | 2,80 | 3,50 | 4,60 | 4,80 | 4,30 | 3,48 | 4,3 | 1,2 | 1,5 |
| | | | | | | | | | | Frequencies of speech | | | | | Speech frequencies | | Speech frequencies |

*Above is the essential acoustic performance of metal ceilings. The results are valid only for products defined, controlled, and fully delivered by PLAFOMETAL.*

*distance from the rear face of the island to the supporting ceiling
**non-standardized data: not present in the test reports

The Aeq - which is defined as the product of the sound absorption coefficient and the surface area of the measured panel - is an imaginary area given in m² with a sound absorption coefficient α sabine of 1 per frequency band.

## NOTES

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