KNAUFCEILINGSOLUTIONS.COM

YOUR **CEILING**
OUR **SOLUTIONS**

MINERAL SOLUTIONS

KNAUF CEILING Solutions

Experience More Innovation

WITH FUNCTIONAL, NATURAL AND SUSTAINABLE MINERAL SOLUTIONS

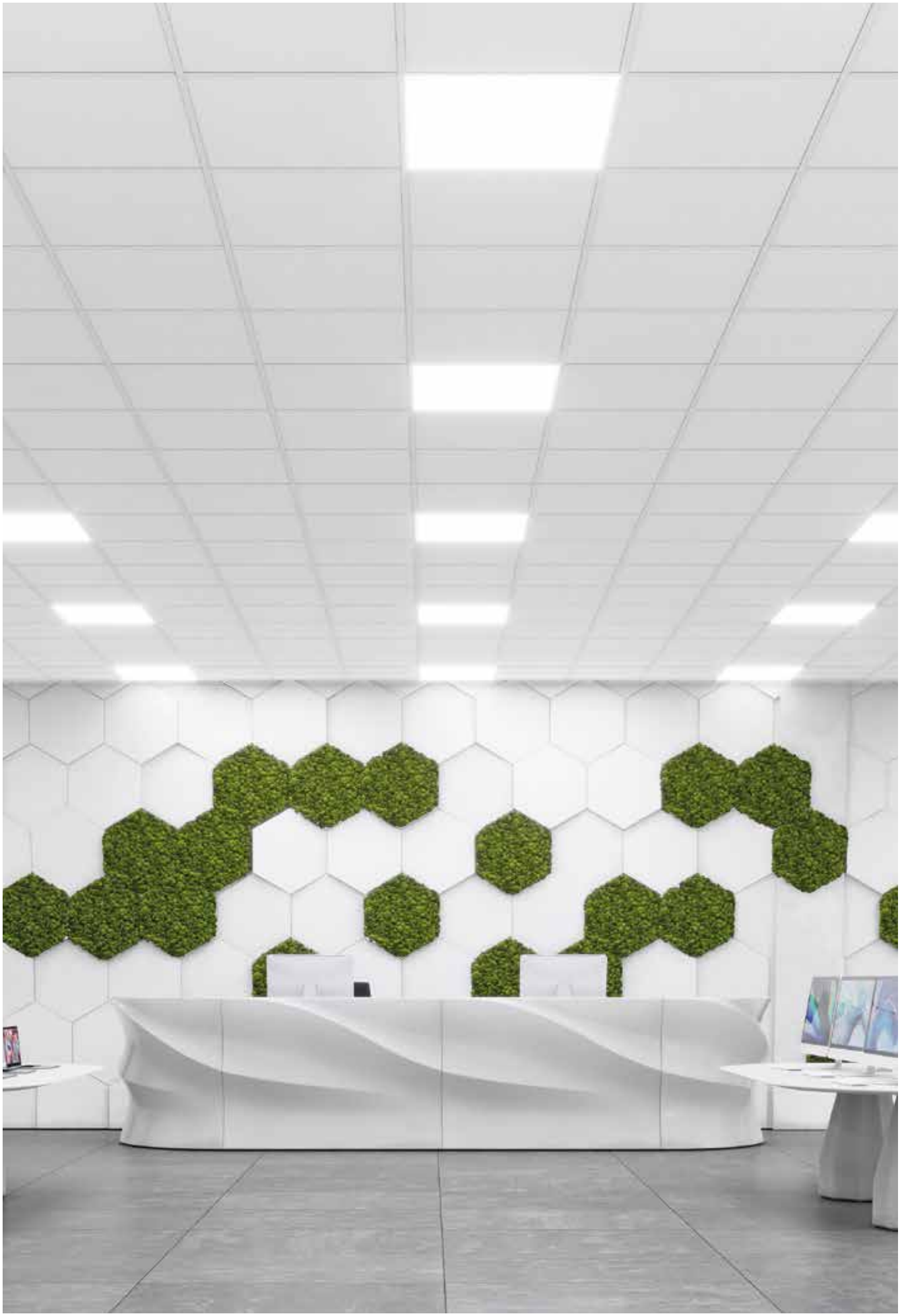
We believe that the ceiling is an integral part of every interior space. It helps give us a wonderful sense of well-being and safety. A seamless connection between form and function, it enhances and protects the spaces in which we live, work, recover and grow. It balances acoustics, provides healthy air to breathe and influences how we think and feel.

Ultimately, it is our customers who create the perfect space using our solutions. To help them realise more exciting visions, two of the world's most recognised ceiling manufacturers, Armstrong Ceiling Solutions and Knauf AMF have combined strengths to offer the best of both in one market-leading brand – Knauf Ceiling Solutions.

Spectacular projects can only become reality if the possibilities between functionality and design live in harmony. Our new harmonised Mineral Solutions range enables customers endless varieties of sizes, shapes and edge designs in all system layouts.

The high-quality mineral tiles are produced in a wet-felt tile process that uses natural, sustainable raw materials, including biosoluble mineral wool, perlite, clay and starch.

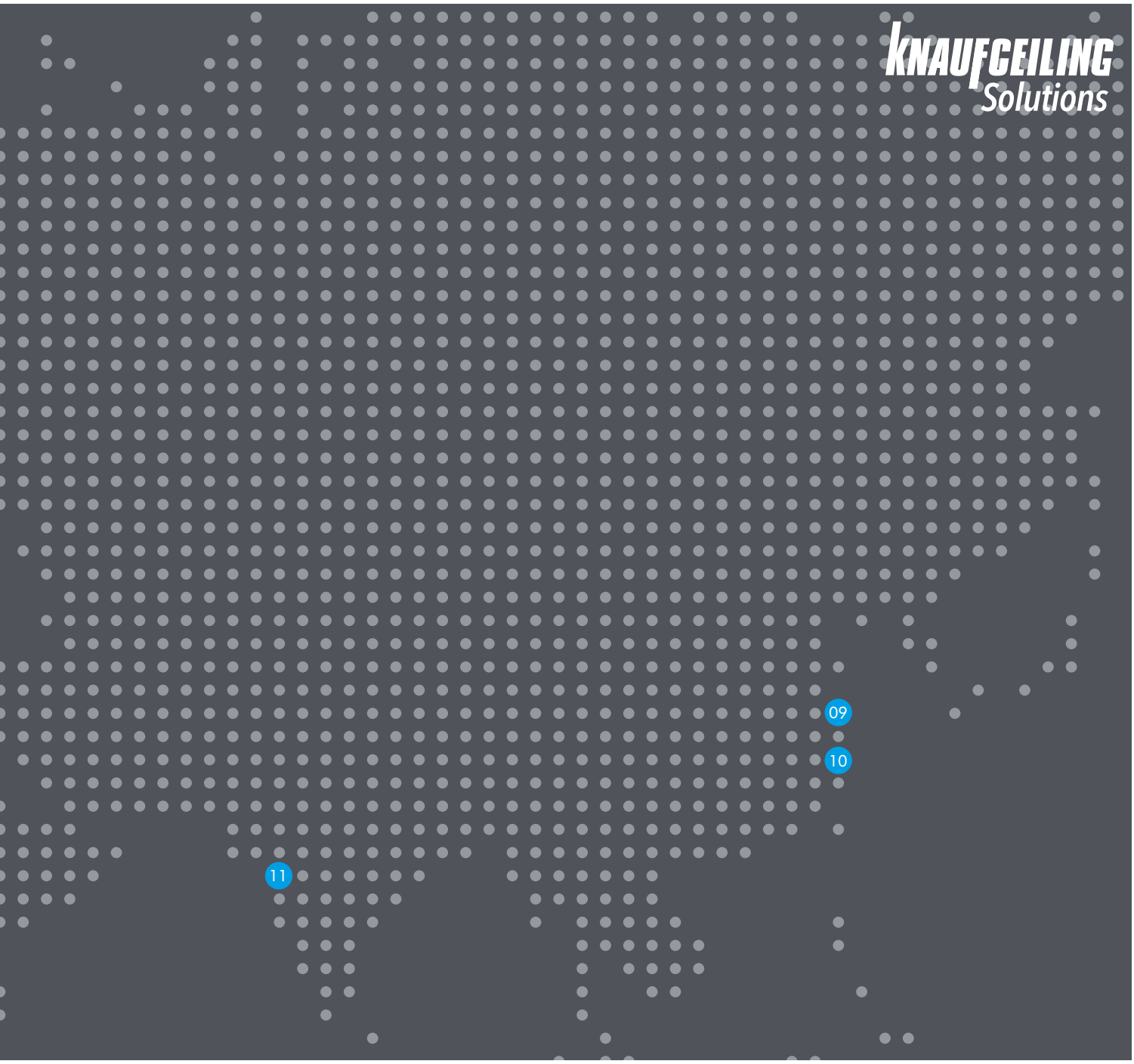
By embodying the best of both worlds and building on our long-standing experience, Knauf Ceiling Solutions is setting the standard for safety, comfort, efficiency and performance. With a boundless multi-material approach that enables you to experience more choice, more inspiration and more support, to help find the unique solution you're looking for.



Production Network

EXPERIENCE OUR LARGE AND COMPREHENSIVE NETWORK

Through the local presence of thirteen state-of-the-art production facilities in eight countries across Europe and Asia, we are able to deliver high-quality ceiling solutions on time. In order to provide our customers consistent and reliable supply processes, we rely on our proven production values that meet the highest standards worldwide in quality, environment and safety.



EMEA

01 Grafenau (DE)
Mineral & Grid

02 Stafford (UK)
Metal

03 Pontarlier (FR)
Mineral

04 Valenciennes (FR)
Grid

05 Dreux (FR)
Grid

06 Ferndorf (AT)
Wood Wool

07 Rankweil (AT)
Metal

08 Antwerp (BE)
Slitting

APAC

09 Wujiang (CN)
Mineral

10 Shanghai (CN)
Grid

11 Pune (IN)
Grid

DEFINITION OF TECHNICAL PERFORMANCE ICONS

SOUND ABSORPTION

A single-number rating for random incidence sound absorption coefficients as calculated by reference to EN ISO 11654 (a_w) or to ASTM C 423 (NRC).

SOUND ABSORPTION CLASS

A classification for sound absorption (A – E) based upon the sound absorption a_w value.

SOUND REDUCTION

A single-number rating for airborne sound transmission (single pass) as calculated by reference to EN ISO 717-1.

SOUND ATTENUATION

A single-number rating for flanking sound transmission between adjacent rooms, as calculated by reference to EN ISO 717-1 (D_{nfw}) and/or ASTM E413-10 (CAC).

FIRE REACTION

Reaction to fire classification in accordance with EN 13501-1 expressed as Euroclass (A1 – F). Additionally in accordance with ASTM E84, expressed as Class A and 123-FZ, expressed as KM0 – KM2.

HUMIDITY RESISTANCE

Maximum relative humidity conditions for installation and lifetime of ceiling.

LIGHT REFLECTANCE

Light reflection is the proportion of incident light that is reflected back off the product, when tested in accordance with EN ISO 7724-2 and 3.

LIGHT DIFFUSION

The percentage of reflected light which is diffused.

INDOOR AIR QUALITY

The Eurofins Indoor Air Comfort (Gold) certification ensures that all product-related health criteria on product emissions are sufficiently fulfilled. It is a sign confirming the quality claim of the manufacturer and its contribution to a healthy indoor climate. Mainly VOCs emissions can pose a serious risk, especially to children. Limiting VOC from indoor building products is the subject of many national regulations and voluntary quality labels. A lot of these regulations are covered by IAC(G).

AIR PERMEABILITY

Tested in accordance with DIN 18177, the air permeability rating indicates the cubic metres of air leakage per hour per square metre.

RECYCLED CONTENT

The recycled content of the product, as calculated in accordance with ISO 14021:2016.

CERTIFIED CRADLE TO CRADLE

Products with this icon are C2C certified, providing a transparent mechanism to compare the sustainability performance of products, showing that they are designed for recycling and can help protect and sustain our environment for future generations by keeping resources in the economy for longer.

ENVIRONMENTAL PRODUCT DECLARATION (EPD)

are independently verified and registered documents that communicate transparent and comparable information about the life-cycle environmental impact of products. Knauf Ceiling Solutions EPDs have been third party certified by IBU (Institut Bauen und Umwelt e.V. (IBU) as conforming to the requirements of ISO 14025.

M1 CLASSIFICATION

The Finnish emission label for building products is one of the leading test labels in the Scandinavian region. M1 is the best category and stands for "low emission". The M1 classification sets requirements for the emission of VOC, formaldehyde, ammonia and other substances.

VOC

The VOC emission performance in accordance with the French labelling requirements.

FORMALDEHYDE (E1)

Formaldehyde emission level (E1 = lowest test result possible).

BLUE ANGEL

The Blue Angel ecolabel is awarded by an independent Jury to environmentally friendly products. Each label specifies that the product meets a list of criteria considering environmental and health-related aspects.

www.blauer-engel.de/uz132

ISO 9001

This icon demonstrates Knauf Ceiling Solutions ability to consistently provide products and services that meet customer and regulatory quality management system requirements.

THERMAL CONDUCTIVITY
Tested in accordance with EN 12667, the thermal conductivity rating measures the rate of heat flow through a material.

EDGE DETAILS
Indicates the different edge details available for the ceiling tile of reference.

THICKNESS
Indicates the thickness for the ceiling tile of reference.

DIMENSIONS
Indicates the sizes available for the ceiling tile of reference.

SYSTEMS
Indicates the suspension systems compatible with the ceiling tile of reference.

WEIGHT
Weight per unit area of the product (kg/m^2).

COLOURS
Custom colours available for products with this icon.

ANTIMICROBIAL
Antimicrobial finish on standard mineral tiles and available as a custom option on metal products with this icon.

SCRATCH RESISTANCE
Products with this icon offer a superior level of surface scratch resistance, evaluated with the Hess Rake test.

PRODUCT HANDLING & DURABILITY
Solutions with enhanced durability for improved handling and resistance to damage.

CLEANING AND DISINFECTION

The frequency and cleaning method of a ceiling varies from one application to another. All products can at least be cleaned with a dry cloth or vacuum cleaner.

For standard cleaning of dust, loose dirt or deposits, a soft brush, a clean, dry, soft white cloth, a normal vacuum cleaner with a soft brush or focus compressed air can be used.

For more intensive cleaning, the surfaces can be damp cleaned. This should be carried out with a wrung-out soft cloth or sponge. After cleaning, the surfaces of the tile should be dried with a soft cloth.

Wet cleaning should be carried out with lukewarm water (up to 40°C), using a sponge and mild cleaning agent (with a pH value between 7 and 9), and using medium pressure. After cleaning, the surface should be dried with a soft cloth.

Can be cleaned using a high pressure water spray. After cleaning, the surface should be dried.

Can be cleaned using focus compressed air. The apparatus used should be a cleaner that generates steam under pressure (8 bar and 175°C).

Can be cleaned with specific disinfectants commonly used in healtchare premises. Disinfectants should be used as a spray on wipes.

For detailed information please ask us for the cleaning instructions.

CE MARKING

In Europe, the Construction Products Regulations (305/2011/EU) defines essential requirements for products (and projects) such that they are safe and fit for their intended use. Harmonized Product Standards respond to these essential requirements and set out what tests must be conducted and how the performance must be communicated. For suspended ceilings the applicable product standard is EN 13964 Suspended Ceilings – Requirements & Test Methods.

The essential requirements identified for suspended ceiling membranes (tiles & baffles) include:

- Reaction to Fire (mandatory)
- Formaldehyde Emissions (mandatory)
- Sound Absorption
- Flexural Tensile Strength / Durability
- Thermal conductivity

It is mandatory to CE Mark products within the scope of EN 13964 and provide a Declaration of Performance in order to place the product on the market.

All Knauf Ceiling Solutions Declarations of Performance can be found on Knauf Ceiling Solutions website.

ACOUSTIC TECHNICAL GLOSSARY

WEIGHTED SOUND ABSORPTION COEFFICIENT, a_w

A single-number rating for random incidence sound absorption coefficients calculated by reference to EN ISO 11654. With this method measured values obtained in accordance with EN ISO 354, are converted into octave bands at 250, 500, 1000, 2000 and 4000 Hz and are plotted onto a graph. A standard reference curve is then shifted towards the measured values in steps of 0.05 until a "best fit" is obtained. The derived value of a_w will vary between 0.00 and 1.00 but is only expressed in multiples of 0.05, *e.g.* $a_w = 0.65$.

SHAPE INDICATOR

With reference to EN ISO 11654, the calculated value of w may be qualified by one or max. two (in brackets) to indicate if the product has excess sound absorption at low (L), medium (M) or high (H) frequencies.

SOUND ABSORPTION CLASS

With reference to EN ISO 11654, the calculated value of w may additionally be allocated into one of six descriptive classes in accordance with the following table:

Sound Absorption Class	a_w
A	0.90; 0.95; 1.00
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	0.00; 0.05; 0.10

WEIGHTED SUSPENDED CEILING NORMALISED LEVEL DIFFERENCE, D_{ncw}

A single-number rating of the laboratory measurement of room-to-room (horizontal) airborne sound insulation of a suspended ceiling above adjacent rooms sharing a common ceiling plenum. It is determined in accordance with EN ISO 717-1 from measurements made in accordance with EN 20140-9. Note: EN 20149-9 has now been withdrawn and superseded by EN ISO 10848-2 (see D_{nfw}), although D_{ncw} test results still continue to be valid.

WEIGHTED SUSPENDED CEILING NORMALISED FLANKING LEVEL DIFFERENCE, D_{nfw}

A single-number rating of the laboratory measurement of room-to-room (horizontal) airborne flanking sound transmission of a suspended ceiling above adjacent rooms sharing a common ceiling plenum. It is determined in accordance with EN ISO 717-1 from measurements made in accordance with EN ISO 10848-2. This has now superseded EN 20149- 9. (see D_{ncw}).

WEIGHTED SOUND REDUCTION INDEX, R_w

A single-number rating of the laboratory measurement of (vertical) airborne sound reduction of a suspended ceiling. It is determined by reference to EN ISO 717-1 from measurements of sound reduction index made in accordance with EN ISO 140-3.

RAIN NOISE SOUND INTENSITY LEVEL, L_I

The laboratory measurement of the sound intensity in a room below a roof construction when subjected to rainfall. It is determined by reference to EN ISO 140-18:2006 – Laboratory measurement of sound generated by rainfall on building elements. The roof's performance can be tested with or without a suspended ceiling beneath. The intensity of the rainfall tested can be selected from the options given in the standard. A combined A-weighted single-number (LIA) can also be determined. Unlike D_{nfw} and R_w data, where the higher the value the better the insulation provided, the lower the intensity value (weighted LIA) the better the insulation performance of the ceiling and roof combination.

SOUND REDUCTION

A term used in relation to the vertical transmission of sound through a suspended ceiling.

SOUND ATTENUATION

A term used in relation to the horizontal transmission of sound through a suspended ceiling above adjacent rooms sharing a common ceiling plenum.

NOISE REDUCTION COEFFICIENT, NRC

A single-number descriptor of random incidence sound absorption coefficients. Defined in ASTM C423 as the arithmetical average, to the nearest multiple of 0.05, of the measured sound absorption coefficients for the four one-third octave band centre frequencies of 250, 500, 1,000 and 2,000 Hz.

EQUIVALENT ABSORPTION AREA (EAA)

The equivalent absorption is a measure of the total sound absorption by discrete objects (canopies, screens, furniture etc) when installed in an architectural space. Because these types of absorbers have more than one surface and may be irregular in form, it is not meaningful to assign sound absorption coefficients to them. Hence the Equivalent Absorption Area per unit (measured in Sabines) is preferred to characterise the absorption provided by an individual 'space absorber'.

ACOUSTICAL SOLUTIONS FOR EVERY SPACE

Meet all expections of acoustical comfort with Knauf Ceiling Solutions

Knauf Ceiling Solutions provide three densities of ceiling tiles to achieve high absorption, high attenuation or a good balance between the two of to meet all requirements in every space.

BALANCED ACOUSTICS

Standard range provides a unique combination of good sound absorption and sound attenuation that enhance intelligibility for workplace effectiveness.

Speech intelligibility addresses the need for comprehension of verbal communication whether naturally spoken or broadcast by an amplified system, within a given space.

Intelligibility can be expressed as the difference in decibels between the level of speech and the background noise (signal to noise ratio) as heard at the listener's position.

To ensure excellent intelligibility, this difference at the listeners position is recommended to be 10-15 dB minimum for people with good hearing and 20-30 dB for hearing impairing of users of headsets.

HIGH ATTENUATION

Our dB range offers excellent sound attenuation and good sound absorption that enhances privacy and confidentiality.

Speech privacy is a measure for defining the degree to which conversation cannot be overheard.

For good privacy between adjacent spaces, it's necessary to focus on room-to-room sound attenuation and the background noise level.

HIGH ABSORPTION

Products with high absorption levels are recommended when concentration is needed. They dramatically improve the acoustic comfort in open spaces, call centres, etc.

Concentration can be disturbed by different types of noise, such as other peoples' voices, phones ringing, ventilation, keyboard, equipment, impacts, road and air traffic...

Intrusive noise will disturb concentration and therefore needs to be considered as another key factor in the design of the acoustical environment.

STRUCTURAL FIRE PROTECTION

Throughout Europe, there is a requirement for a building's structure to be protected from fire. This is primarily for the structure to remain stable during a fire to allow the occupants to escape and also to enable fire fighters to work without threat of the building's collapse. The duration of the required protection will usually depend upon the height of, and location within, the building (*i.e.* typical floor, basement, roof construction etc), whether there is any active methods of fire protection (sprinklers etc.) and the type of construction to be protected (steel beams, timber or mezzanine floors etc). In the case of structural fire protection, the suspended ceiling is classified together with the soffit and the complete construction.

Knauf Ceiling Solutions ceilings achieve building component classifications of REI30 to REI120, depending on the type of soffit. Regular fire testing is carried out to ensure the highest up to date system quality and built in safety for our customers.

INDEPENDENT FIRE RESISTANCE

Independent fire rated ceilings provide fire protection both from above (ceiling void) as well as from the underside of the ceiling. Fittings, such as lighting, loudspeakers and signage etc. as well as the connection to light-weight partition systems, bulkheads etc. are tested and classified as well.

In case of a fire in the ceiling void (incidentally, the most common fire source) the underlying escape routes are protected by AMF THERMATEX® Uno fire rated ceiling for 30 minutes.

Fire resistant certificates such as the German abP- certificates are available on request.

BUILDING REGULATIONS

Fire reaction performance for suspended ceilings is shown using the Euroclass fire reaction classification. Most Knauf Ceiling Solutions products are reaching A2-s1,d0 acc. to EN 13501-1.

For more information, please contact us or visit www.knaufceilingsolutions.com

HEALTHY INTERIORS

CHALLENGE

The World Health Organization reports that 30% of new and renovated buildings receive excessive complaints related to indoor air quality.

In addition, poor air quality, and elevated temperatures consistently lowered employee performance by up to 10%.

SOLUTION

Knauf Ceiling Solutions:

- achieve low or very low VOC and formaldehyde emission levels.
- have all been classified E1 for formaldehyde (best test result possible).
- for a large majority, achieve A+ (the best performance level under the stringent French VOC labelling system).

In certain indoor spaces such as laboratories

It is essential to limit the number of airborne particles by creating a Clean Room-type environment using products certified in accordance with ISO 14644-1.

Knauf Ceiling Solutions offers solutions for areas requiring minimal to the most stringent requirements.

Achieving the right acoustics for specific rooms is recognised in LEED®, BREEAM, HQE, DGNB, WELL Building Standard.

VISUAL COMFORT

CHALLENGE

The light reflectance of the ceiling, floor and wall surfaces play the second most important role for overall illumination of the room, directly affecting working comfort, wellbeing and productivity.

SOLUTION

Specifying high light reflectance ceilings contribute to LEED®, BREEAM, HQE, DGNB and Well Building Standard credits.

A well-design ceiling with high light reflectance:

- Improves space illumination, allowing for fewer light fixtures
- Reduces electrical light output and lowers maintenance costs
- Reduces cooling load

High light reflectance ceilings up to 87% of the light back into the space.

Rafts and canopy ceilings installed over a working place improve the light reflection for better comfort for the end-user.

Cradle to Cradle Certified®

The Cradle to Cradle Certified® product programme has been developed to meet growing customer demand for sustainable products, with C2C certification already becoming a requirement for building projects in the United States and Europe. It adds value to a project and helps protect and sustain our environment for future generations by keeping resources in the economy for longer. Cradle to Cradle Certified® products are recognised in LEED® and WELL Building Standard credits.


IMI
Integrated Micro-Electronics
Niš

WORKPLACES THAT WORK BETTER

Over our lifetimes, the average person spends around 90,000 hours in the workplace. It's our responsibility to make these spaces better for everyone.

This isn't just about happiness — even if happier workers are better workers. It's about wellbeing in the workplace. Wellbeing boosts productivity. It improves performance, reduces stress and contributes to a work-life balance that brings out the best in people. And one of the ways we can promote wellbeing in the workplace is through design.

By considering aesthetics, light, shade and zoning, intelligent design can transform even the most uniform open-plan office into a vibrant, dynamic space that balances contemporary architecture and statement design with visual, and acoustic comfort that measurably enhances wellbeing and happiness, productivity and performance.

Even beyond these considerations, the principles we use in enabling great office design can create more functionally effective spaces for working. Spaces for close collaboration and quiet concentration; spaces that keep conversations private, or open the floor to discussion and debate — and spaces that aid focus while inspiring workers and visitors alike. This is our task, our responsibility and our opportunity, together, to create workspaces that work better.

CREATE SPACES TO INSPIRE

Having an education that will last a lifetime is down to outstanding, inspirational teachers that deliver learning with knowledge and passion — but these tutors need the right spaces in which to do this.

Schools, colleges and universities are complex ecosystems, and the buildings that house them need to take this into account. They encompass everything from focussed classrooms, quiet study areas to sweeping auditoria and lecture theatres, sound studios and common rooms. Each space has its own requirements and intricacies — but all need to optimise the learning experience.

So, what does this take? It takes careful consideration of architectural zoning, and how each space works individually and as part of the ecosystem. It takes a balance of acoustic performance and visual comfort — where tutors can be heard clearly at the back of the class, and where students can concentrate on their work.

Above all, however, it takes an awareness, sensitivity and commitment to creating a safe, healthy and peaceful environment for education to thrive, and a dedication to creating spaces as inspiring as the teaching within them.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SHAPING THE RETAIL EXPERIENCE

The path to purchase is never straightforward. There's a world of factors along the way that can sway a decision. And a major one of these is the retail environmen — and the experience it creates.

Whether it's a supermarket or convenience store, shopping mall or showroom, food court or fashion boutique, the design of a retail space is integral to the shopper experience — and we should treat this experience like any other we'd desire to have. It should be comfortable and easily navigable, but it should also surprise, excite, entertain and entice.

The materials, technologies and techniques we use to create our retail environments are vital for making this happen. Visually arresting design features; playful manipulation of light and shade, colour and shape; bright, open and airy room plans; intuitive pathways, and acoustically comfortable, unintimidating spaces to encourage customer interaction and streamline the sales process. All of these play their part in a positive shopper experience.

By blending functionality with flair, great design doesn't just breathe fresh life into brands in the real world — it shapes a retail experience that people will enjoy, share and remember.


NO SMOKING
FRAGILE
KASSE
3901
3801
3814

MAKE YOURSELF AT HOME

Rest and relaxation is crucial for everyone's way of life — especially as everyone's way of life is different. But whatever people get up to in their downtime, their leisure spaces should be as enriching as their pastimes.

Sometimes, it's all about high-tempo sports or hitting the gym. Other times, it's dining out, heading away for a hotel stay, or simply taking in a film at the cinema. There's a huge variety of spaces in which we spend our free time, but all of them share one requirement for design and architecture: creating the right atmosphere to enhance quality of life.

This might take the form of maintaining the right acoustical balance to focus viewers on the movie. It might be flooding fitness studios with light while keeping an effective thermal performance and maximising humidity resistance. Or, it might be designing a hotel as part of a multi-use building in which statement design atria and lobbies give way to cosy, comfortable guest rooms.

For every architectural challenge in leisure and hospitality spaces, there's an idea to help you achieve it — a solution to make your work easier and more effective. Because, let's face it, everyone deserves a little relaxation.

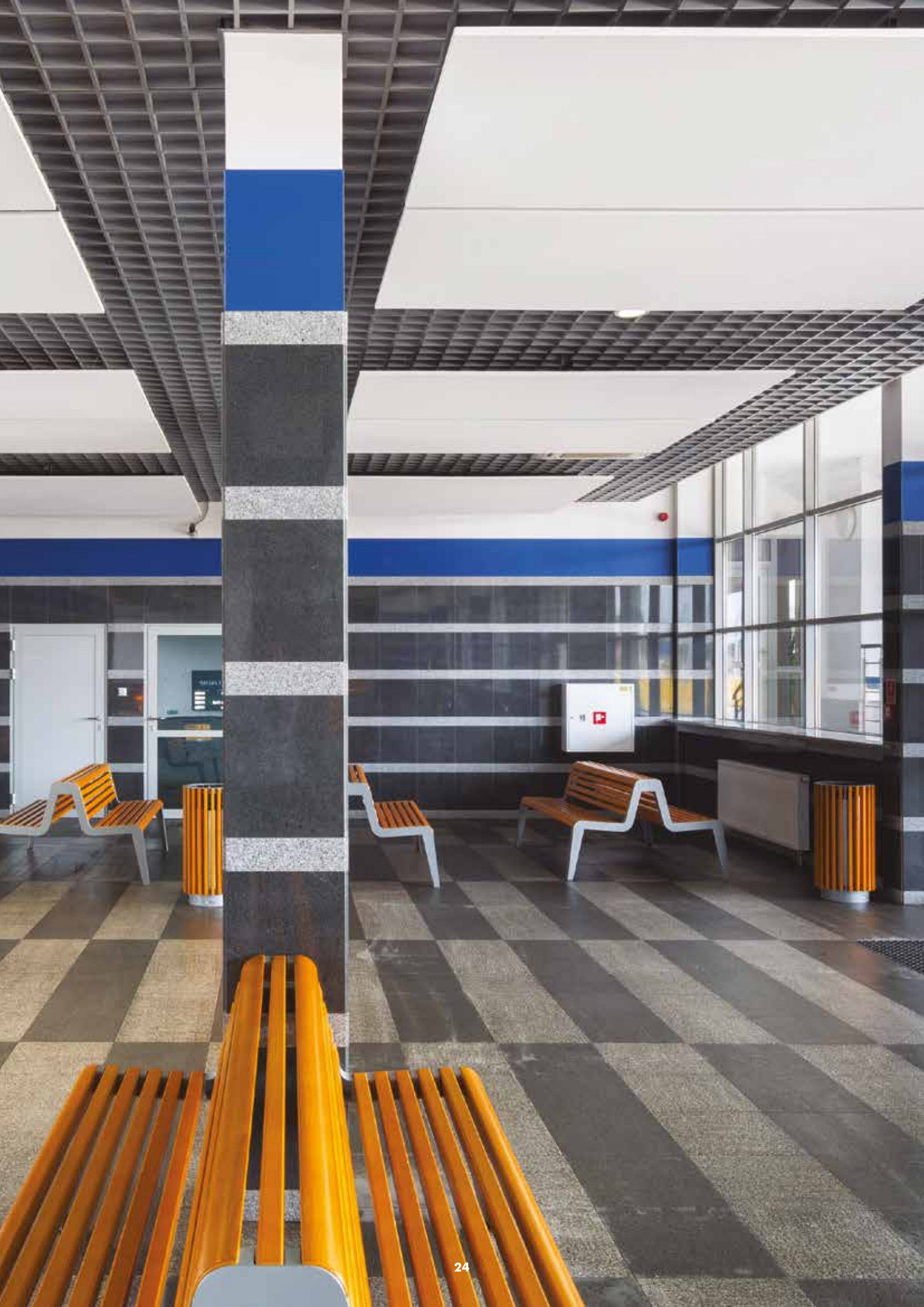
CREATING SPACES FOR HEALING

Healthcare places huge demands on architecture — no matter if it's a waiting room in a local surgery or the intense environment of the operating theatre. In every space, there's a host of considerations critical to lives.

The most vital element is, of course, creating a space that's conducive to healthcare — hygienically clean, performing at the anti-microbial level, using materials and technologies that enhance indoor air quality and minimise emissions, and safeguarding patients and caregivers alike through robust fire protection.

Going beyond this, it's our responsibility to design environments that actively aid the healing process. Given the proven importance of natural light to wellbeing, it's imperative that our healthcare spaces are bright and open, with high levels of light reflectance that makes the most of window space. Acoustically, too, these spaces need to absorb and attenuate noise, providing the peace, quiet and tranquillity for people to rest and recover

Ultimately, healthcare environments need to be perfectly attuned to their purpose, functionally and aesthetically. Clean and simple, bright and welcoming, calm and comfortable. Everything it takes for doctors to perform and patients to recover — and all the ingredients to create the perfect spaces for healing.



ARCHITECTURE THAT MOVES PEOPLE

Our world is always in motion — billions of people travelling from city to city, continent to continent. And the buildings in which they arrive and depart need to play their part in making every journey better.

From airport departure lounges to train station concourses, from the food court through to the platform, the architecture of transportation is a journey. Ceilings, walls and floors are travellers' companions; the first and last things they'll see in any location, the backdrops to meetings and partings — and a crucial part of people's journeys.

So, we should approach these buildings rationally and emotionally. They need to be functional, to guide travellers to gates, lounges and platforms. They need to be clean, maintainable and durable to cope with the footfall of millions every day. But they also need to be calming and welcoming; tranquil, peaceful places that encourage exploration.

To this end, we need to transform the dark tunnels and cavernous lobbies that once characterised transport hubs into bright, open and desirable spaces, concealing the noise and passage of crowds to make people feel comfortable. And all of this while using design to make an impression – to create spaces that move people, physically and emotionally.

OVERVIEW

DESIGN

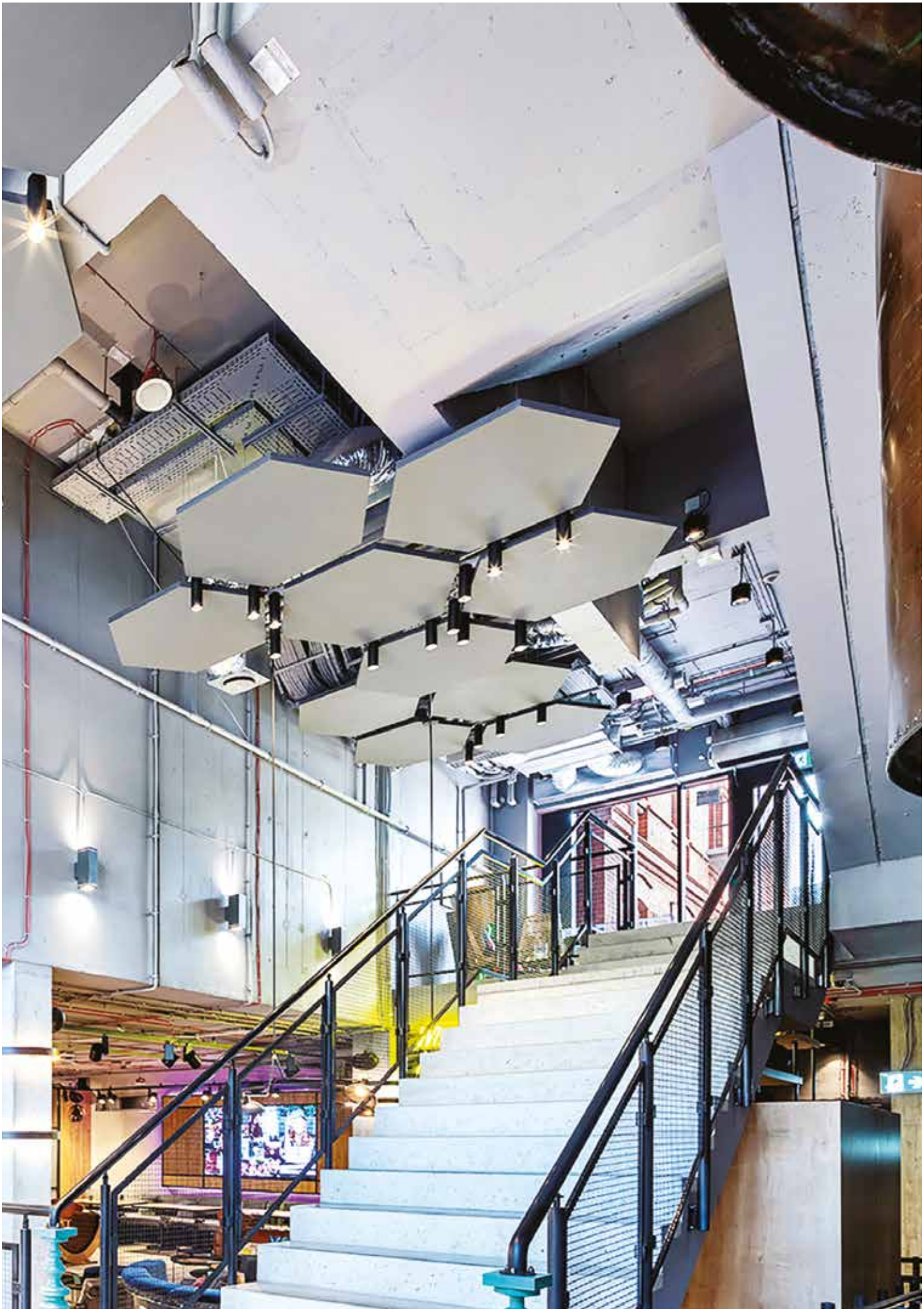
SMOOTH WHITE ACOUSTIC

HEALTHCARE & HYGIENE

CLASSIC SANDED

CLASSIC FISSURED/PERFORATED

FIRE PROTECTION



Design

IN A WORLD WHERE IMAGE IS EVERYTHING, OUR FLEXIBLE CEILING SOLUTIONS INSPIRE YOU TO CREATE STUNNING AESTHETICS AND INTIMATE SPACES.

An endless array of dramatic design possibilities with baffles, canopies, wall absorbers and accessories that can be easily installed and relocated without further modification. Exposed surfaces that absorb sound to enhance acoustics, while reflecting up to 87% of light to make brighter, energy efficient spaces. And seamless, monolithic floating ceilings that add colour, shape, depth, scale and rhythm to contemporary building design.

Vertical Baffle Systems

MINERAL Baffle Element

Individual / Grouped

- MINERAL Baffle Element is a range of high performance acoustical baffles with a white laminate surface for a modern linear appearance.
- Good sound absorption: reduce noise levels, increase intelligibility and reduce reverberation time in a space
- Typically used to provide high levels of acoustic absorption in offices, leisure centres, transport hubs, etc

MINERAL Baffle Element

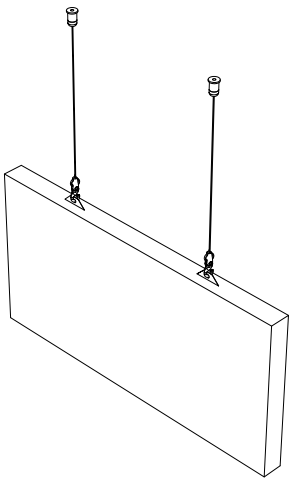
Individual / Grouped

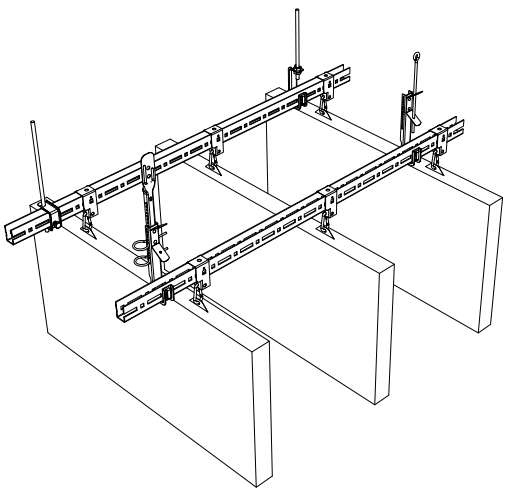
Thickness (mm)	39
Dimensions (mm) Additional dimensions available on request	1200 x 300 1200 x 400 1800 x 300 1800 x 400
System	Hanging Wire Kit U Profile grouping option T Grid grouping option
Weight	1200 x 300: 3.8 kg / pc 1200 x 400: 5.0 kg / pc 1800 x 300: 5.6 kg / pc 1800 x 400: 7.5 kg / pc
Colour & design	White **Vario Design Colours**: Granite, Steel, Green Marble, Copper, Oak, Brass, Sandstone, Concrete
Sound absorption	EN ISO 354 α_w = **0.50(MH)** (300mm) as per EN ISO 11654 - **Class D**

Frequency *f* (Hz)	125	250	500	1000	2000	4000
Baffles 1200 x 300mm α_p Row distances 300mm	0.15	0.25	0.45	0.90	0.90	0.95

NRC = **0.65** (300mm) as per ASTM C 423

Fire reaction	Euroclass **A2-s1,d0** as per EN 13501-1
Humidity resistance	**90%**
Indoor air quality	A+, E1, IACG
Cleanability	
Sustainability	



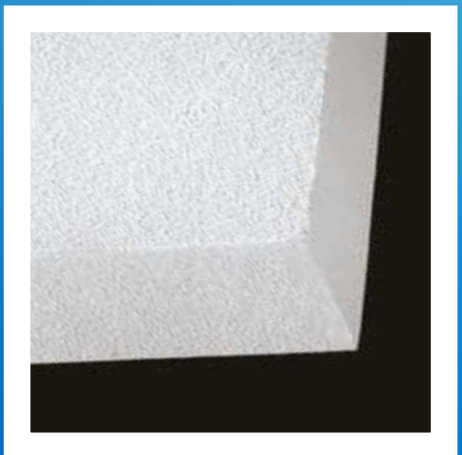


Options with this icon are available from our **Vario Design** range.
Products may vary from country to country. Please contact your local sales representative.
For further information and legal notice, please visit our website.

Vertical Baffle Systems

MINERAL Baffle Element Arc

(OPTIMA Baffle Curves)
Individual / Grouped



- With MINERAL Baffle Element Arc you can create exciting interiors without compromising acoustic performance, even with modern exposed soffit ceilings
- Modern curved appearance
- Reduce noise levels, increase speech intelligibility and reduce reverberation time in the space
- Install individually or in groups
- Typically used in schools, offices, leisure centres, transport hubs, etc.

MINERAL Baffle Element Arc

Individual / Grouped

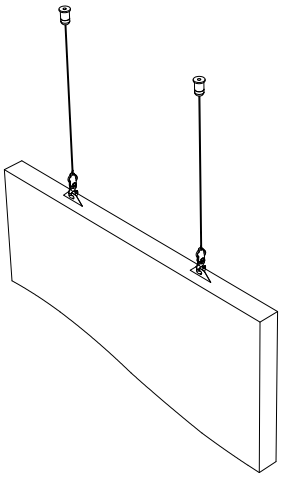
Thickness (mm)	39
Dimensions (mm) Additional sizes on request	1200 x 400 1800 x 400
System	Hanging Wire Kit U-Profile grouping option T-Grid Main Runner grouping option
Weight	1200 x 400: 5.0 kg/pc 1800 x 400: 7.5 kg/pc
Colour & design	**Vario Design Colours** White, Granite, Steel, Green Marble, Copper, Oak, Brass, Sandstone, Concrete
Sound absorption	EN ISO 354 α_w = **0.50(MH)** as per EN ISO 11654 - **Class D**

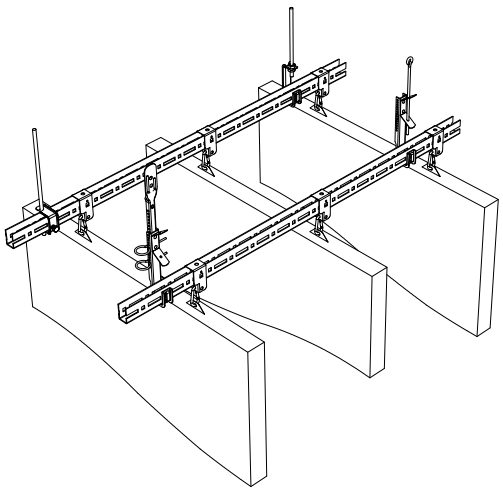
Frequency *f* (Hz)	125	250	500	1000	2000	4000
α_p Row distances 300mm	0.15	0.25	0.45	0.90	0.90	0.95

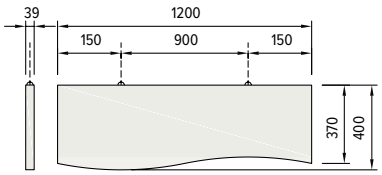
NRC = **0.65** as per ASTM C 423

Fire reaction	Euroclass **A2-s1,d0** as per EN 13501-1
Humidity resistance	**90%**
Indoor air quality	A+, E1, IACG
Cleanability	
Sustainability	

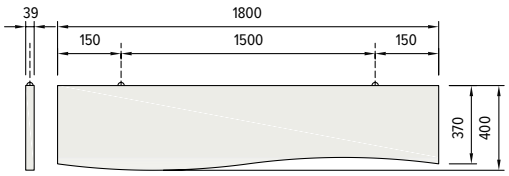
MINERAL Baffle Element Arc







Module 1200 x 400 mm



Module 1800 x 400 mm

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Vertical Baffle Systems

MINERAL Baffle Line L/N

(THERMATEX® Baffle)

Individual / Grouped (only MINERAL Baffle Line L)

- MINERAL Baffle Line L and Line N features an aluminium frame and white laminate surface for a modern linear appearance. MINERAL Baffle Line L and Line N are also available in a variety of colours or customised graphic prints on request
- Good sound absorption: reduce noise levels, increase intelligibility and reduce reverberation time in a space
- Typically used to provide high levels of acoustic absorption in offices, leisure centres, transport hubs, etc

MINERAL Baffle Line L/N

Individual / Grouped (only MINERAL Baffle Line L)

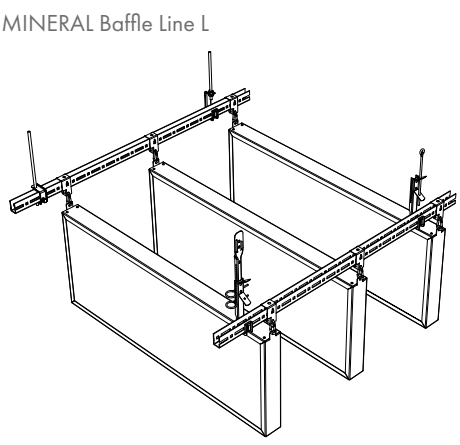
Thickness (mm)	50
Dimensions (mm) Additional sizes on request	1200 x 300 1200 x 400 1800 x 300 1800 x 400
System	MINERAL Baffle Line N - wire hanger with top screw thread MINERAL Baffle Line L - wire hanger with tab connector MINERAL Baffle Line L - U-Profile and carabiner with tab connector
Weight	1200 x 300: 3.2 kg/pc 1200 x 400: 4.1 kg/pc 1800 x 300: 4.7 kg/pc 1800 x 400: 6.0 kg/pc
Colour & design	**Frame:** Anodised Aluminium, White, Colours **Vario Design Colour**: White, Granite, Steel, Green Marble, Copper, Oak, Brass, Sandstone, Concrete **Motif:** Custom Graphic Print
Sound absorption	EN ISO 354 α_w = **0.60(MH)** (300mm) as per EN ISO 11654 - **Class C**

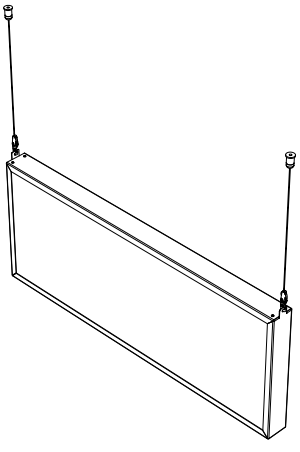
Frequency f (Hz)	125	250	500	1000	2000	4000
Baffles 1200 x 300mm Row distances 300mm α_p	0.35	0.40	0.55	0.90	0.90	0.90

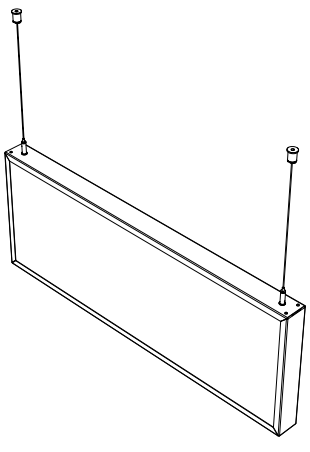
NRC = **0.65** as per ASTM C 423

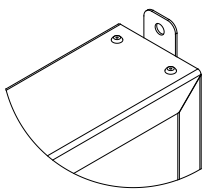
Fire reaction	Euroclass **A2-s1,d0** as per EN 13501-1
Light reflectance	**88%**
Humidity resistance	**90%**
Cleanability	
Sustainability	BIOSOLUBLE WOOL EC 1272/2008 Annex Q

MINERAL Baffle Line L

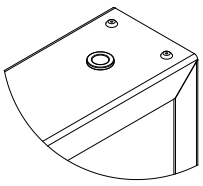








MINERAL Baffle Line L



MINERAL Baffle Line N

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Floating Canopy Systems

MINERAL Sonic Element

(TOPIQ® Sonic Element, Optima Canopy)
Individual / Grouped

- MINERAL Sonic Element is a frameless and jointless ceiling raft. It also benefits from a fully colour coated face and reverse laminate fleece
- The monolithic ceiling raft design offers excellent sound absorption properties and when installed gives the appearance of a free floating ceiling cloud

MINERAL Sonic Element

Individual / Grouped

Thickness (mm)

40

Dimensions (mm)

Additional sizes and shapes on request

Trapezoid	1180 x 870	Rectangle	1780 x 1180
Hexagon	1363 x 1180	Rectangle	2380 x 1180
Left Parallelogram	1180 x 1180	Circle	Ø800
Right Parallelogram	1180 x 1180	Circle	Ø1200
Square	800 x 800	Circle	Ø1600
Square	1180 x 1180	Convex	1170 x 1170
Rectangle	1180 x 580	Concave	1170 x 1020
Rectangle	1780 x 880	Triangle	1180 x 1022

System

Individual: Wire Hanger
Grouped: U-Profile

Weight

6.0 kg/m²

Colour & design

Vario Design Colours

White, Granite, Steel, Green Marble, Copper, Oak, Brass, Sandstone, Concrete

Sound absorption

EN ISO 354

Frequency f (Hz) Equivalent Absorption Area Aobj*	125	250	500	1000	2000	4000
Square: 1180 x 1180mm / Suspension height 190mm	0.40	1.20	2.20	2.40	2.40	2.30
Rectangle: 1780 x 1180mm / Suspension height 190mm	0.80	2.10	3.10	3.30	3.50	3.40
Rectangle: 2380 x 1180mm / Suspension height 190mm	0.80	2.70	4.20	4.40	4.50	4.30
Circle: Ø1200mm / Suspension height 150mm	0.40	1.00	1.70	1.80	2.00	1.90

*Values shown are the average of the 3 one third octave band values

Fire reaction

Euroclass **A2-s1,d0** as per EN 13501-1

Light reflectance

Up to **88%**

Humidity resistance

90%

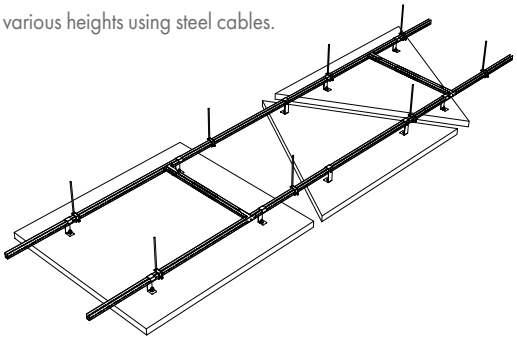
Indoor air quality

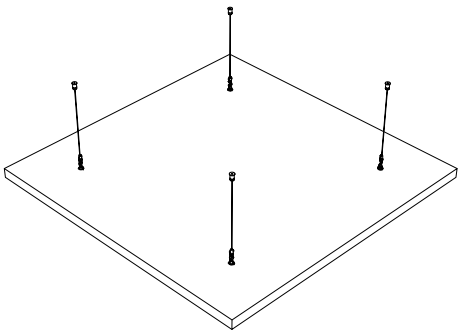
A, E1, IAC

Cleanability

Sustainability

Flexible design and adjustable to various heights using steel cables.





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Floating Canopy Systems

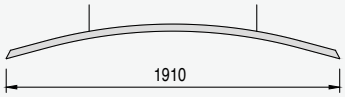
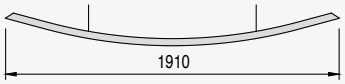
MINERAL Sonic Line Arc

(THERMATEX® Sonic Arc)
Individual

- Create unique, elegant designs with an array of MINERAL Sonic Line Arc concave and convex canopies
- Play with custom colours to create exciting contrasting effects
- MINERAL Sonic Line Arc allows you express your creativity and accentuate an area using new spacial effects

MINERAL Sonic Line Arc

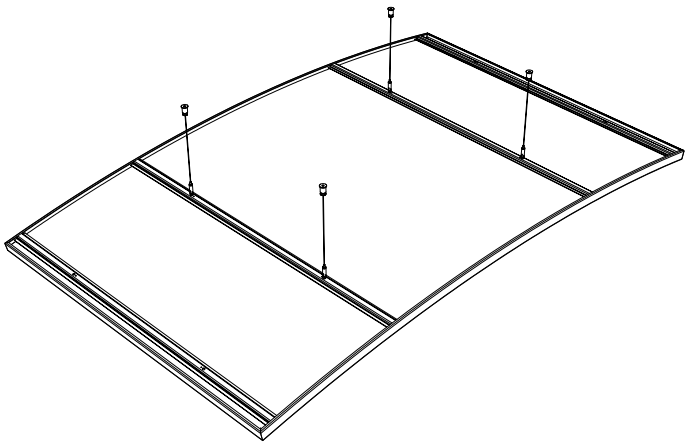
Individual

Edge details	**MINERAL Sonic Line Arc Concave**  **MINERAL Sonic Line Arc Convex** 
Thickness (mm)	35
Dimensions (mm)	1910 x 1180
System	Wire Hanger
Weight	16.0 kg/pc
Colour & design	**Vario Design Colours** White, Granite, Steel, Green Marble, Copper, Oak, Brass, Sandstone, Concrete
Sound absorption	EN ISO 354
Fire reaction	Euroclass **A2-s1,d0** as per EN 13501-1
Light reflectance	Up to **88%**
Humidity resistance	**90%**
Cleanability	
Sustainability	BIOSOLUBLE WOOL EC 1272/2008 Annex Q

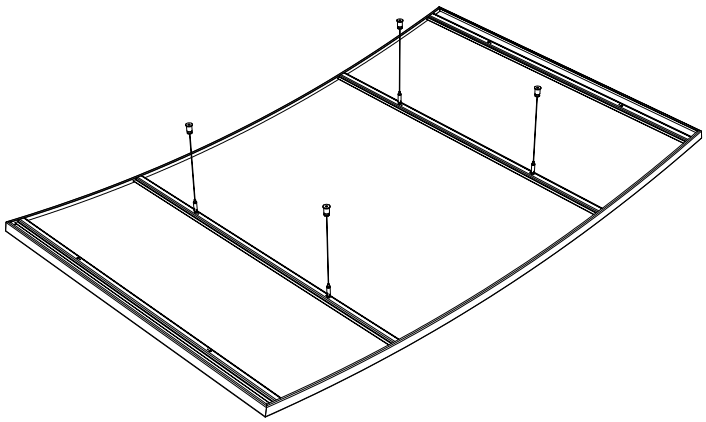
Frequency *f* (Hz) Equivalent Absorption Area Aobj*	125	250	500	1000	2000	4000
Suspension height 185mm	0.40	1.60	2.40	2.70	3.20	3.40

*Values shown are the average of the 3 one third octave band values

MINERAL Sonic Line Arc Concave



MINERAL Sonic Line Arc Convex



Ceiling rafts are delivered in one piece making them quick and easy to install. Flexible design and adjustable to various heights using steel cables.

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Floating Canopy Systems

MINERAL Sonic Line

(THERMATEX® Sonic Modern)
Individual

- MINERAL Sonic Line is a ceiling raft with an aluminium frame.
  The flexible suspension with fine, steel cables enables the height to be individually adjusted as required
- Available with a standard white laminate surface and can be customised in a variety of colours or bespoke printed motifs on request
- Aesthetically defines spaces in schools, offices leisure centres, retail spaces etc.

MINERAL Sonic Line

Individual

Thickness (mm)	43
Dimensions (mm)	1200 x 600 1200 x 1200 1800 x 1200 2400 x 1200
System	Wire Hanger
Weight	1200 x 600: 5.0 kg/pc 1200 x 1200: 10.0 kg/pc 1800 x 1200: 15.0 kg/pc 2400 x 1200: 20.0 kg/pc
Colour & design	**Frame:** Anodised Aluminium, White, Colours **Vario Design Colours** White, Granite, Steel, Green Marble, Copper, Oak, Brass, Sandstone, Concrete **Motif:** Custom Graphic Print

Sound absorption

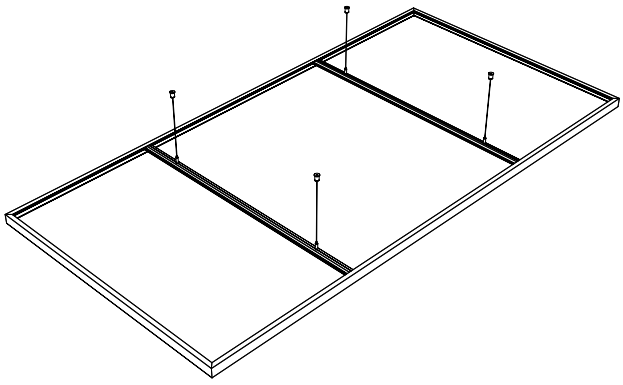
EN ISO 354

Frequency *f* (Hz) Equivalent Absorption Area Aobj*	125	250	500	1000	2000	4000
1200 x 1200mm Suspension height 193mm	0.40	1.10	1.60	2.00	2.10	2.00
2400 x 1200mm Suspension height 193mm	0.90	1.90	3.00	3.40	3.80	3.70

*Values shown are the average of the 3 one third octave band values

Fire reaction	Euroclass **A2-s1,d0** as per EN 13501-1
Light reflectance	Up to **88%**
Humidity resistance	**90%**
Cleanability	
Sustainability	BIOSOLUBLE WOOL EC 1272/2008 Annex G

Ceiling rafts are delivered in one piece making them quick and easy to install. Flexible design and adjustable to various heights using steel cables.



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Wall Systems

MINERAL Wallcoustic Element

(OPTIMA Canopy, OPTIMA L Canopy, TOPIQ® Line Element)
Individual

- MINERAL Wallcoustic Element is a frameless and jointless wall abosorber. It also benefits from a fully colour coated face and reverse laminate fleece
- The monolithic wall absorber offers excellent sound absorption properties and endless design possibilities for ambitious architects, who seek to raise the visual and acoustic quality of interior spaces
- The wall panel is delivered in one piece and is quick and easy to install using spiral anchors and wall brackets

MINERAL Wallcoustic Element

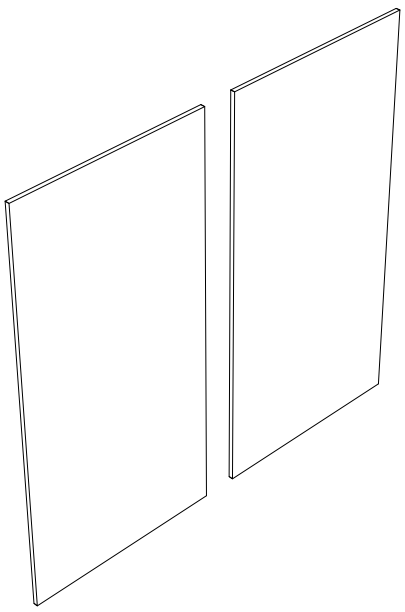
Individual

Thickness (mm)	40
Dimensions (mm) Additional sizes on request	Square 1180 x 1180 Square 800 x 800 Rectangle 1180 x 580 Rectangle 1780 x 880 Rectangle 1780 x 1180
System	Spiral anchor Wall brackets
Weight	6.0 kg/m²
Colour & design	White Vario Design Colours: Granite, Steel, Green Marble, Copper, Oak, Brass, Sandstone, Concrete
Sound absorption	EN ISO 354

Frequency *f* (Hz) Equivalent Absorption Area Aobj*	125	250	500	1000	2000	4000
Square: 1180 x 1180mm	0.40	1.20	1.90	1.90	1.90	1.80
Rectangle: 1780 x 1180mm	0.50	1.70	2.70	2.80	2.80	2.60

*Values shown are the average of the 3 one third octave band values

Fire reaction	Euroclass **A2-s1,d0** as per EN 13501-1
Light reflectance	Up to **88%**
Humidity resistance	**90%**
Cleanability	
Sustainability	BIOSOLUBLE WOOL EC 1272/2008 Annex Q



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Wall Systems

MINERAL Wallcoustic Line

(THERMATEX® Line Modern)
Individual

- MINERAL Wallcoustic Line is a pre-assembled aluminium framed wall absorber with a standard white, laminate surface finish. It can also be ordered in a variety of colours or customised printed motifs on request
- Customise and enhance the visual appearance and acoustic ambience in any space
- The wall panel is delivered in one piece and is quick and easy to install using eccentric screws and installation key

MINERAL Wallcoustic Line

Individual

Thickness (mm)	43
Dimensions (mm) Additional sizes on request	1200 x 600 1200 x 1200 1800 x 1200 2400 x 1200
System	Eccentric bracket
Weight	9.4 kg/m²
Colour & design	**Frame:** Anodised Aluminium, White, Colours

Vario Design Colours

White | Granite | Steel | Green Marble | Copper | Oak | Brass | Sandstone | Concrete

Motif: Custom Graphic Print

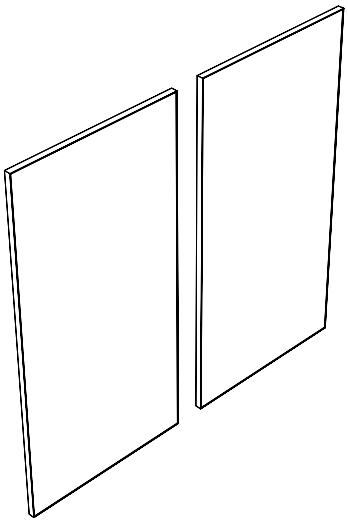
Sound absorption

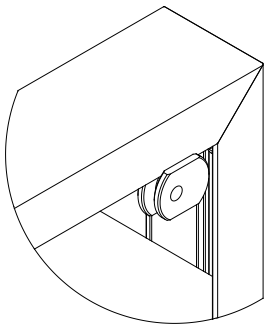
EN ISO 354

Frequency *f* (Hz) Equivalent Absorption Area Aobj*	125	250	500	1000	2000	4000
Rectangle: 1200 x 600mm	0.20	0.60	1.00	0.90	0.80	0.90
Square: 1200 x 1200mm	0.50	1.10	1.60	1.50	1.50	1.50
Rectangle: 1800 x 1200mm	0.60	1.90	2.50	2.40	2.20	2.40
Rectangle: 2400 x 1200mm	1.10	2.20	3.10	3.10	3.00	3.10

*Values shown are the average of the 3 one third octave band values

Fire reaction	Euroclass **A2-s1,d0** as per EN 13501-1
Light reflectance	Up to **88%**
Humidity resistance	**90%**
Cleanability	
Sustainability	BIOSOLUBLE WOOL EC 1272/2008 Annex Q





Detail: Eccentric bracket

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Wall Systems

FABRIC Wallcoustic Line

(LINE Style)
Individual

- FABRIC Wallcoustic Line is a fabric covered wall absorber with an elegant aluminium frame and can be easily customised using individual patterns or images. The aluminium frame is supplied with an all-round groove into which the printed fabric is inserted. The fabric covering can be easily removed and replaced with a new fabric design, without using any special tools
- FABRIC Wallcoustic Line 20: Lightweight profile for one-sided coverings in small sizes
- FABRIC Wallcoustic Line 27: Profile for all sizes with one-sided coverings
- FABRIC Wallcoustic Line 50: Profile for all sizes with one-sided coverings and a highly absorbing acoustic filling

FABRIC Wallcoustic Line

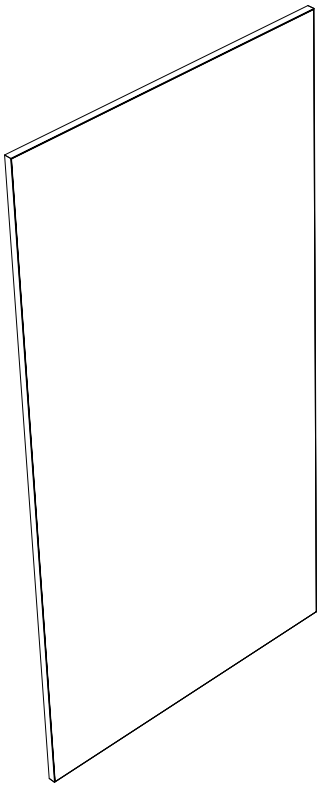
Individual

	20	27	50
Thickness (mm)	20	27	50
Dimensions (mm)	600 x 600 1 200 x 600	1200 x 1200 1800 x 1200 2400 x 1200 2400 x 2400	600 x 600 1200 x 600 1200 x 1200 1800 x 1200 2400 x 1200 2400 x 2400
System	Wall bracket		
Weight	3.0 - 6.0 kg/m^2		
Colour & design	**Frame:** anodised aluminium, white, RAL colours **FABRIC Wallcoustic Line 20:** fabric, white or Custom Graphic Print **FABRIC Wallcoustic Line 27:** fabric, white or Custom Graphic Print **FABRIC Wallcoustic Line 50:** fabric, white or Custom Graphic Print		
Sound absorption	EN ISO 354		
Humidity resistance	**90%**		
Cleanability			

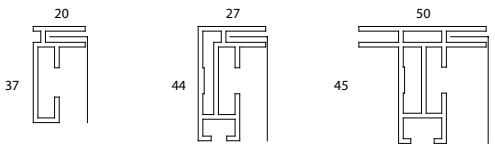
Frequency f (Hz) Equivalent Absorption Area Aobj*	125	250	500	1000	2000	4000
1200 x 1200mm (50mm thickness)	0.30	0.90	1.90	1.90	1.80	1.60

*Values shown are the average of the 3 one third octave band values

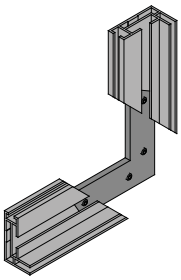
FABRIC Wallcoustic Line



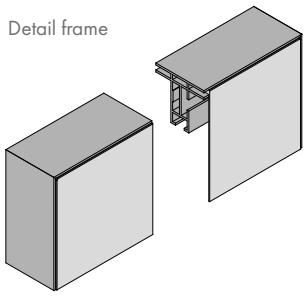
Profile cross-sections



Corner connection



Detail frame



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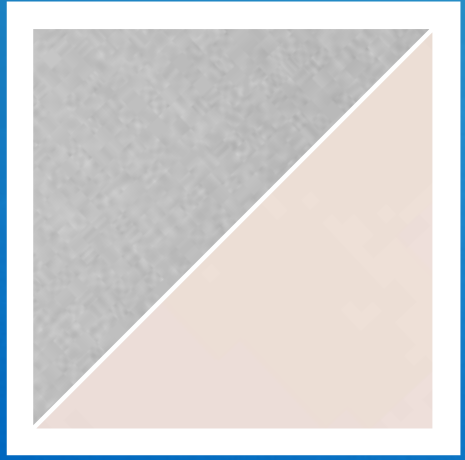
AMF THERMATEX®
Alpha Colour



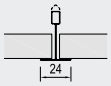
- AMF THERMATEX® Alpha Colour provides a modern appearance and is the optimal solution for spaces that require outstanding sound absorption. In addition to cream, black and silver, the acoustic range is also available in granite, steel, green marble, copper, oak, brass, sandstone and concrete Vario Design colours
- Excellent sound absorption (0.95 α_w)
- Ideal for offices, restaurants, cinemas, classrooms and learning applications

AMF THERMATEX® ALPHA COLOUR

Edge details

Additional edge details on request

Board



Thickness (mm)

19

Dimensions (mm)

Additional sizes on request

600 x 600	1200 x 600
610 x 610	1220 x 610
625 x 625	1250 x 625

System

Exposed demountable - System C

Weight

3.3 kg / m²

Colour

Additional colours on request

Black, Silver, Cream

Vario Design colours

Granite, Steel, Green Marble, Copper, Oak, Brass, Sandstone, Concrete

Sound absorption

EN ISO 354

α_w = **1.00** as per EN ISO 11654 - **Class A** (Black)

α_w = **0.95** as per EN ISO 11654 - **Class A** (other colours)

Frequency *f* (Hz)		125	250	500	1000	2000	4000
α_p	Black	0.45	0.80	0.95	0.95	1.00	1.00

Frequency *f* (Hz)		125	250	500	1000	2000	4000
α_p	Other colours	0.50	0.80	0.90	0.90	1.00	1.00

NRC = **0.90** as per ASTM C 423

Sound attenuation

EN ISO 10848-2

$D_{n,f,w}$ = **28 dB** as per EN ISO 717-1

CAC = **29 dB** as per ASTM E 413-10

Sound reduction

EN ISO 10140-2

R_w = **14 dB** as per EN ISO 717-1

Fire reaction

Euroclass **A2-s1, d0** as per EN 13501-1

RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ

Thermal conductivity

λ = **0.040 W/mk** as per EN 12667

Air permeability

PM1 (≤ 30 m³/hm²) as per DIN 18177

Humidity resistance

95% RH

Indoor air quality

A+, E1

Cleanability

Sustainability

43%

www.blauer-engel.de/uz132

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EXPERIENCE MORE POSSIBILITIES

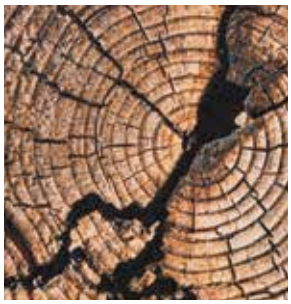
AMF THERMATEX® Varioline

With AMF THERMATEX® Varioline, the individual design possibilities are almost limitless.

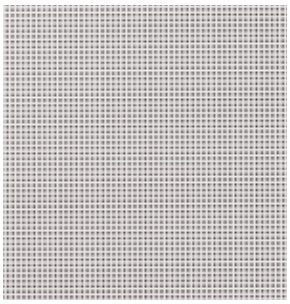
Whichever architectural look and feel you have in mind, you can choose from a selection of mineral tiles with wood, concrete or metal pattern surfaces to achieve the desired visual aesthetic.

Individual motif designs are also available to help customise and enhance the ambience of any space.

Choose from any of the following solutions - AMF THERMATEX® Varioline Motif, Varioline Metal, Varioline Wood, Varioline Symetra and Varioline Colour to meet the acoustic, aesthetic and fire performance needs of your project.

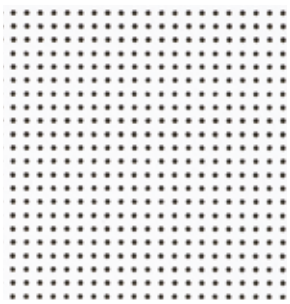


Varioline Motif



Varioline Metal

Varioline Wood



Varioline Symetra

Smooth White Acoustic

THE SMOOTH WHITE ACOUSTIC RANGE HAS THE WIDEST CHOICE OF EDGES, MODULES AND ACOUSTIC OPTIONS.

Designed to provide flexibility and complete noise control for every space – whether it's high sound absorption, high sound attenuation or a balance of both. Thanks to the smooth white surface, these aesthetically pleasing ceilings also offer high levels of light reflectance and energy saving benefits.

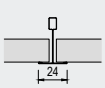
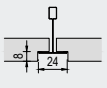
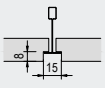
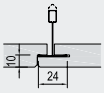
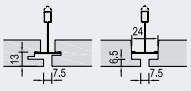
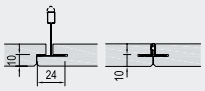
DATASHEET

AMF THERMATEX® Acoustic

- The laminated finish of AMF THERMATEX® Acoustic creates a smooth, white appearance and provides good levels of sound absorption and excellent sound attenuation
- Good sound absorption (0.65 (H) α_w)
- Excellent sound attenuation (40 dB; SL2)
- High sound attenuation (38 dB; Board, Tegular 24/90, Tegular 15/90, Vector, Finesse)
- Excellent light reflectance (88%)
- ISO 4
- Ideal for retail, offices and meeting rooms, installation rooms or production areas

DATASHEET

AMF THERMATEX® Acoustic

Edge details Additional edge details on request	Board	Tegular 24/90	Tegular 15/90	SL2	Vector	Finesse
						
Thickness (mm)	19	19	19	19	24	19
Dimensions (mm)	600 x 600 625 x 625 1200 x 600 1250 x 625	600 x 600 625 x 625 1200 x 600	600 x 600 1200 x 600	1200 x 300 1500 x 300 1800 x 300 2000 x 300 2500 x 300	600 x 600 625 x 625 1200 x 600	600 x 600 625 x 625 1200 x 600 1250 x 625
System	Exposed demountable - System C			Semi-concealed planks, demountable - System I.3 Semi-concealed planks - Bandraster, demountable - System I.2 Semi-concealed planks - Corridor, demountable - System F.2	Semi-concealed tiles, demountable - System C	Concealed, demountable - System A.2 / A.3
Weight	5.0 - 8.6 kg / m²					
Colour	White					

Sound absorption

EN ISO 354 — α_w = **0.65 (H)** as per EN ISO 11654 - **Class C**

Frequency *f* (Hz)	125	250	500	1000	2000	4000
α_p Board, Tegular 24/90, Tegular 15/90, Finesse, SL2	0.50	0.45	0.60	0.85	0.95	0.95
α_p Vector	0.45	0.40	0.60	0.80	0.90	1.00

NRC = **0.70** as per ASTM C 423

Sound attenuation

EN ISO 10848-2
$D_{n,f,w}$ = **38 dB** (Board, Tegular 24/90 Tegular 15/90, Vector, Finesse) as per EN ISO 717-1
$D_{n,f,w}$ = **40 dB** (SL2) as per EN ISO 717-1

CAC = **39 dB** (Board, Tegular 24/90, Tegular 15/90, Vector, Finesse) as per ASTM E 413-10

Sound reduction

EN ISO 10140-2
R_w = **22 dB** as per EN ISO 717-1

Fire reaction

Euroclass **A2-s1, d0** as per EN 13501-1
Class A as per ASTM E 84

Light reflectance

88%

Thermal conductivity

λ = **0.060 W/mk** as per EN 12667

Air permeability

PM1 (≤ 30 m³/hm²) as per DIN 18177

Humidity resistance

95% RH

Clean room

ISO 4 as per EN ISO 14644-1

Indoor air quality

A+ E1

Cleanability

Sustainability

35 - 36.9%

Products may vary from country to country.
Please contact your local sales representative.
For further information and legal notice, please visit our website.

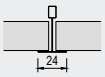
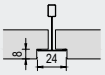
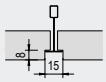
DATASHEET

AMF THERMATEX® dB Acoustic

- AMF THERMATEX® dB Acoustic is the ideal solution for spaces requiring excellent sound attenuation and good sound absorption. It provides a simple yet timeless design finish to any space
- Good sound absorption (0.65 (H) α_w)
- Excellent sound attenuation (24mm thickness: 41dB - 30mm thickness: 43dB)
- Excellent light reflectance (88%)
- ISO 4
- Ideal for offices, meeting rooms and learning applications or corridors

DATASHEET

AMF THERMATEX® dB Acoustic

	Board	Tegular 24/90	Tegular 15/90
Edge details Additional edge details on request			
Thickness (mm)	24, 30	24	24
Dimensions (mm)	600 x 600	600 x 600	600 x 600
System	Exposed demountable - System C		
Weight	8.6 - 10.6 kg / m²		
Colour	 White		

Sound absorption

EN ISO 354 — α_w = **0.65 (H)** as per EN ISO 11654 - **Class C**

Frequency f (Hz)	125	250	500	1000	2000	4000
α_p Board (24mm), Tegular 24/90, Tegular 15/90	0.40	0.45	0.60	0.80	0.95	0.95
α_p Board (30mm)	0.35	0.40	0.65	0.85	0.90	0.95

NRC = **0.70** as per ASTM C 423

Sound attenuation

EN ISO 10848-2
$D_{n,f,w}$ = **41 dB** (24mm) as per EN ISO 717-1 — $D_{n,f,w}$ = **43 dB** (30mm) as per EN ISO 717-1
CAC = **43 dB** (24mm) as per ASTM E 413-10

Sound reduction

EN ISO 10140-2
R_w = **24 dB** (24mm) as per EN ISO 717-1 — R_w = **25 dB** (30mm) as per EN ISO 717-1

Fire reaction

Euroclass **A2-s1, d0** as per EN 13501-1
Class A as per ASTM E 84

Light reflectance

88%

Thermal conductivity

λ = **0.075 W/mk** as per EN 12667

Air permeability

PM1 (≤ 30 m³/hm²) as per DIN 18177

Humidity resistance

95% RH

Clean room

ISO 4 as per EN ISO 14644-1

Indoor air quality

A+ E1

Cleanability

Sustainability

36.9 - 37%

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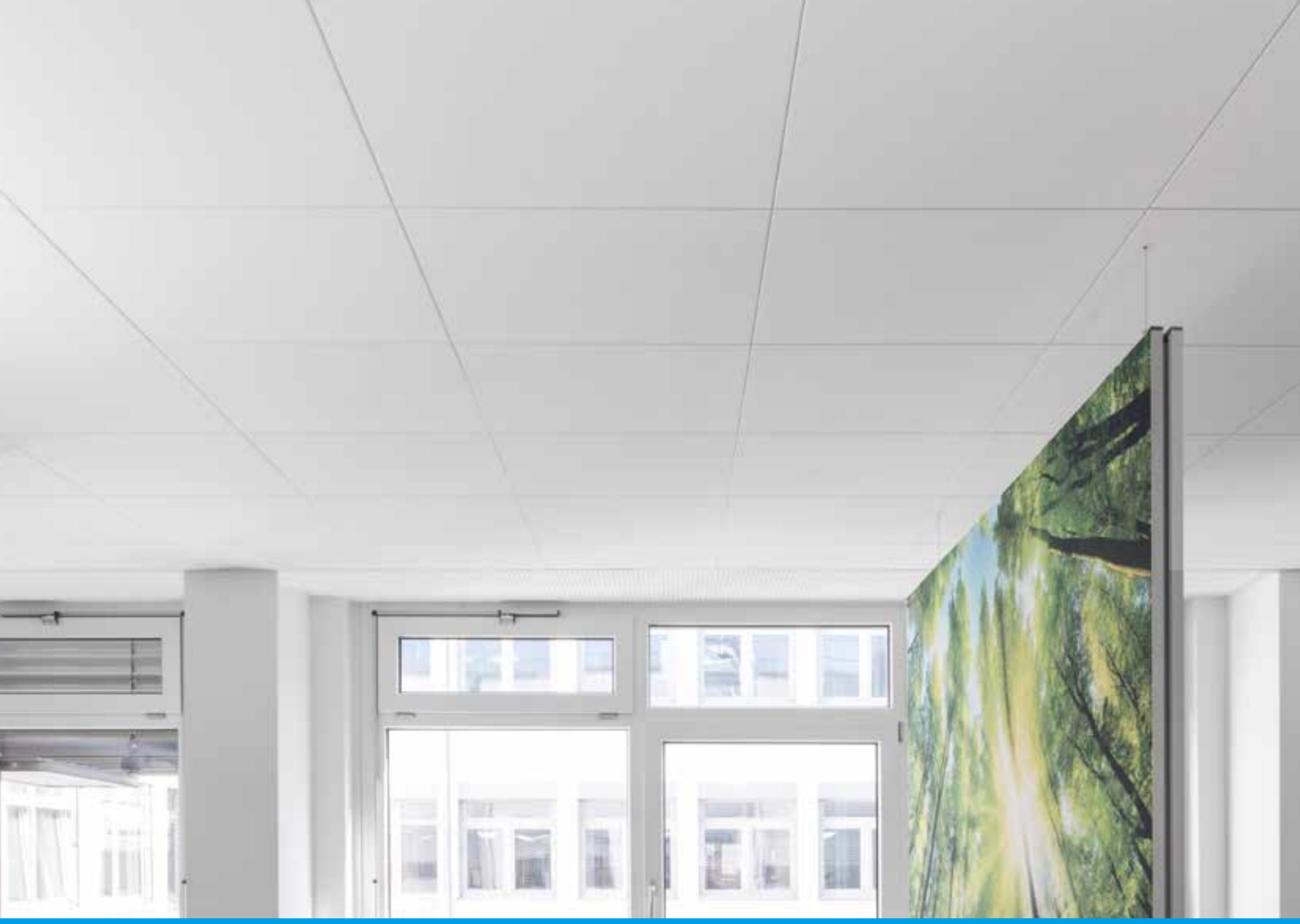


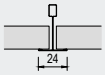
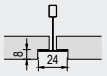
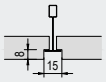
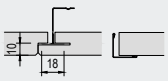
DATASHEET

AMF THERMATEX® Alpha HD 19mm

- AMF THERMATEX® Alpha HD 19mm offers a modern, white appearance and is the optimal solution for spaces that need a combination of excellent sound absorption and good sound attenuation
- Excellent sound absorption (0.90 a_w)
- Good sound attenuation (34 dB)
- Excellent light reflectance (88%)
- ISO 4
- Ideal for offices, classrooms, learning applications and corridors

DATASHEET

AMF THERMATEX® Alpha HD 19mm

	Board	Tegular 24/90	Tegular 15/90	SL2	Finesse
Edge details Additional edge details on request					
Thickness (mm)	19	19	19	19	19
Dimensions (mm)	600 x 600 625 x 625 675 x 675 1200 x 300 1200 x 600 1250 x 625 1500 x 600 1800 x 600	600 x 600 625 x 625 675 x 675 1200 x 300 1200 x 600 1250 x 625 1500 x 600 1800 x 600	600 x 600 625 x 625 675 x 675 1200 x 300 1200 x 600 1250 x 625 1350 x 300 1350 x 600 1500 x 600 1800 x 600	1350 x 300 1350 x 600 1500 x 300 1800 x 300 2000 x 300	600 x 600 625 x 625 1200 x 600 1250 x 625
System	Exposed demountable - System C		Exposed, demountable - System C Exposed - Bandraster, demountable - System I.3 Exposed - Corridor, demountable -System F.3	Semi-concealed planks, demountable - System I.3 Semi-concealed planks - Bandraster, demountable - System I.2 Semi-concealed planks - Corridor, demountable -System F.2	Concealed,demountable - System A.2 / A.3
Weight	5.2 kg / m²				
Colour	White				

Sound absorption

EN ISO 354 — α_w = **0.90** as per EN ISO 11654 - **Class A**

Frequency f (Hz)	125	250	500	1000	2000	4000
α_p	0.50	0.70	0.80	0.90	1.00	1.00

NRC = **0.85** as per ASTM C 423

Sound attenuation

EN ISO 10848-2
$D_{n,f,w}$ = **34 dB** as per EN ISO 717-1 — CAC = **35 dB** as per ASTM E 413-10

Sound reduction

EN ISO 10140-2
R_w = **17 dB** as per EN ISO 717-1

Fire reaction

Euroclass **A2-s1, d0** as per EN 13501-1

Light reflectance

88%

Thermal conductivity

λ = **0.060 W/mk** as per EN 12667

Air permeability

PM1 (≤ 30 m³/hm²) as per DIN 18177

Humidity resistance

95% RH

Clean room

ISO 4 as per EN ISO 14644-1

Indoor air quality

A+ — E1

Cleanability

Sustainability

49.1%

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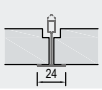
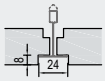
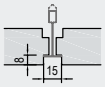
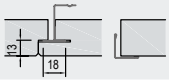
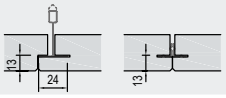
DATASHEET

AMF THERMATEX® Alpha HD 30mm

- AMF THERMATEX® Alpha HD 30mm offers a modern, white appearance and is the optimal solution for spaces that need excellent sound absorption and sound attenuation
- Excellent sound absorption (0.90 α_w)
- Excellent sound attenuation (40 dB)
- Excellent light reflectance (88%)
- ISO 4
- Ideal for offices, classrooms and learning applications

DATASHEET

AMF THERMATEX® Alpha HD 30mm

Edge details Additional edge details on request	Board	Tegular 24/90	Tegular 15/90	SL2	Finesse
					
Thickness (mm)	30	30	30	30	30
Dimensions (mm)	600 x 600 625 x 625 675 x 675 1200 x 600 1250 x 625	600 x 600 625 x 625 675 x 675 1200 x 600 1250 x 625	600 x 600 625 x 625 675 x 675 1200 x 600 1250 x 625 1350 x 300 1350 x 600	1350 x 300 1350 x 600 1500 x 300 1800 x 300 2000 x 300	600 x 600 625 x 625 1200 x 600 1250 x 625
System	Exposed demountable - System C		Exposed, demountable - System C Exposed - Bandraster, demountable - System I.3 Exposed - Corridor, demountable -System F.3	Semi-concealed planks, demountable - System I.3 Semi-concealed planks - Bandraster, demountable - System I.2 Semi-concealed planks - Corridor, demountable -System F.2	Concealed,demountable - System A.2 / A.3

Weight — 8.2 kg / m²

Colour — White

Sound absorption

EN ISO 354 — α_w = **0.90** as per EN ISO 11654 - **Class A**

Frequency *f* (Hz)	125	250	500	1000	2000	4000
α_p	0.55	0.70	0.85	1.00	1.00	1.00

NRC = **0.90** as per ASTM C 423

Sound attenuation

EN ISO 10848-2
$D_{n,f,w}$ = **40 dB** as per EN ISO 717-1 — CAC = **41 dB** as per ASTM E 413-10

Sound reduction

EN ISO 10140-2
R_w = **22 dB** as per EN ISO 717-1

Fire reaction — Euroclass **A2-s1, d0** as per EN 13501-1

Light reflectance — **88%**

Thermal conductivity — λ = **0.060 W/mk** as per EN 12667

Air permeability — **PM1** (≤ 30 m³/hm²) as per DIN 18177

Humidity resistance — **95% RH**

Clean room — **ISO 4** as per EN ISO 14644-1

Indoor air quality — A+ — E1

Cleanability

Sustainability — 49.9%

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© Victor Sajara Photography

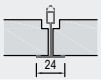
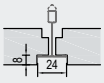
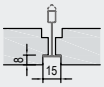
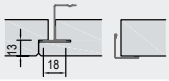
DATASHEET

AMF THERMATEX® Alpha HD 35mm

- AMF THERMATEX® Alpha HD 35mm offers a modern, white appearance and is the optimal solution for spaces that need excellent sound absorption and sound attenuation
- Excellent sound absorption (0.90 α_w)
- Excellent sound attenuation (42 dB)
- Excellent light reflectance (88%)
- ISO 4
- Ideal for offices, classrooms and learning applications

DATASHEET

AMF THERMATEX® Alpha HD 35mm

	Board	Tegular 24/90	Tegular 15/90	SL2
Edge details Additional edge details on request				
Thickness (mm)	35	35	35	35
Dimensions (mm)	600 x 600 625 x 625 1200 x 600 1250 x 625	600 x 600 625 x 625 1200 x 600 1250 x 625	600 x 600 625 x 625 1200 x 600 1250 x 625 1350 x 300 1350 x 600	1350 x 300 1350 x 600 1500 x 300 1800 x 300 2000 x 300
System	Exposed demountable - System C		Exposed, demountable - System C Exposed - Bandraster, demountable - System I.3 Exposed - Corridor, demountable -System F.3	Semi-concealed planks, demountable - System I.3 Semi-concealed planks - Bandraster, demountable - System I.2 Semi-concealed planks - Corridor, demountable -System F.2
Weight	9.5 kg / m²			
Colour	White			

Sound absorption

EN ISO 354 — α_w = **0.90** as per EN ISO 11654 - **Class A**

Frequency *f* (Hz)	125	250	500	1000	2000	4000
α_p	0.40	0.65	0.85	1.00	1.00	1.00

NRC = **0.85** as per ASTM C 423

Sound attenuation

EN ISO 10848-2
$D_{n,f,w}$ = **42 dB** as per EN ISO 717-1 — CAC = **44 dB** as per ASTM E 413-10

Sound reduction

EN ISO 10140-2
R_w = **25 dB** as per EN ISO 717-1

Fire reaction

Euroclass **A2-s1, d0** as per EN 13501-1

Light reflectance

88%

Thermal conductivity

λ = **0.060 W/mk** as per EN 12667

Air permeability

PM1 (≤ 30 m³/hm²) as per DIN 18177

Humidity resistance

95% RH

Clean room

ISO 4 as per EN ISO 14644-1

Indoor air quality

A+ E1

Cleanability

Sustainability

50.4%

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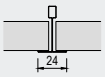
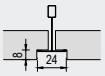
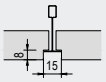
DATASHEET

AMF THERMATEX® Alpha One

- AMF THERMATEX® Alpha One offers a modern, white appearance and is the optimal solution for spaces that need excellent sound absorption
- Excellent sound absorption (1.00 α_w)
- Excellent light reflectance (88%)
- ISO 4
- Ideal for offices, classrooms and learning applications

DATASHEET

AMF THERMATEX® Alpha One

	Board	Tegular 24/90	Tegular 15/90
Edge details Additional edge details on request			
Thickness (mm)	24	24	24
Dimensions (mm)	600 x 600 625 x 625 1200 x 600	600 x 600 625 x 625 1200 x 600	600 x 600 625 x 625 1200 x 600
System	Exposed demountable - System C		
Weight	4.0 kg / m²		
Colour	 White		

Sound absorption

EN ISO 354 — α_w = **1.00** as per EN ISO 11654 - **Class A**

Frequency *f* (Hz)	125	250	500	1000	2000	4000
α_p	0.55	0.85	1.00	0.95	1.00	1.00

NRC = **1.00** as per ASTM C 423

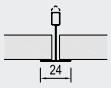
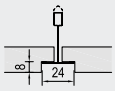
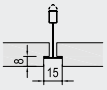
Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **29 dB** as per EN ISO 717-1
Sound reduction	EN ISO 10140-2 R_w = **17 dB** as per EN ISO 717-1
Fire reaction	Euroclass **A2-s1, d0** as per EN 13501-1 **Class A** as per ASTM E 84
Light reflectance	**88%**
Thermal conductivity	λ = **0.040 W/mk** as per EN 12667
Air permeability	**PM1** (≤ 30 m³/hm²) as per DIN 18177
Humidity resistance	**95% RH**
Clean room	**ISO 4** as per EN ISO 14644-1
Indoor air quality	 A+  E1 
Cleanability	 
Sustainability	 50.8%      www.blauer-engel.de/uz132

Products may vary from country to country.
Please contact your local sales representative.
For further information and legal notice, please visit our website.

AMF THERMATEX® Alpha

- AMF THERMATEX® Alpha offers a modern, white appearance and is the optimal solution for spaces that need excellent sound absorption
- Excellent sound absorption (0.95 α_w)
- Excellent light reflectance (88%)
- ISO 4
- Ideal for offices, classrooms and learning applications

AMF THERMATEX® ALPHA

Edge details Additional edge details on request	Board 	Tegular 24/90 	Tegular 15/90 
Thickness (mm)	19	19	19
Dimensions (mm) Additional sizes on request	600 x 600 625 x 625 1200 x 600 1250 x 625	600 x 600 625 x 625 1200 x 600	600 x 600 625 x 625 1200 x 600
System	Exposed demountable - System C		
Weight	3.3 kg / m²		
Colour	White		
Sound absorption	EN ISO 354 α_w = **0.95** as per EN ISO 11654 - **Class A** Frequency *f* (Hz) 125 250 500 1000 2000 4000 α_p 0.50 0.80 0.90 0.90 1.00 1.00 NRC = **0.90** as per ASTM C 423		
Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **28 dB** as per EN ISO 717-1	CAC = **29 dB** as per ASTM E 413-10	
Sound reduction	EN ISO 10140-2 R_w = **14 dB** as per EN ISO 717-1		
Fire reaction	Euroclass **A2-s1, d0** as per EN 13501-1 **Class A** as per ASTM E 84	RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ	
Light reflectance	**88%**		
Thermal conductivity	λ = **0.040 W/mk** as per EN 12667		
Air permeability	**PM1** (≤ 30 m³/hm²) as per DIN 18177		
Humidity resistance	**95% RH**		
Clean room	**ISO 4** as per EN ISO 14644-1		
Indoor air quality	A+	E1	IACG
Cleanability			
Sustainability	43%		www.blauer-engel.de/uz132

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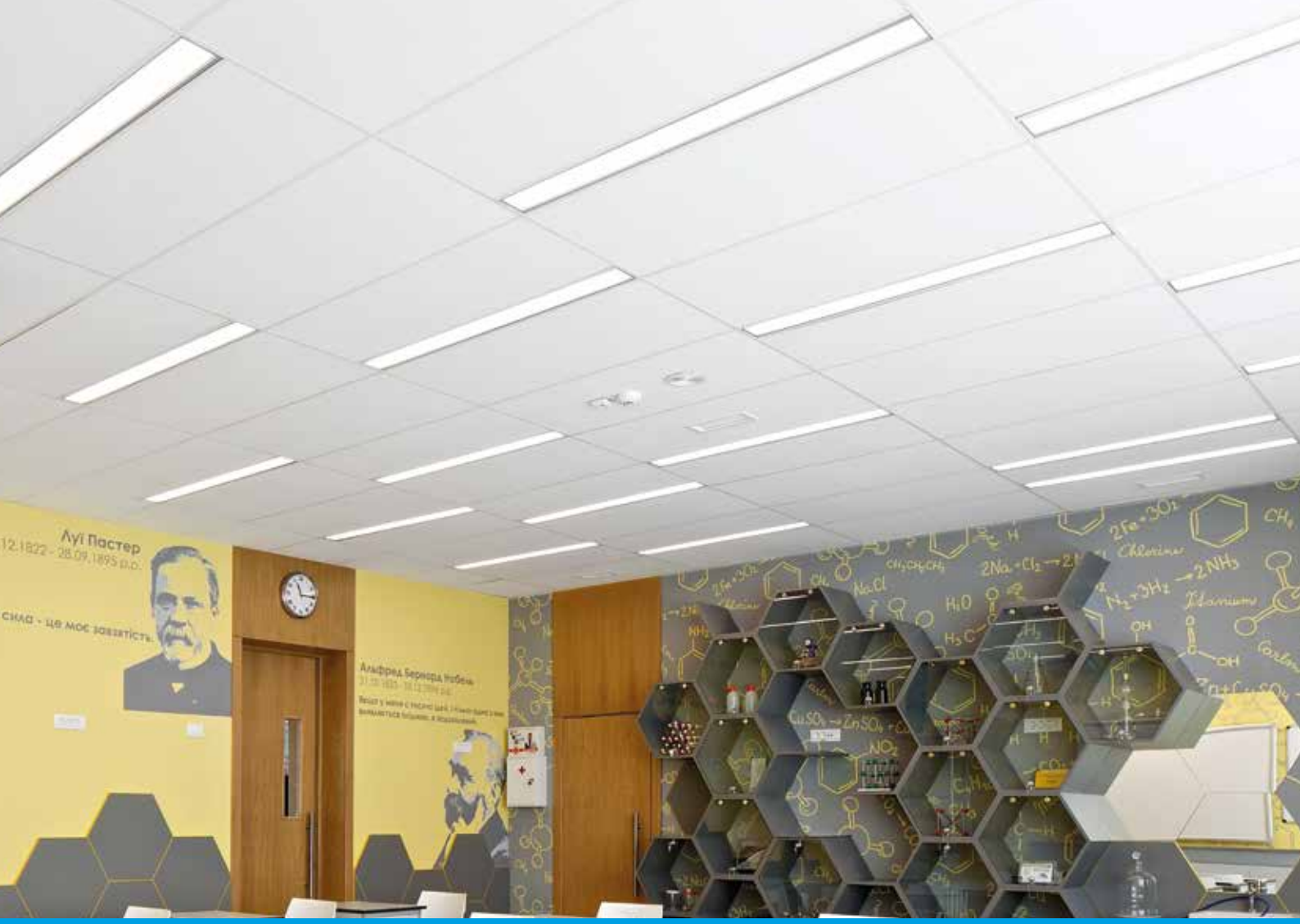
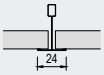
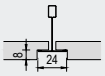
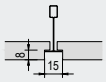


DATASHEET
Antaris

- Antaris is a white, laminated mineral tile and offers Class A sound absorption. Antaris provides fire protection and a hygienic ceiling solution
- Excellent sound absorption (0.90 α_w)
- High light reflectance (86%)
- ISO 5
- Ideal for retail, offices and meeting rooms, installation rooms or production areas

DATASHEET

Antaris

	Board	Tegular 24/90	Tegular 15/90
Edge details Additional edge details on request			
Thickness (mm)	15	15	15
Dimensions (mm) Additional sizes on request	600 x 600 675 x 675 1200 x 600	600 x 600 675 x 675 1200 x 600	600 x 600 675 x 675 1200 x 600
System	Exposed demountable - System C		
Weight	2.9 kg / m²		
Colour	White		

Sound absorption

EN ISO 354 — α_w = **0.90** as per EN ISO 11654 - **Class A**

Frequency *f* (Hz)	125	250	500	1000	2000	4000
α_p	0.50	0.80	0.85	0.85	1.00	1.00

NRC = **0.90** as per ASTM C 423

Sound attenuation

EN ISO 10848-2
$D_{n,f,w}$ = **28 dB** as per EN ISO 717-1
CAC = **29 dB** as per ASTM E 413-10

Sound reduction

EN ISO 10140-2
R_w = **13 dB** as per EN ISO 717-1

Fire reaction

Euroclass **A2-s1, d0** as per EN 13501-1
Class A as per ASTM E 84

Light reflectance

86%

Thermal conductivity

λ = **0.040 W/mk** as per EN 12667

Humidity resistance

95% RH

Clean room

ISO 5 as per EN ISO 14644-1

Indoor air quality

A+ E1

Cleanability

Sustainability

43%

www.blauer-engel.de/uz132

Products may vary from country to country.
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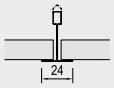
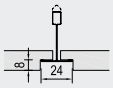
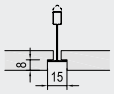
For further information and legal notice, please visit our website.

AMF THERMATEX® Thermofon

- AMF THERMATEX® Thermofon features a smooth, white laminated finish and modern design visual. It provides high sound absorption for enhanced acoustic comfort
- High sound absorption (0.80 (H) α_w)
- Excellent light reflectance (88%)
- ISO 4
- Ideal for offices, classrooms and learning applications

AMF THERMATEX® THERMOFON

Edge details Additional edge details on request	Board 	Tegular 24/90 	Tegular 15/90 
Thickness (mm)	15	15	15
Dimensions (mm) Additional sizes on request	600 x 600 625 x 625 1200 x 600 1250 x 625	600 x 600 625 x 625 1200 x 600	600 x 600 625 x 625 1200 x 600
System	Exposed demountable - System C		
Weight	2.9 kg / m²		
Colour	White		
Sound absorption	EN ISO 354 α_w = **0.80 (H)** as per EN ISO 11654 - **Class B** NRC = **0.85** as per ASTM C 423		

Frequency *f* (Hz)	125	250	500	1000	2000	4000
α_p	0.55	0.75	0.75	0.80	0.95	1.00

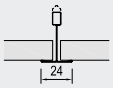
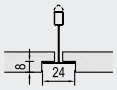
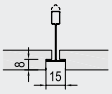
Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **28 dB** as per EN ISO 717-1	CAC = **29 dB** as per ASTM E 413-10
Sound reduction	EN ISO 10140-2 R_w = **13 dB** as per EN ISO 717-1	
Fire reaction	Euroclass **A2-s1, d0** as per EN 13501-1 **Class A** as per ASTM E 84	RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ
Light reflectance	**88%**	
Thermal conductivity	λ = **0.040 W/mk** as per EN 12667	
Humidity resistance	**95% RH**	
Clean room	**ISO 4** as per EN ISO 14644-1	
Indoor air quality	A+	E1 IACG
Cleanability		
Sustainability	42%	www.blauer-engel.de/uz132

Products may vary from country to country.
Please contact your local sales representative.
For further information and legal notice, please visit our website.

AMF TOPIQ®
Prime

- AMF TOPIQ® Prime is a very light stone wool panel with a modern, smooth surface.
- Excellent sound absorption (0.95 α_w)
- Excellent light reflectance (88%)
- ISO 5
- Ideal for offices, retail, classrooms, learning applications and underground garages

AMF TOPIQ® PRIME

Edge details Additional edge details on request	Board 	Tegular 24/90 	Tegular 15/90 
Thickness (mm)	15	15	15
Dimensions (mm) Additional sizes on request	600 x 600 625 x 625 1200 x 600 1250 x 625	600 x 600 625 x 625 1200 x 600	600 x 600 625 x 625 1200 x 600
System	Exposed demountable - System C		
Weight	2.1 kg / m²		
Colour	White		
Sound absorption	EN ISO 354 α_w = **0.95** as per EN ISO 11654 - **Class A** Frequency *f* (Hz) 125 250 500 1000 2000 4000 α_p 0.50 0.85 0.95 0.90 1.00 1.00 NRC = **0.90** as per ASTM C 423		
Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **24 dB** as per EN ISO 717-1	CAC = **24 dB** as per ASTM E 413-10	
Sound reduction	EN ISO 10140-2 R_w = **13 dB** as per EN ISO 717-1		
Fire reaction	Euroclass **A1** as per EN 13501-1 **Class A** as per ASTM E 84	RUS **KM2 (G1, V2, D1, T1)** as per 123-FZ	
Light reflectance	**88%**		
Humidity resistance	**100% RH**		
Clean room	**ISO 5** as per EN ISO 14644-1		
Indoor air quality	 A  E1  IAC		
Cleanability	  		
Sustainability	 32-33%    www.blauer-engel.de/uz132		

Products may vary from country to country.
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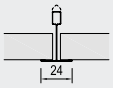
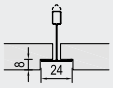
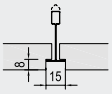
For further information and legal notice, please visit our website.

AMF TOPIQ®
Efficient Pro

- AMF TOPIQ® Efficient Pro is a very light stone wool panel with a modern, smooth surface.
- Excellent sound absorption (1.00 α_w)
- Excellent light reflectance (88%)
- ISO 4
- Ideal for offices, classrooms, learning applications and underground garages

AMF TOPIQ® EFFICIENT PRO

KNAUFCEILING Solutions

Edge details Additional edge details on request	Board 	Tegular 24/90 	Tegular 15/90 
Thickness (mm)	20	20	20
Dimensions (mm) Additional sizes on request	600 x 600 625 x 625 1200 x 600	600 x 600 625 x 625 1200 x 600	600 x 600 625 x 625 1200 x 600
System	Exposed demountable - System C		
Weight	2.8 kg / m²		
Colour	White		
Sound absorption	EN ISO 354 α_w = **1.00** as per EN ISO 11654 - **Class A**		

Frequency *f* (Hz)	125	250	500	1000	2000	4000
α_p	0.45	0.90	1.00	0.95	1.00	1.00

NRC = **0.95** as per ASTM C 423

Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **25 dB** as per EN ISO 717-1	CAC = **25 dB** as per ASTM E 413-10
Sound reduction	EN ISO 10140-2 R_w = **15 dB** as per EN ISO 717-1	
Fire reaction	Euroclass **A1** as per EN 13501-1	RUS **KM2 (G1, V2, D1, T1)** as per 123-FZ
Light reflectance	**88%**	
Humidity resistance	**100% RH**	
Clean room	**ISO 4** as per EN ISO 14644-1	
Indoor air quality	A E1 IAC	
Cleanability		
Sustainability	33% www.blauer-engel.de/uz132	

Healthcare & Hygiene

UNDER CONSTANT SCRUTINY AND DEMANDING THE HIGHEST LEVELS OF COMFORT AND CLEANLINESS, HEALTHCARE SETTINGS GO THROUGH CONTINUAL CHANGES TO ENSURE THE BEST POSSIBLE ENVIRONMENT FOR PATIENTS AND HEALTHCARE PROFESSIONALS.

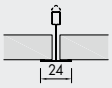
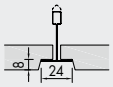
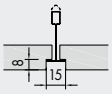
Reaching the essential criteria for individual risk zones, our easy-to-clean products deliver a strong acoustic performance, with impressive sound-absorbing and sound-blocking properties to help create privacy, as well as bring in daylight to reduce in-patient time.

ARMSTRONG BIOGUARD ACOUSTIC OP

- Armstrong BIOGUARD ACOUSTIC OP is suitable for demanding healthcare applications requiring Class A sound absorption and stringent cleaning methods: dry steam and damp cloth using standard detergents. It does not contribute to the growth of MRSA
- Excellent sound absorption (0.95 α_w)
- Good light reflectance (85%)
- ISO 3
- Ideal for healthcare environments with severe risk of infection

Armstrong CEILING SOLUTIONS

ARMSTRONG BIOGUARD ACOUSTIC OP

Edge details Additional edge details on request	Board 	Tegular 24 	Tegular 15/90 
Thickness (mm)	20	20	20
Dimensions (mm) Additional sizes on request	600 x 600 1200 x 600	600 x 600 1200 x 600	600 x 600 1200 x 600
System	Exposed demountable - System C		
Weight	3.3 kg / m²		
Colour	White		
Sound absorption	EN ISO 354 α_w = **0.95** as per EN ISO 11654 - **Class A** NRC = **0.95** as per ASTM C 423		

Frequency *f* (Hz)	125	250	500	1000	2000	4000
α_p	0.55	0.85	0.95	0.90	1.00	1.00

Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **25 dB** as per EN ISO 717-1	CAC = **25 dB** as per ASTM E 413-10
Fire reaction	Euroclass **A2-s1, d0** as per EN 13501-1 **Class A** as per ASTM E 84	RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ
Light reflectance	**85%**	
Thermal conductivity	λ = **0.040 W/mk** as per EN 12667	
Humidity resistance	**95% RH**	
Clean room	**ISO 3** as per EN ISO 14644-1	
Indoor air quality	A+ E1 IACG	
Cleanability		
Sustainability	70%	

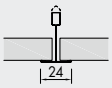
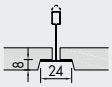
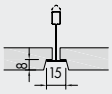
Products may vary from country to country.
Please contact your local sales representative.
For further information and legal notice, please visit our website.

ARMSTRONG BIOGUARD ACOUSTIC

- Armstrong BIOGUARD ACOUSTIC combines excellent cleanability, resistance to disinfectants and sound absorption. Along with its antimicrobial performance, it is an ideal solution for healthcare environments
- Good sound absorption (0.60(H) α_w) and sound attenuation (36 dB)
- Good light reflectance (85%)
- ISO 4
- Ideal for healthcare environments with average or severe risk of infection

Armstrong CEILING SOLUTIONS

ARMSTRONG BIOGUARD ACOUSTIC

Edge details Additional edge details on request	Board 	Tegular 24 	Tegular 15 
Thickness (mm)	17	17	17
Dimensions (mm) Additional sizes on request	600 x 600 1200 x 600	600 x 600 1200 x 600	600 x 600 1200 x 600
System	Exposed demountable - System C		
Weight	4.5 kg / m²		
Colour	White		
Sound absorption	EN ISO 354 α_w = **0.60(H)** as per EN ISO 11654 - **Class C** Frequency *f* (Hz) 125 250 500 1000 2000 4000 α_p 0.35 0.40 0.50 0.70 0.85 0.90 NRC = **0.60** as per ASTM C 423		
Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **36 dB** as per EN ISO 717-1	CAC = **37 dB** as per ASTM E 413-10	
Sound reduction	EN ISO 10140-2 R_w = **18 dB** as per EN ISO 717-1		
Fire reaction	Euroclass **A2-s1, d0** as per EN 13501-1	RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ	
Light reflectance	**85%**		
Thermal conductivity	λ = **0.060 W/mk** as per EN 12667		
Humidity resistance	**95% RH**		
Clean room	**ISO 4** as per EN ISO 14644-1		
Indoor air quality	A+ E1 IACG		
Cleanability			
Sustainability	42%		

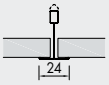
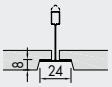
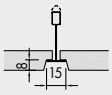
Products may vary from country to country.
Please contact your local sales representative.
For further information and legal notice, please visit our website.

ARMSTRONG BIOGUARD PLAIN 15mm

- Armstrong BIOGUARD PLAIN combines excellent cleanability and resistance to disinfectants. Along with its antimicrobial performance, it is an ideal solution for healthcare environments
- Good sound attenuation (35 dB)
- Excellent light reflectance (87%)
- ISO 5
- Ideal for healthcare environments with average or severe risk of infection

Armstrong CEILING SOLUTIONS

ARMSTRONG BIOGUARD PLAIN 15mm

Edge details Additional edge details on request	Board 	Tegular 24 	Tegular 15 
Thickness (mm)	15	15	15
Dimensions (mm) Additional sizes on request	600 x 600 1200 x 600	600 x 600 1200 x 600	600 x 600 1200 x 600
System	Exposed demountable - System C		
Weight	3.5 - 3.6 kg / m²		
Colour	White		
Sound absorption	EN ISO 354 α_w = **0.20(L)** as per EN ISO 11654 - **Class E** Frequency *f* (Hz): 125 / 250 / 500 / 1000 / 2000 / 4000 α_p: 0.40 / 0.25 / 0.15 / 0.15 / 0.20 / 0.30 NRC = **0.20** as per ASTM C 423		
Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **35 dB** as per EN ISO 717-1	CAC = **35 dB** as per ASTM E 413-10	
Sound reduction	EN ISO 10140-2 R_w = **19 dB** as per EN ISO 717-1		
Fire reaction	Euroclass **A2-s1, d0** as per EN 13501-1	RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ	
Light reflectance	**87%**		
Thermal conductivity	λ = **0.060 W/mk** as per EN 12667		
Humidity resistance	**95% RH**		
Clean room	**ISO 5** as per EN ISO 14644-1		
Indoor air quality	A+	E1	IACG
Cleanability			
Sustainability	31 - 42%		

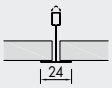
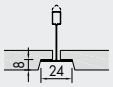
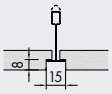
Products may vary from country to country.
Please contact your local sales representative.
For further information and legal notice, please visit our website.

ARMSTRONG SANIGUARD

- Armstrong SANIGUARD fulfils all hygienic requirements for healthcare applications and does not contribute to the growth of MRSA. It offers a smooth laminated finish and Class A sound absorption
- Excellent sound absorption (0.95 α_w)
- Good light reflectance (85%)
- ISO 5
- Ideal for healthcare environments with average risk of infection

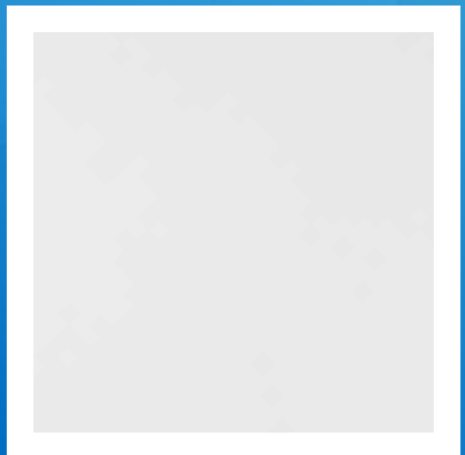
Armstrong CEILING SOLUTIONS

ARMSTRONG SANIGUARD

Edge details Additional edge details on request	Board 	Tegular 24 	Tegular 15/90 
Thickness (mm)	15	15	15
Dimensions (mm) Additional sizes on request	600 x 600 1200 x 600	600 x 600	600 x 600
System	Exposed demountable - System C		
Weight	2.5 kg / m²		
Colour	White		
Sound absorption	EN ISO 354 α_w = **0.95** as per EN ISO 11654 - **Class A** Frequency *f* (Hz) 125 250 500 1000 2000 4000 α_p 0.50 0.80 0.95 0.85 0.95 1.00 NRC = **0.90** as per ASTM C 423		
Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **25 dB** as per EN ISO 717-1	CAC = **25 dB** as per ASTM E 413-10	
Fire reaction	Euroclass **A2-s1, d0** as per EN 13501-1	RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ	
Light reflectance	**85%**		
Thermal conductivity	λ = **0.040 W/mk** as per EN 12667		
Humidity resistance	**95% RH**		
Clean room	**ISO 5** as per EN ISO 14644-1		
Indoor air quality	A+	E1	IACG
Cleanability			
Sustainability	66%		

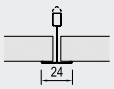
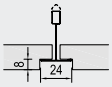
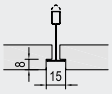
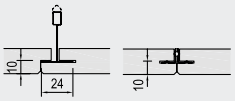
Products may vary from country to country.
Please contact your local sales representative.
For further information and legal notice, please visit our website.

AMF THERMATEX®
Aquatec



- AMF THERMATEX® Aquatec is the optimal solution for high humidity areas of up to 100% RH. It offers excellent sound absorption, and is suitable for high pressure water cleaning. Its high-quality design makes it the ideal solution for hygiene and healthcare environments
- Excellent sound absorption (0.90 α_w)
- Excellent light reflectance (88%)
- ISO 3
- Ideal for healthcare environments, laboratories, treatment rooms, locker rooms or shower areas

AMF THERMATEX® AQUATEC

Edge details Additional edge details on request	Board 	Tegular 24/90 	Tegular 15/90 	Finesse 
Thickness (mm)	19	19	19	19
Dimensions (mm) Additional sizes on request	600 x 600 625 x 625	600 x 600 625 x 625	600 x 600 625 x 625	600 x 600 625 x 625
System	Exposed demountable - System C			Concealed, demountable - System A.2 / A.3
Weight	5.2 kg / m²			
Colour	White			
Sound absorption	EN ISO 354 α_w = **0.90** as per EN ISO 11654 - **Class A** NRC = **0.90** as per ASTM C 423			
Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **29 dB** as per EN ISO 717-1		CAC = **29 dB** as per ASTM E 413-10	
Sound reduction	EN ISO 10140-2 R_w = **16 dB** as per EN ISO 717-1			
Fire reaction	Euroclass **A2-s1, d0** as per EN 13501-1 **Class A** as per ASTM E 84		RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ	
Light reflectance	**88%**			
Thermal conductivity	λ = **0.060 W/mk** as per EN 12667			
Air permeability	**PM1** (≤ 30 m³/hm²) as per DIN 18177			
Humidity resistance	**100% RH**			
Clean room	**ISO 3** as per EN ISO 14644-1			
Indoor air quality	A+	E1	IACG	
Cleanability				
Sustainability	35%		www.blauer-engel.de/uz132	

Products may vary from country to country.
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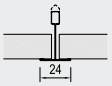
For further information and legal notice, please visit our website.

AMF THERMATEX®
Aquatec Hygena

- AMF THERMATEX® Aquatec Hygena is the ideal solution for high humidity areas of up to 100% RH. It offers excellent sound absorption, and its washable, high quality design makes it the ideal solution for hygiene and healthcare environments. The surface is washable and anti-microbial (resistant to the growth of germs, bacteria and fungi)
- Excellent sound absorption (0.90 α_w)
- Excellent light reflectance (88%)
- ISO 3
- Ideal for healthcare environments, laboratories, treatment rooms, intensive care units, locker rooms or shower areas

AMF THERMATEX® AQUATEC HYGENA

Edge details Additional edge details on request	Board 
Thickness (mm)	19
Dimensions (mm) Additional sizes on request	600 x 600 625 x 625
System	Exposed demountable - System C
Weight	5.2 kg / m²
Colour	White
Sound absorption	EN ISO 354 α_w = **0.90** as per EN ISO 11654 - **Class A** Frequency *f* (Hz) 125 250 500 1000 2000 4000 α_p 0.60 0.70 0.85 0.90 1.00 1.00 NRC = **0.90** as per ASTM C 423
Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **29 dB** as per EN ISO 717-1 CAC = **29 dB** as per ASTM E 413-10
Sound reduction	EN ISO 10140-2 R_w = **16 dB** as per EN ISO 717-1
Fire reaction	Euroclass **A2-s1, d0** as per EN 13501-1 RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ **Class A** as per ASTM E 84
Light reflectance	**88%**
Thermal conductivity	λ = **0.060 W/mk** as per EN 12667
Air permeability	**PM1** (≤ 30 m³/hm²) as per DIN 18177
Humidity resistance	**100% RH**
Clean room	**ISO 3** as per EN ISO 14644-1
Indoor air quality	A+ E1 IACG
Cleanability	
Sustainability	35%

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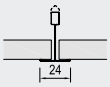
AMF THERMATEX® Thermaclean

- AMF THERMATEX® Thermaclean combines excellent cleanability with good resistance to germs and fungi. It has a laminated finish with a white vinyl foil, that ensures a timeless look
- Good sound attenuation (34 dB)
- ISO 4
- Ideal for healthcare environments, laboratories, treatment rooms, intensive care units

AMF THERMATEX® THERMACLEAN

Edge details Additional edge details on request	Board 
Thickness (mm)	15
Dimensions (mm) Additional sizes on request	600 x 600 625 x 625
System	Exposed demountable - System C
Weight	3.6 kg / m²
Colour	White
Sound absorption	EN ISO 354 α_w = **0.10 (L)** as per EN ISO 11654

Frequency *f* (Hz)	125	250	500	1000	2000	4000
α_p	0.35	0.20	0.10	0.10	0.10	0.10

NRC = **0.15** as per ASTM C 423

Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **34 dB** as per EN ISO 717-1 — CAC = **36 dB** as per ASTM E 413-10
Sound reduction	EN ISO 10140-2 R_w = **19 dB** as per EN ISO 717-1
Fire reaction	Euroclass **A2-s3, d0** as per EN 13501-1 — RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ
Light reflectance	**81%**
Thermal conductivity	λ = **0.060 W/mk** as per EN 12667
Air permeability	**PM1** (≤ 30 m³/hm²) as per DIN 18177
Humidity resistance	**95% RH**
Clean room	**ISO 4** as per EN ISO 14644-1
Indoor air quality	A+ E1
Cleanability	
Sustainability	45%

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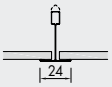
ARMSTRONG NEWTONE

- Armstrong NEWTONE is a hydrated calcium silicate ceiling tile offering 100% RH performance and is suitable for use in areas subject to extremes of humidity and temperature
- High sound attenuation (37 dB)
- Ideal for spas and water parks

ISO 9001
ISO 14001

Armstrong CEILING SOLUTIONS

ARMSTRONG NEWTONE

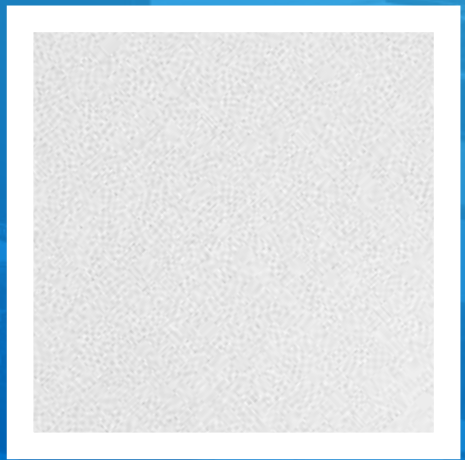
Edge details Additional edge details on request	Board 
Thickness (mm)	6
Dimensions (mm) Additional sizes on request	600 x 600
System	Exposed demountable - System C
Weight	8.0 kg / m²
Colour	White
Sound absorption	EN ISO 354 α_w = **0.10(L)** as per EN ISO 11654 - **Class N/A** Frequency *f* (Hz) 125 250 500 1000 2000 4000 α_p 0.25 0.15 0.10 0.10 0.10 0.05 NRC = **0.10** as per ASTM C 423
Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **37 dB** as per EN ISO 717-1
Fire reaction	Euroclass **A1-s1,d0** as per EN 13501-1 RUS **KM0 (NG)** as per 123-FZ
Light reflectance	**84%**
Humidity resistance	**100% RH**
Indoor air quality	A+ E1
Cleanability	

In all environments where humidity conditions could regularly reach and/or exceed 90% RH we recommend the use of 24mm corrosive resistant grid and associated accessories.

Classic Sanded

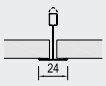
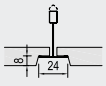
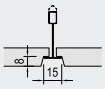
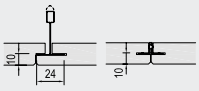
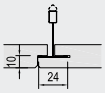
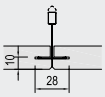
WITH A FINELY TEXTURED SURFACE, THE SANDED CLASSIC MINERAL CEILING SOLUTION PROVIDES A PERFECT BALANCE OF LIGHT REFLECTANCE AND ACOUSTIC PERFORMANCE TO ENHANCE COMFORT.

AMF THERMATEX®
Feinstratos Micro



- AMF THERMATEX® Feinstratos Micro features a finely textured surface and creates an even, uniform ceiling appearance with good sound absorption
- Good sound absorption (0.60 α_w)
- Good to high sound attenuation (34-38 dB)
- Good light reflectance (85%)
- Ideal for retail, offices and meeting rooms, installation rooms or production areas

AMF THERMATEX®
FEINSTRATOS MICRO

Edge details Additional edge details on request	Board 	Tegular 24 	Tegular 15 	Finesse 	SL2 	K2C2 
Thickness (mm)	15, 19	15, 19	15	19	19	15
Dimensions (mm) Additional sizes on request	600 x 600 625 x 625 1200 x 600 1250 x 625	600 x 600 625 x 625 1200 x 600	600 x 600 625 x 625 1200 x 600	600 x 600 625 x 625 1200 x 600	1500 x 300 1800 x 300 2000 x 312,5 2500 x 300 2500 x 312,5	2000 x 312,5 2500 x 312,5
System	Exposed demountable - System C			Concealed, demountable - System A.2 / A.3	Semi-concealed planks, demountable - System I.3 Semi-concealed planks - Bandraster, demountable - System I.2 Semi-concealed planks - Corridor, demountable - System F.2	Semi-concealed planks, non-demountable - System I.3 Semi-concealed planks - Bandraster, non-demountable - System I.1 Semi-concealed planks - Corridor, non-demountable - System F.1

Weight

3.9 - 5.0 kg / m²

Colour

White

Sound absorption

EN ISO 354

α_w = **0.60** as per EN ISO 11654 - **Class C**

Frequency f (Hz)	125	250	500	1000	2000	4000
α_p	0.50	0.50	0.55	0.70	0.65	0.50

NRC = **0.60** as per ASTM C 423

Sound attenuation

EN ISO 10848-2

$D_{n,f,w}$ = **34 dB** Board, Tegular 24, Tegular 15, K2C2 (15mm) as per EN ISO 717-1

$D_{n,f,w}$ = **38 dB** Board, Tegular 24, Finesse, SL2 (19mm) as per EN ISO 717-1

CAC = **35 dB** (15mm) CAC = **38 dB** (19mm) as per ASTM E 413-10

Sound reduction

EN ISO 10140-2

R_w = **21 dB** as per EN ISO 717-1

Fire reaction

Euroclass **A2-s1, d0** as per EN 13501-1
Class A as per ASTM E 84

RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ

Light reflectance

85%

Thermal conductivity

λ = **0.060 W/mk** as per EN 12667

Humidity resistance

95% RH

Indoor air quality

A+ E1 IACG

Cleanability

Sustainability

37-43%

Products may vary from country to country.
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For further information and legal notice, please visit our website.

Classic Fissured/ Perforated

CHOOSE A FISSURED SURFACE FROM THE CLASSIC MINERAL RANGE TO ENJOY ITS UNIQUE COMBINATION OF SUPERIOR SOUND ABSORPTION AND SOUND ATTENUATION FOR IMPROVED INTELLIGIBILITY.

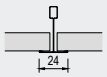
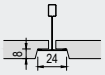
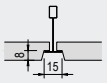
DATASHEET

Star 15mm

- Star 15mm features fine, uneven perforations with a smooth surface finish, and meets the needs for a modern, elegant design visual
- Good sound absorption (0.60 α_w)
- Good sound attenuation (34 dB)
- Excellent light reflectance (88%)
- Ideal for retail, offices and meeting rooms, installation rooms or production areas

DATASHEET

Star 15mm

	Board	Tegular 24	Tegular 15	K2C2
Edge details Additional edge details on request				
Thickness (mm)	15	15	15	15
Dimensions (mm) Additional sizes on request	600 x 600 625 x 625 1200 x 600 1250 x 625 2500 x 300	600 x 600 625 x 625 1200 x 600	600 x 600 625 x 625 1200 x 600	2000 x 312,5 2500 x 312,5
System	Exposed demountable - System C Exposed - Bandraster, demountable - System I.3 Exposed - Corridor, demountable - System F.3			Semi-concealed planks, non-demountable - System I.3
Weight	3.6 - 3.8 kg / m²			
Colour	White			

Sound absorption

EN ISO 354 — α_w = **0.60** as per EN ISO 11654 - **Class C**

Frequency *f* (Hz)	125	250	500	1000	2000	4000
α_p	0.45	0.50	0.55	0.70	0.65	0.50

NRC = **0.60** as per ASTM C 423

Sound attenuation

EN ISO 10848-2
$D_{n,f,w}$ = **34 dB** as per EN ISO 717-1
CAC = **35 dB** as per ASTM E 413-10

Sound reduction

EN ISO 10140-2
R_w = **21 dB** as per EN ISO 717-1

Fire reaction

Euroclass **A2-s1, d0** as per EN 13501-1
Class A as per ASTM E 84

Light reflectance

88%

Thermal conductivity

λ = **0.060 W/mk** as per EN 12667

Humidity resistance

95% RH

Indoor air quality

A+ E1

Cleanability

Sustainability

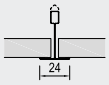
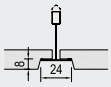
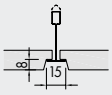
37-48%

Products may vary from country to country.
Please contact your local sales representative.
For further information and legal notice, please visit our website.

AMF THERMATEX® Feinfresko

- AMF THERMATEX® Feinfresko features an uneven textured finish and offers good sound absorption for better acoustic comfort
- Good sound absorption (0.60 (H) α_w)
- High sound attenuation (32 dB)
- Ideal for retail, offices and meeting rooms, installation rooms or production areas

AMF THERMATEX® FEINFRESKO

Edge details Additional edge details on request	Board 	Tegular 24 	Tegular 15 
Thickness (mm)	15	15	15
Dimensions (mm) Additional sizes on request	600 x 600 625 x 625 1200 x 600 1250 x 625	600 x 600 625 x 625	625 x 625
System	Exposed demountable - System C		
Weight	3.6 - 3.8 kg / m^2		
Colour	White		
Sound absorption	EN ISO 354 α_w = **0.60 (H)** as per EN ISO 11654 - **Class C** NRC = **0.60** as per ASTM C 423		
Sound attenuation	EN ISO 10848-2 $D_{n,f,w}$ = **32 dB** as per EN ISO 717-1	CAC = **32 dB** as per ASTM E 413-10	
Sound reduction	EN ISO 10140-2 R_w = **21 dB** as per EN ISO 717-1		
Fire reaction	Euroclass **A2-s1, d0** as per EN 13501-1	RUS **KM1 (G1, V1, D1, T1)** as per 123-FZ	
Light reflectance	**83%**		
Thermal conductivity	λ = **0.060 W/mk** as per EN 12667		
Air permeability	**PM1** (≤ 30 m^3/hm^2) as per DIN 18177		
Humidity resistance	**90% RH**		
Indoor air quality	A+	E1	IACG
Cleanability			
Sustainability	37-48%		

Frequency f (Hz)	125	250	500	1000	2000	4000
α_p	0.45	0.40	0.50	0.70	0.80	0.75

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Fire Protection

FIRE PERFORMANCE IS AN IMPORTANT CONSIDERATION FOR EVERY CEILING SYSTEM - NO MATTER HOW SIMPLE OR COMPLEX.

Our ceiling tiles are engineered to meet the most stringent industry standards. Select from a broad range of looks and acoustic options to meet your design and fire reaction requirements.

EXPERIENCE MORE POSSIBILITIES

AMF THERMATEX® Uno

Uno EI 30

System Uno is a corridor span solution that offers independent fire protection EI 30 from above and below. If a fire occurs within the ceiling void, escape routes underneath remain free of smoke, flame and heat. Or if it occurs below the ceiling, the building structure and services in the ceiling void are protected. System Uno planks installed on a supporting perimeter construction can span up to 2.8m without suspension hangers, and are quick and easy to install.

The system offers good levels of sound absorption and is available in a variety of finishes.

ARMSTRONG SUSPENSION SOLUTIONS "PRECISION MEETS PERFORMANCE"

Knauf Ceiling Solutions suspension systems include a full range of solution and detailing for all ceiling suspension requirements. A full range of accessories is also available.

GENERAL SOLUTIONS

A range of standard exposed grid suspensions systems including Prelude 15, Prelude 24, Prelude 24 Sixty² for longer spans, Prelude 35 and Bandraster.

- **PEAKFORM**
  Most profiles in the Prelude range of grids feature the innovative Peakform design which is taller and engineered to create stronger, more stable suspension systems. The Peakform shape makes Main Runners and Cross Tees quicker and easier to cut.

- **PRELUDE UNIVERSAL MAIN RUNNER**
  The Prelude Universal Main Runner supports the installation of either TL² or TL hook/butt cut Cross Tees or XL² stab/override Cross Tees from one simple inventory of Main Runners.

- **XL² CROSS TEES – "Click" installation**
  Prelude XL² Cross Tees feature an advanced stab system that locates with an audible click, ensuring a solid installation at all times.

- **TL² CROSS TEES – "Hook" installation**
  TL² is a highly engineered staked-on hook solution with a patented clip.

- **TL CROSS TEES – "Hook" installation**
  Prelude TL Cross Tees in 15mm width feature an advanced an integrally formed hook nose.

Products may vary from country to country.
Please contact your local sales representative.

DESIGN SOLUTIONS

PERFECTLINE XL² is designed to create a crisp, clean look to provide an enhanced aesthetic. The channel profile finishes flush with the ceiling surface leaving a minimalist 3mm or 6mm reveal.

SPECIFIC SOLUTIONS

- **Clean Room 24** is a unique co-extrusion of aluminium with a PVC gasket to create a better seal between tile and grid for clean room applications and "non-magnetic" environments.
- **Prelude 24 Corrosive Resistant** has a special paint finish and is designed for areas requiring enhanced corrosion resistance.
- **System Z** is a system providing an accessible semi-concealed appearance with ship-lap SL2 planks.
- **Seismic Rx®** is a specific installation method for Prelude 24 grid with XL² Cross Tees combined with specialist accessories.

CORRIDOR SOLUTIONS

- Multiple corridor options from freespaning semi-concealed grid for corridors with SL2 demountable planks.

AXIOM SOLUTIONS

- AXIOM Transitions, Profiles and accessories compliment the traditional range of perimeter angle trims. Create changes in level, perimeter lighting features or transition to a flush plasterboard perimeter.

Armstrong® CEILING SOLUTIONS

DONN®
“COMPETENT AND COMPATIBLE”

The proven DONN® DX technology with the patented gold clip has long been regarded as a guarantee for high quality ceiling grid substructures. A wide range of products guarantees consistent, flexible and certified system compatibility.

PRODUCT BENEFITS

- More stability, increased security, faster installation
- Three rib design for more rigidity
- Clear audible click-connection
- Compatible with all well-known acoustic ceiling tiles
- Create individual ceiling designs with alternative colour options for the capping: Black matt (LM), Metal 06 (D), Aluminium (A), Chrome (M), Gold (Q)., Additional RAL colours available on request.
- Wide range of system fire tests for all common soffit types according to the latest EN 1365-2 in conjunction with EN 1363-1

Products may vary from country to country.
Please contact your local sales representative.

STABLE AND SECURE CEILING GRID STRUCTURE

The DX3® technology with its patented rib design gives DX main runner and long cross tee ceiling grid structures even more rigidity. The profiles are dimensionally more stable and have greater torsional strength. This results in an easier and therefore faster installation and gives a stable and secure ceiling grid structure.

PROVEN DONN® SYSTEM PORTFOLIO

DX Standard

Create shadow gaps and reveals to highlight the modularity in a ceiling, with the DX Fineline system. The system features a box profile with a central groove (6.5mm width) along the exposed profile that creates a shadow gap of varying visibility, dependent on the rooms lighting conditions.

Design & Aesthetic

An increasing number of ceiling constructions require special solutions, which cannot be achieved using conventional systems. These include, amongst others, wide span, heavy load, corridor and corrosion protected systems.

Function & Creativity

All DX standard systems are characterised by a combination of subtle appearance and high efficiency. The systems are available in 24 and 15mm profile widths (visible area).

AMF VENTATEC®
"QUALITY AND FLEXIBILITY"

High material quality and precise technical detailing characterise the standard of the profiles. The high performance product design guarantees the stability, safety and flexibility of the construction. In combination with AMF THERMATEX®, the result is a perfect ceiling solution to meet the highest requirements.

PRODUCT BENEFITS

- Modular system – Click (Joggled, Butt Cut)
- High stability due to stitching and ribbing
- Strong connection between main runners and cross tees as a result of the stainless steel end clips
- Easy to handle and simple to install
- Quick and easy removal of the cross tees
- Audible click confirms secure connection of Click-components
- Wide range of system fire tests for all common soffit types according to the latest EN 1365-2 in conjunction with EN 1363-1

Products may vary from country to country.
Please contact your local sales representative.

Individual and flexible ceiling grid structure

The AMF VENTATEC® ceiling suspension grid system offers maximum flexibility as a simple Click- construction, with high or low cross tees in both joggled and butt cut options. 24 or 15mm profile widths are available, the system can be individually adapted to many aesthetic and functional requirements.

Certified in fire protection

We help our customers with tested fire protection systems in the ceiling area. The product and system developments introduced in recent years have been tested against the latest standards and test criteria taking all aspects of the ceiling construction (such as integrated lighting) into account. The result is a comprehensive portfolio of current fire tests with the AMF VENTATEC® grid system in combination with AMF THERMATEX® ceiling tiles protecting all relevant soffit types.


PARTNER
CONSTRUCTION
PARTNER
DESIGN

YOUR **CEILING**
OUR **SOLUTIONS**

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