

The background of the cover is a photograph of a modern, bright interior space, likely a gym or a large office. It features a high ceiling with a grid of recessed lighting, large windows on the right side, and a polished floor. In the foreground, there are some pieces of equipment, including what looks like a pull-up bar and some rolled-up materials. A large, stylized blue graphic element, resembling a folded piece of paper or a ribbon, cuts across the middle of the image, separating the top text from the bottom image.

KNAUF

ORGANIC RANGE
KNAUF FIBRE **2016**



EDITORIAL



Denis Kleiber
General Manager of Knauf Bâtiment

The construction sector has been marked by an unprecedented decline since 2012. Although we have seen some signs of recovery, particularly with growing demand from private buyers of new residential buildings, we cannot forget the lessons that we have learned during the past four years of crisis. We have confidence in our current policy as we are “Part of the Solution” with you.

“Part of the Solution” by being innovative in a pragmatic manner and proposing solutions in line with current concerns:

- Knauf Easy Click system associated with Knauf Thane RB2 Wall for effective inner wall insulation and a high level of thermal performance with optimised habitable areas.
- Organic Sound and Cleaneo® Up acoustic baffles and blocks to combat noise pollution.
- Knauf Façade Covering system to protect façades against damage on the ground and first floors in line with the ETI.
- Complete adaptable system for the waterproofing and insulation of terrace roofs for asphalt spreaders, Asfalthane.

“Part of the Solution” by preparing for the future and investing in the energy transition with the launch of a new polyurethane insulation production line.

“Part of the Solution” with a view to supporting you in your day-to-day business: Technical support available by email or telephone, digital tools to visualise sites, download product sheets, configure and cost a project.

“Part of the Solution” by offering you a local service. A business manager in each region and for each business will support and advise you based on his in-depth knowledge of the local market and your concerns.

We are committed to offering you specific, appropriate solutions for each of your projects.



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KNAUF & YOU



From a family-owned firm
to a family of firms

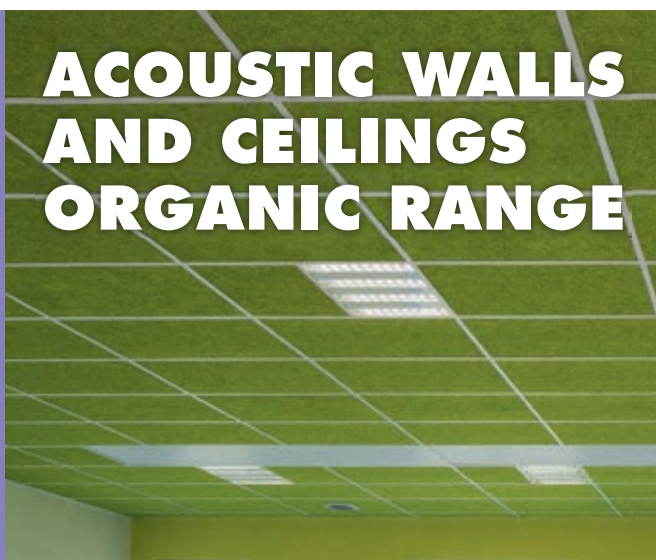
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Knauf Bâtiment,
a mark of commitment

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ACOUSTIC WALLS AND CEILINGS ORGANIC RANGE



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YOUR PRODUCTS AND SERVICES ALSO ON KNAUF-BATIMENT.FR

ONLY IN FRENCH



Specific requirements?

With the search engine on knauf-batiment.fr, you can find the optimum solution and download the essential documents for your projects (FDES, technical evaluations, etc.)

Product sheets just a click away!

You can access the product sheet directly with the Web link and the flash code.


www.knauf-batiment.fr

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FROM A FAMILY-OWNED FIRM TO A FAMILY OF FIRMS

KNAUF & YOU



1932

Two young engineers, brothers Karl and Alfons Knauf, founded Gebrüder Knauf a company specialising in the extraction and exploitation of gypsum, in Germany. The company began to diversify fairly quickly into the production of construction materials dedicated to the shell and interior layout of buildings.

In **1958**, the company became involved in the industrial production of wall boards in addition to new specialities in the fields of insulation and packaging.

1984

Arrival of Knauf in France.

Within the space of 80 years, Knauf has grown from a family-owned firm to become a world leader in the construction materials industry. Whilst **reliability, credibility and integrity form the basis of the commercial success of Knauf**, its growth could not be consolidated without strong human and social principles. For all subsequent managers who have handed over the reins from father to son, **the family represents a circle** in which individuals motivated by different but converging interests **help and support one another in pursuing a shared goal**.

Today, the entrepreneurial spirit generated by the Knauf brothers is more relevant than ever: **Knauf has grown into a huge family of 26,500 employees** who all share the same desire to understand their customers and tackle challenges together.



AN INTERNATIONAL REPUTATION

Since its establishment in the United States in 1978 via the acquisition of a glass wool factory, **Knauf has developed an excellent reputation throughout the world.**

The firm is known both for the production of **construction and insulation materials** and for **100% Knauf** construction systems (rails, uprights, coatings, spray machines, equipment, etc.) as well as for specific activities (honeycomb moulding, plastic injection and thermoforming).

PRESENCE
ON ALL
5 CONTINENTS
AND IN OVER
80 COUNTRIES

**LEADING WORLDWIDE
TRANSFORMER OF EP**

**LEADING EUROPEAN
PRODUCER
OF WALL BOARDS**

**220 FACTORIES
AND OVER 70 QUARRIES
WORLDWIDE**

**26,500 EMPLOYEES
WORLDWIDE**

**OVER 6.4 BILLION EUROS
IN TURNOVER IN 2014**

INNOVATION FOCUSING ON EFFICIENCY

Our vision for innovation? Adoption of the principle of **pragmatic research** to adapt to **market demand**. Knauf does not systematically strive to invent new products but is continually developing **new solutions to suit your requirements perfectly.**

This **strong dynamism within our Research and Development division** is based on:

- Considerable resources and competent employees in a targeted field
- A strong history of tests recorded in a precise, exhaustive database
- A fire laboratory within the Research and Development division



CERTIFIED QUALITY

The basic values followed by Knauf include competitiveness, innovation and product and service quality.

Knauf does its utmost to ensure that its products attain **the highest levels in terms of the certification and conformity of their performances** which are confirmed by official documents:

- Fire, mechanical and acoustic performance : **Reports**
- Innovative building processes: **Technical statements**
- Thermal performances: **ACERMI**

Or by external bodies independent of the construction sector. Numerous Knauf projects also include:

- An **environmental product declaration (FDES)** which clearly indicates the environmental and health-related impacts of our products.
- **CE labelling** according to the regulation on construction products establishing the harmonised conditions for the marketing of construction products repealing the Council directive 89/106/EEC.
- **Declarations of Performance (DoP)** which confirm that products are compliant with this harmonised European standard and issue **CE labelling** for all the products concerned.





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ACOUSTIC WALLS & CEILINGS (WOOD WOOL) ORGANIC RANGE

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THE MARKET

ACOUSTIC COMFORT AS EASY ON THE EYES AS ON THE EARS

The acoustic quality of an area is fundamental, both in a professional context and in a relaxation area: the reverberation of sound can be tiring and can impede discussions or alter the quality of music, for example. Architects are increasingly looking for effective solutions to enhance their architectural projects, particularly for public access buildings. In response to this requirement, Knauf offers effective acoustic solutions whilst emphasising creativity and aesthetics.

PUBLIC ACCESS
BUILDINGSCOLLECTIVE
ACCOMMO-
DATIONSPORTING /
CULTURAL
ESTABLISHMENTS

KNAUF INNOVATION

ORGANIC, NATURALLY DIFFERENT ACOUSTICS

**FDES
AVAILABLE**
KNAUFHQE®



Acoustic slabs made from Organic wood wool are healthy, ecological and rot-proof and proudly embody their dual features of "modernity and environment".

Put an end to monotony with the Organic range and choose from natural or coloured designs or motifs. Add depth to your walls and create a perfect harmony with your ceilings. These adaptable slabs give volume to an area and create a unique graphic identity.

The natural components of the Organic range are compliant with the HQE® procedure. They are made from spruce, lime and cement and coated with a sunflower oil based paint and do not emit any VOC (volatile organic component). The spruce is sourced from controlled plantations with 80% being cut from a 200 km area around the factory (in order to limit the carbon impact).

The energy required to dry the panels is obtained from a boiler supplied with offcuts of wood and over 90% of the wood suppliers possess a sustainable forest management label, PEFC.

The environmental performances of the Organic slabs are certified by FDES (environmental product declarations).

PRODUCT SOLUTION

ORGANIC RANGE

The standard slab par excellence.
Guarantees excellent acoustic performance
in walls and ceilings both inside and out.



DIMENSIONAL TOLERANCES OF FINISHED PRODUCTS CEILING RANGE

The different tolerances of the range produced by Knauf Fibre, with reference to the standard NF EN 13168 "Products manufactured from wood fibre", are described in the table below:

Ceiling range:	Category	Tolerances	
Length	L4	+1/-1 mm (less than or = 1250 mm)	+2/-2 mm (greater than 1,250 mm)
Width	W2	+1/-1 mm	
Thickness for assembly with visible attachment with through screws	T2	+1/-1 mm	+2/-2 mm (longer than 1,250 mm)
Thickness for other types of assembly	T1	+3/-2 mm	+4/-3 mm (longer than 1,250 mm)
Squaring		less than or = 5 mm	
Levelness	P2	less than or = 3 mm	

For the purpose of harmonising thicknesses, we may in exceptional cases be required to calibrate them according to a nominal thickness which is ± 1 mm compared with the planned measurement. This does not call into question the thickness tolerances presented in the table above.

NB: wood fibre is a natural product which therefore reacts naturally and has a tendency to retract / dilate.

The relative change (determined according to the standard EN 1604) does not exceed 3% in thickness and 0.5% in length and width.



KNAUF'S STRENGTHS

- Natural product
- High level of acoustic absorption
- Wide range of colours
- Meets HQE® project requirements
- Versatility and easy installation

DID YOU KNOW?

Wood wool is a natural insulator and is obtained by "grating" pieces of wood and soaking them in a cement and lime binder to guarantee protection against damp, mould and insects.

After a number of operations, the product is transformed into this famous slab which can be recognised by its overlapping natural fibres.

1

SELECT your solution according to your acoustic requirements

The Organic concept is intended for ceilings and walls, both inside and out, and is presented as the new collection of natural slabs par excellence, combining aesthetics, technical quality and wide ranges.

The wood wool controls noise reverberation and guarantees remarkable acoustic comfort in all situations.

Thanks to the large panel dimensions (1,200 x 600 mm, 2,000 x 600 mm...), Organic is a perfect solution for theatres or swimming pools combining an excellent acoustic quality and an attractive appearance.

ORGANIC

The acoustic answer to all your projects



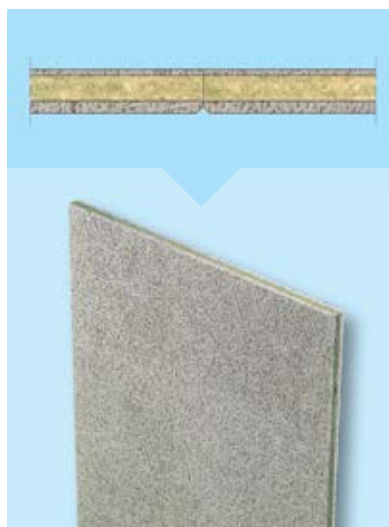
The standard slab par excellence, **Organic** can be adapted to all aesthetic and acoustic requirements both inside and out for ceilings or walls.

Organic 35 mm (plenum 200 mm)
 $\alpha_w = 0.70$ (H)

Product detail p. 16

ORGANIC TWIN

Excellent acoustic performance



Combine natural aesthetics with excellent acoustic performances: **Organic Twin** has taken up this challenge and is easy on the eyes and the ears.

Organic 50 mm (plenum 200 mm)
 $\alpha_w = 0.95$ (LH)

Product detail p. 22

ORGANIC MINERAL

Combining acoustic and thermal performance



Thanks to the wood wool and rock wool, **Organic Mineral** offers a combination of excellent acoustic and thermal performances.

Organic 75 mm (plenum 50 mm)
 $\alpha_w = 1$
 $R = 1.65 \text{ m}^2 \text{ K/W}$

Product detail p. 26

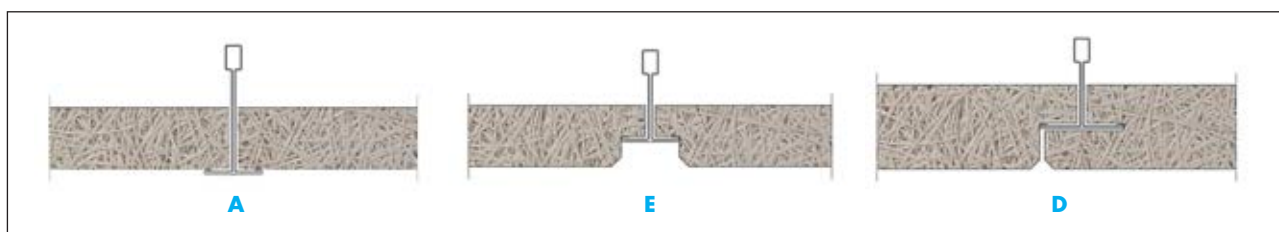
SELECT your solution according to the type of Implementation

INSTALLATION ON T24 OR T35 – ONLY WITH REMOVABLE CEILING

- T24 structure for panels with 25 mm thickness
- T24 structure for panels with 35 mm thickness

3 edges available

- Straight edge **A** (Organic + Organic Twin)
- Bevelled recessed edge **E** (Organic)
- Edge with concealed removable frame **D** (Organic + Organic Twin)



INSTALLATION WITH MECHANICAL ATTACHMENT (PERMANENT) ON WALLS OR CEILINGS

1 type of edge

- Bevelled on 4 sides

2 types of installation

- IMA: invisible attachment thanks to IVFIB clip (Organic + Organic Mineral) or Organic clip (Organic)
- VMA: visible attachment by means of through screw (Organic + Organic Mineral + Organic Twin)



Les Boutours nursery school – Rosny sous Bois (93) – Organic



Swimming pool – Montigny les Metz (57) – Organic FMV

1

OPTIMISING

your selection
according to your inspiration
and environment

STANDARD RANGE

This unpainted range represents the quintessence of wood playing on "nature par excellence" and may **contain colour variations**.



Organic Pure
Enjoy the natural warm colour of wood.

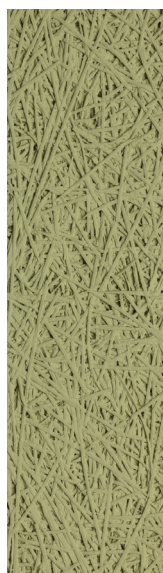


Organic Beton
Maintain the rough appearance of the slab.

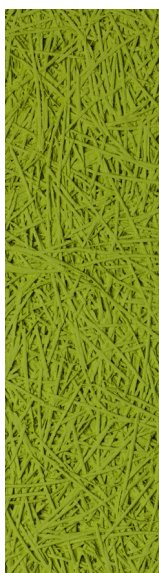
COLOUR RANGE

- The wide range of Organic colours offers infinite creative possibilities. Each order is completed upon request
- The paint used for each colour is guaranteed not to contain any solvents. It is a plant-based paint made from sunflower oil.
- It is important to follow the instructions for use when handling the cut.

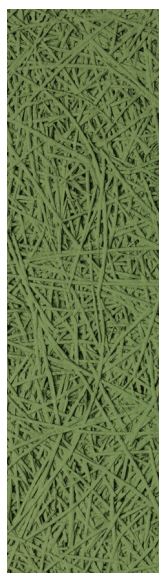
Natural **Life**



Tilleul



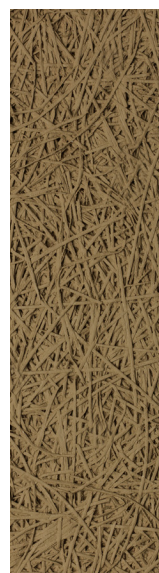
Vert Anis



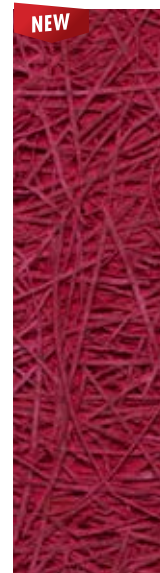
Pistache



Lin



Tabaco



Aubergine



Sanguine

Fractal Poetry



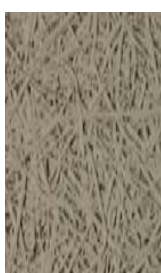
White



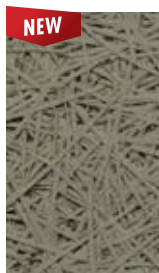
Ecume



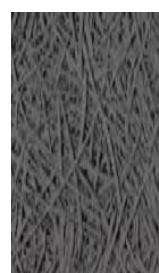
Silicium



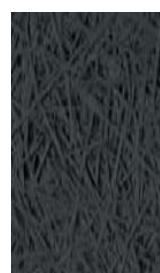
Gris de Lune



Gris Pierre



Asphalte



Carbone

Urban World



Lemon



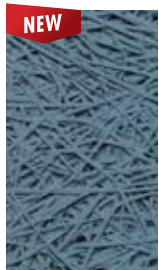
Orange Juice



Rouille



Pink Paradise



Ciel



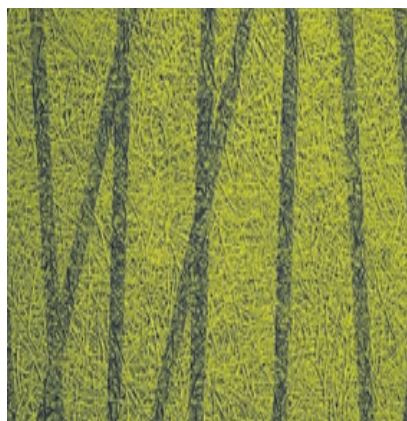
Bleu Silver



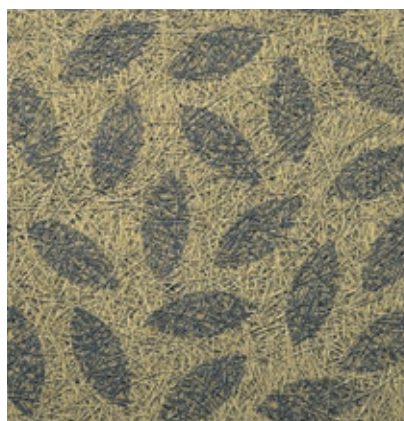
Green Grass

MOTIFS RANGE

For 600 x 600 and 1,200 x 600 mm panels. Organic: A, E, D edges and IMA – Organic Twin: A, D edges



Vegetal Rythmics



Winds & Leaves



Woods

Organic



> TECHNICAL CHARACTERISTICS

Dimensions for T24 or T35 framework (removable):

600 x 600 mm – 600 x 1,200 mm

615 x 600 / 1,200 mm (edge D)

See assembly possibilities on following pages

Dimensions for mechanical attachment (non-removable):

600 x 1,200 mm – 600 x 1,200 mm

Thickness:

- 15 mm (only edge A assembled on T24)
- 25 mm
- 35 mm

Surface density:

- Thickness 25 mm: 11 kg/m²
- Thickness 35 mm: 14 kg/m²

Acoustic performances: α_w between 0.45 (MH) and 0.70 (H)

Response to fire:

- B-s1,d0 according to PV RA11-0400
- A2-s1,d0 according to PV RA12-0085 (with increased value)

Light reflection (test CSTB EN-ECL 11.57.C):

- Organic Pure: 45%
- Organic Concrete: 20%
- Organic Foam: 54%

Mechanical resistance (according to standard EN 13964):

Category C / 30 N / m² for secure fault test

Category C = 30 °C – 95% HR

Thermal performances: certificates ACERMI n°03/007/292 and n°10/007/628

Estimated quantities: see p. 414

Installation according to DTU 58.1

CE labelling



> PRESENTATION

Organic is the standard slab par excellence. It is made from extremely fine spruce wood which is mineralised and coated in a cement/white lime binder (1 mm wide fibre) and offers excellent acoustic performances.

Available in a range of sizes, thicknesses and different edges to adapt to all situations.

A wide range of Organic motifs and colours are available.

> APPLICATION

Interior installation on T24 or T35 frame

Interior installation with visible or invisible mechanical attachment

- Premises classified as EA, EB and EB+, all types of private and collective building, either new or renovated: residential buildings public access buildings (PAB) such as schools, hospitals, hotels, industrial and commercial buildings, Hotels and leisure facilities (theatres, show rooms, etc.), public places requiring reverberation control and improved intelligibility.

External installation using visible mechanical attachments only (contact us):

- Ceilings, sheltered horizontal structures such as courtyards, porch roofs, underside of overhanging roofs, etc.



KNAUF'S STRENGTHS

- Natural product
- HQE® procedure
- Mechanical resistance
- Assembly in damp environments

Knauf Recommendations

The Organic slabs are not sensitive to moisture but the attachment systems must be protected against rust. The rules relating to snow and wind must be respected in all cases. Depending on the area of the site, this will affect the type and length of the hangers. Installation not possible in coastal areas.



ACOUSTIC ABSORPTION

Reference	Insulation	Edge type	α_s Frequencies (Hz)						α_w
			125	250	500	1000	2000	4000	
Without plenum									
ORGANIC 35 ⁽³⁾	/	Joints	0.10	0.21	0.40	0.77	0.81	0.79	0.45 (MH)
Plenum 50 mm – wall installation									
ORGANIC 25 ⁽³⁾	/	Joints	0.10	0.21	0.40	0.77	0.81	0.79	0.45 (MH)
ORGANIC 35 ⁽⁴⁾	/	Joints	0.13	0.25	0.46	0.81	0.90	0.86	0.50 (MH)
Plenum 200 mm									
ORGANIC 15 ⁽¹⁾	/	A	0.19	0.46	0.49	0.40	0.51	0.62	0.50
ORGANIC 25 ⁽²⁾	/	A, E	0.22	0.60	0.64	0.54	0.66	0.82	0.65 (H)
ORGANIC 35 ⁽²⁾	/	A, E, D	0.27	0.68	0.68	0.60	0.77	0.90	0.70 (H)

See AC08-26015655 certificate on lack of influence of paint: absorption unchanged with paint concentrations of 300, 600 and 900 g/m².

(1) AC 05-103/6

(2) AC 12-26038902/2

(3) AC 05-103/9

(4) AC 05-103/10



Lusigny sports club – Organic Lemon

Organic (continued)

ASSEMBLY POSSIBILITIES

Interior ceilings

Edges	Frameworks or supports	Plans	Thickness • 25 mm		Thickness • 35 mm					
Removable										
A (straight edges)	T24		600 or 1,200 x 600		600 or 1,200 x 600					
A (straight edges)	T35		600 or 1,200 x 600		600 or 1,200 x 600					
E (semi-embedded edges)	T24		600 or 1,200 x 600							
E (semi-embedded edges)	T35				600 or 1,200 x 600					
D (concealed framework edges)	T35				600 or 1,200 x 615					
Non-removable										
VisibleMechanicalAttachment										
VMA	CD60 or wooden battens 60 x 30 + Organic INT screw		1,200 or 2,000 x 600		1,200 or 2,000 x 600					
VMA	Concrete slab + Ejoat screw		1,200 or 2,000 x 600		1,200 or 2,000 x 600					
VMA	Plasterboard ceiling + Organic INT* screw (screwed to furring)		1,200 or 2,000 x 600		1,200 or 2,000 x 600					
InvisibleMechanicalAttachment										
IMA	CD60 or wooden battens 60 x 30 + clip FIB IV				1,200 or 2,000 x 600					
IMA	F47 furring + Organic **clip		1,200 or 2,000 x 600		1,200 or 2,000 x 600					
IMA	Rapid Fix T40				600 or 1,200 x 600					
IMA	Concrete slab + IVFIB clip				1,200 or 2,000 x 600					
IMA	Plasterboard ceiling + FIB IV * clip (screwed to furring)				1,200 or 2,000 x 600					

Interior sloping ceilings

Edges	Frameworks or supports	Plans		
			Thickness • 25 mm	Thickness • 35 mm
Non-removable				
VisibleMechanicalAttachment				
VMA	CD60 or wooden battens 60 x 30 + Organic INT screw		1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Plasterboard ceiling + Organic INT* screw (screwed to furring)		1,200 or 2,000 x 600	1,200 or 2,000 x 600
InvisibleMechanicalAttachment				
IMA	Rapid Fix T40			600 or 1,200 x 600
IMA	CD60 or wooden battens 60 x 30 + FIB IV clip			1,200 or 2,000 x 600
IMA	F47 furring + Organic **clip		1,200 or 2,000 x 600	1,200 or 2,000 x 600
IMA	Plasterboard ceiling + FIB IV * clip (screwed to furring)		1,200 or 2,000 x 600	1,200 or 2,000 x 600

* Ceiling dimensions to be determined according to load. ** Framework parallel to rafters.

Specific case of interior ceilings

SWIMMING POOL AND EC PREMISES (contact us)

Edges	Frameworks or supports	Plans	Thickness • 25 mm		Thickness • 35 mm	
Removable						
A (straight edges)	T24 Epoxy treated (painted afterwards)		600 x 600		600 x 600	
A (straight edges)	T35 Epoxy treated (painted afterwards)		600 x 600		600 x 600	
Non-removable						
VisibleMechanicalAttachment						
VMA	CD 60 H + line H + Organic screw EXT		1,200 x 600		1,200 x 600	
InvisibleMechanicalAttachment						
IMA	Rapid Fix T40Epoxy treated (painted afterwards)				600 or 1,200 x 600	

GYMNASIUM (ball impacts)

Edges	Frameworks or supports	Plans		
			Thickness • 25 mm	Thickness • 35 mm
Non-removable				
VisibleMechanicalAttachment				
VMA (with impacts)	Primary CD 60 (0.90 m) + Secondary CD 60 (0.30 m) + Organic screw INT		1,200 x 600	1,200 x 600

Exterior ceilings

All exterior work must be carried out subject to prior consultation with our technical support department.

Edges	Frameworks or supports	Plans		
			Thickness • 25 mm	Thickness • 35 mm
Non-removable				
VisibleMechanicalAttachment				
VMA	CD 60 H or wooden battens 60 x 30 + Organic screw EXT		1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Concrete slab + Ejot screw (except in coastal areas)		1,200 or 2,000 x 600	1,200 or 2,000 x 600

Interior walls

Edges	Frameworks or supports	Plans		
			Thickness • 25 mm	Thickness • 35 mm
Non-removable				
VisibleMechanicalAttachment				
VMA	CD 60 or wooden battens 60 x 30 + Organic screw INT		1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Concrete wall + Ejot screw		1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Plasterboard partition + Organic screw INT (screwed to upright)		1,200 or 2,000 x 600	1,200 or 2,000 x 600
InvisibleMechanicalAttachment				
IMA	CD 60 or wooden battens 60 x 30 + Organic screw INT			1,200 or 2,000 x 600
IMA	Concrete wall + IVFIB clip			1,200 or 2,000 x 600
IMA	Plasterboard partition + IVFIB clip (screwed to upright)			1,200 or 2,000 x 600

Organic (continued)

Specific case of interior walls

SWIMMING POOL AND EC PREMISES (contact us)

Edges	Frameworks or supports	Plans		
			Thickness • 25 mm	Thickness • 35 mm
Non-removable				
VisibleMechanicalAttachment				
VMA	CD 60 H + line H + Organic screw EXT		1,200 x 600	1,200 x 600

GYMNASIUM (ball impacts)

Edges	Frameworks or supports	Plans	Thickness • 25 mm	Thickness • 35 mm
Non-removable				
VisibleMechanicalAttachment				
VMA (with impacts)	Primary CD 60 (0.90 m) + Secondary CD 60 (0.30 m) + Organic screw Int		1,200 x 600	1,200 x 600

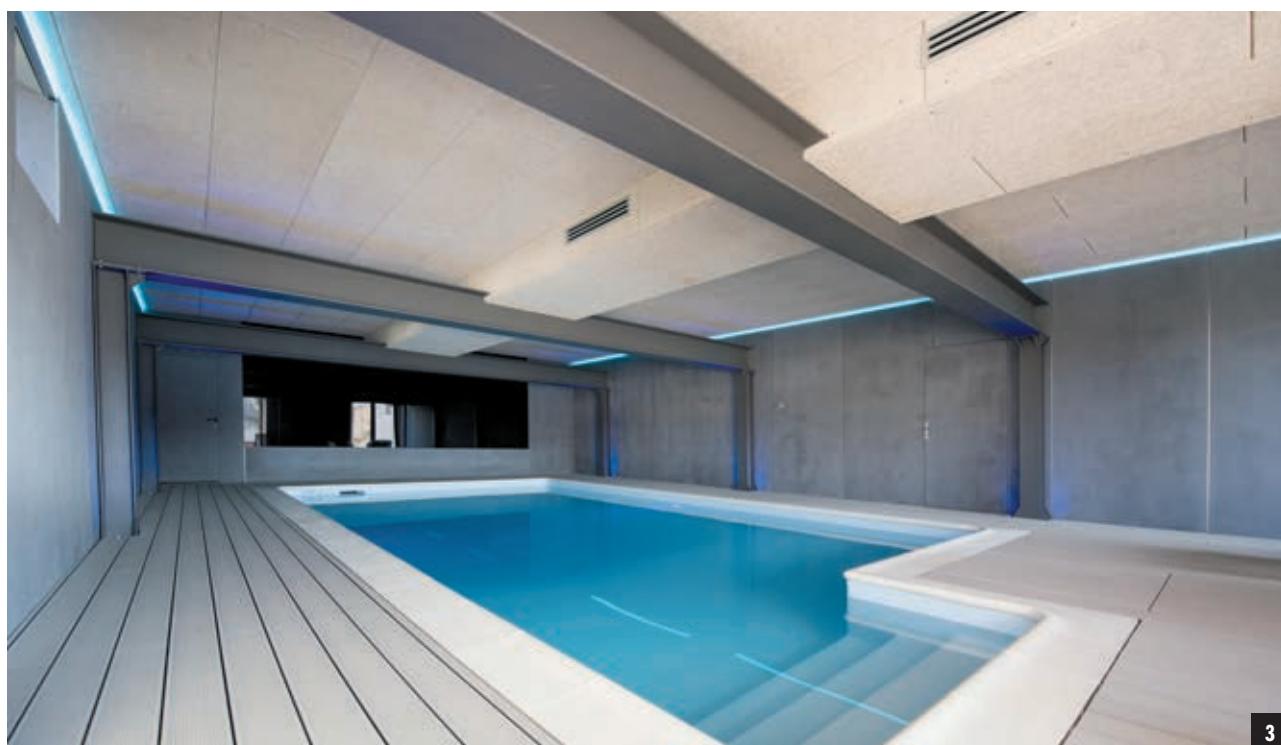


Haut Minervois water park – Organic edge A (straight edges) on T24 painted afterwards



IMPLEMENTATION

- 1 Music school – Épinal – Organic Carbon IMA.
- 2 Montigny les Metz swimming pool – Organic VMA Twilight Grey.
- 3 Private swimming pool – Organic FMV Pure.



Organic Twin



> TECHNICAL CHARACTERISTICS

Dimensions for T24 or T35 framework (removable) :

600 x 600 mm – 600 x 1,200 mm

615 x 600/1 200 mm (D edge)

Dimensions for mechanical attachment

600 x 1,200 mm – 600 x 1,200 mm

See assembly possibilities on following pages

Thickness: (wood wool + rock wool + wood)

- 25 mm (7 + 15 + 3 mm)
- 35 mm (10 + 20 + 5 mm)
- 50 mm (10 + 35 + 5 mm)

Surface density:

- thickness 25 mm: 9.40 kg/m²
- thickness 35 mm: 11.30 kg/m²
- thickness 50 mm: 13.00 kg/m²

Acoustic performances: α_w between 0.65 (MH) and 0.95 (H)

Response to fire:

- B-s1,d0 according to PV RA11-0399
- A2-s1,d0 according to PV RA12-0085 (with increased value)

Light reflection (CSTB EN-ECL 11.57.C test):

- Organic Pure: 45%
- Organic Concrete: 20%
- Organic Foam: 54%

Mechanical resistance (according to standard EN 13964) :

Category C / 30N / m² for secure fault test

Category C = 30 °C – 95 % HR

Thermal performances: ACERMI n°07/007/492

(Organic Twin) and 10/007/624 (Organic Twin A2)

- thickness 25 mm: R = 0.50 m² K/W
- thickness 35 mm: R = 0.70 m² K/W
- thickness 50 mm: R = 1.10 m² K/W

Estimated quantities: see p. 414

Implementation according to DTU 58.1

CE labelling

NEW:
AVAILABLE
WITH D EDGES



> PRESENTATION

Organic Twin is a multi-layer slab consisting of a high-density rock wool core and 2 very fine wood wool casings. Its D edge (concealed removable frame) gives the ceiling a continuous, monolithic appearance.

> APPLICATION

Interior installation on T24 or T35 frame

Interior installation with visible mechanical attachments

- Premises classified as EA, EB and EB+, all types of private and collective building, either new or renovated: residential buildings, public access buildings (PAB) such as schools, hospitals, hotels, industrial and commercial buildings, Hotels and leisure facilities (theatres, show rooms, etc.), public places requiring reverberation control and improved intelligibility.

External installation using visible mechanical attachments only (contact us):

- Ceilings, sheltered horizontal structures such as courtyards, porch roofs, underside of overhanging roofs, etc.



KNAUF'S STRENGTHS

- Attractive appearance with concealed removable frame
- Excellent acoustic performance
- Easily accessible plenum
- Natural product
- Meets HQE® project requirements



ACOUSTIC ABSORPTION

Reference	Insulation	Edge type	α_s Frequencies (Hz)						α_w
			125	250	500	1000	2000	4000	
Without plenum									
ORGANIC TWIN 25 ⁽¹⁾	/	Joints	0.10	0.36	0.70	0.93	1.05	1.03	0.65 (MH)
ORGANIC TWIN 35 ⁽²⁾	/	Joints	0.16	0.53	0.89	1.02	1.03	1.05	0.85 (H)
ORGANIC TWIN 50 ⁽³⁾	/	Joints	0.20	0.65	1.05	1.05	1.00	0.90	0.95
Plenum 50 mm – wall installation									
ORGANIC TWIN 25	/	Joints	0.24	0.58	0.71	0.90	1.03	0.98	0.80 (H)
ORGANIC TWIN 35	/	Joints	0.27	0.71	0.90	0.98	1.01	1.02	0.95
Plenum 200 mm									
ORGANIC TWIN 25 ⁽¹⁾	/	A	0.37	0.45	0.65	0.94	1.05	1.00	0.70 (MH)
ORGANIC TWIN 35 ⁽²⁾	/	A, D	0.45	0.66	0.84	0.99	1.08	1.03	0.90
ORGANIC TWIN 50 ⁽³⁾	/	A	0.40	0.70	0.95	1.05	1.00	0.95	0.95

See AC08-26015655 certificate on lack of influence of paint: absorption unchanged with paint concentrations of 300, 600 and 900 g/m².

(1) AC 12-26039552/-1

(2) AC 12-26039552/-2

(3) AC 09-26018151/-2

Knauf Recommendations

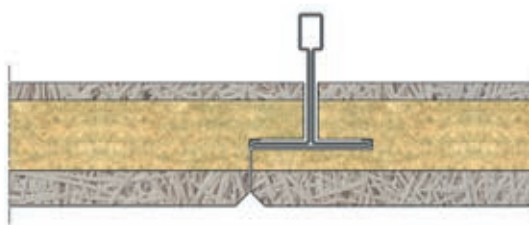
In order to limit the accumulation of dust on the panels, Knauf recommends:

- cutting the panels in a different area from the one in which the products are to be installed
- storing and covering the panels in an area other than the one in which the products are cut
- cutting the panels on the painted side to avoid tearing the fibres

If it is not possible for these precautions to be taken on site, it is important to maintain an optimum distance from the cutting area to prevent the spreading of dust.

NEW

Organic Twin is available with a removable concealed frame - D edge.
Installation on T35 every 600 mm with spacer in the plenum every 1 m.



Organic Twin (continued)

ASSEMBLY POSSIBILITIES

Interior ceilings

Edges	Frameworks or supports	Plans	ORGANIC TWIN		
			Thickness • 25 mm	Thickness • 35 mm	Thickness • 50 mm
Removable					
A (straight edges)	T24		600 or 1,200 x 600	600 or 1,200 x 600	600 or 1,200 x 600
A (straight edges)	T35		600 or 1,200 x 600	600 or 1,200 x 600	600 or 1,200 x 600
D (concealed framework edges)	T35			600 or 1,200 x 600	
Non-removable					
VisibleMechanicalAttachment					
VMA	CD 60 or wooden battens 60 x 30 + Organic screw INT		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Concrete slab + Ejot screw		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Plasterboard ceiling + Organic INT* screw (screwed to furring)		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600

Interior sloping ceilings

Edges	Frameworks or supports	Plans	ORGANIC TWIN		
			Thickness • 25 mm	Thickness • 35 mm	Thickness • 50 mm
Non-removable					
VisibleMechanicalAttachment					
VMA	CD60 or wooden battens 60 x 30 + Organic INT screw		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Plasterboard ceiling + Organic INT* screw (screwed to furring)		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600

Specific case of interior ceilings

SWIMMING POOL AND EC PREMISES(contact us)

Edges	Frameworks or supports	Plans	ORGANIC		
			Thickness • 25 mm	Thickness • 35 mm	Thickness • 50 mm
Removable					
A (straight edges)	T24 Epoxy treated (painted afterwards)		600 x 600	600 x 600	
A (straight edges)	T35 Epoxy treated (painted afterwards)		600 x 600	600 x 600	
Non-removable					
VisibleMechanicalAttachment					
VMA	CD60 H + hanger H + EXT Organic screw		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600

* Ceiling dimensions to be determined according to load. ** Organic Twin VMA panels 25 mm non-bevelled 4 sides. *** Framework parallel to rafters.

Exterior ceilings

All exterior work must be carried out subject to prior consultation with our technical support department.

Edges	Frameworks or supports	Plans	ORGANIC TWIN		
			Thickness • 25 mm	Thickness • 35 mm	Thickness • 50 mm
Non-removable					
VisibleMechanicalAttachment					
VMA	CD60 or wooden battens 60 x 30 + Organic EXT screw		1,200 or 2,000 x 600	1,200 or 2,000 x 600	
VMA	Concrete slab + Ejot screw (except in coastal areas)		1,200 or 2,000 x 600	1,200 or 2,000 x 600	

Interior walls

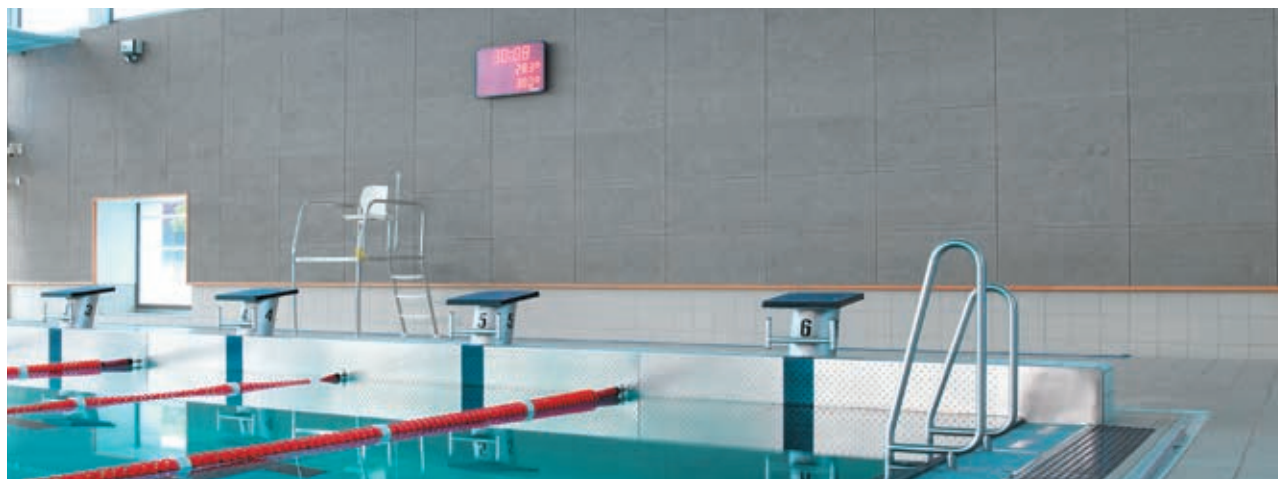
Edges	Frameworks or supports	Plans	ORGANIC		
			Thickness • 25 mm	Thickness • 35 mm	Thickness • 50 mm
Non-removable					
VisibleMechanicalAttachment					
VMA	CD60 or wooden battens 60 x 30 + Organic EXT screw		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Concrete wall + Ejot screw		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Plasterboard partition + INT screw (screwed to upright)		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600

Specific case of interior walls

SWIMMING POOL AND EC PREMISES(contact us)

Edges	Frameworks or supports	Plans	ORGANIC		
			Thickness • 25 mm	Thickness • 35 mm	Thickness • 50 mm
Non-removable					
VisibleMechanicalAttachment					
VMA	CD60 or wooden battens 60 x 30 + Organic EXT screw		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600

** Organic Twin VMA panels 25 mm non-bevelled 4 sides.



Organic Mineral



> TECHNICAL CHARACTERISTICS

Dimensions for mechanical attachment:

600 x 1,200 mm – 600 x 1,200 mm

See assembly possibilities on following pages

Thickness: (wood wool + rock wool)

- 50 mm (25 + 25 mm)
- 75 mm (25 + 50 mm)
- 100 mm (25 + 75 mm)
- 125 mm (25 + 100 mm)
- 150 mm (25 + 125 mm)

Surface density:

- thickness 50 mm: 14 kg/m²
- thickness 75 mm: 16 kg/m²
- thickness 100 mm: 18.5 kg/m²
- thickness 125 mm: 20.5 kg/m²
- thickness 150 mm: 23 kg/m²

Acoustic performances: α_w from 0.85 (H) to 1.00

Response to fire:

- B-s1,d0 according to PV RA11-0399
- A2-s1,d0 according to current PV (with increased value)

Light reflection (CSTB EN-ECL 11.57.C test):

- Organic Pure: 45%
- Organic Concrete: 20%
- Organic Foam: 54%

Thermal performances: ACERMI 03/007/284

- thickness 50 mm: $R = 0.95 \text{ m}^2 \text{ K/W}$
- thickness 75 mm: $R = 1.65 \text{ m}^2 \text{ K/W}$
- thickness 100 mm: $R = 2.30 \text{ m}^2 \text{ K/W}$
- thickness 125 mm: $R = 3.00 \text{ m}^2 \text{ K/W}$
- thickness 150 mm: $R = 3.65 \text{ m}^2 \text{ K/W}$

Estimated quantities: see p. 414

Installation according to DTU 58.1

CE labelling



> PRESENTATION

Organic Mineral is a material made from very fine spruce wood wool which has been mineralised and coated in a white cement/lime binder (1 mm wide fibre) with a thickness of 25 mm and a rock wool insulator with a variable thickness depending on the reference required. It provides both excellent acoustic and thermal performances.

> APPLICATION

Interior installation with visible or invisible mechanical attachment

- Premises classified as EA, EB and EB+, all types of private and collective building, either new or renovated: residential buildings public access buildings (PAB) such as schools, hospitals, hotels, industrial and commercial buildings,

NB: for sports halls, resistance to ball impacts requires a mesh type mechanical protection behind the goals only.

External installation using visible mechanical attachments only (contact us):

- Ceilings, sheltered horizontal structures such as courtyards, porch roofs, underside of overhanging roofs, etc.



KNAUF'S STRENGTHS

- α_w in excess of 0.85
- Ideal for thermal and acoustic insulation

Knauf Recommendations

The Organic Mineral slabs are not sensitive to moisture, but the attachment systems must be protected against corrosion. The rules relating to snow and wind must be respected in all cases, in addition to the implementation recommendations provided by Knauf. Depending on the area of the site, this will affect the type and length of the hangers. Installation not possible in coastal areas.



ACOUSTIC ABSORPTION

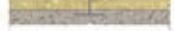
Reference	Insulation	Edge type	α_s Frequencies (Hz)						α_w
			125	250	500	1000	2000	4000	
Without plenum									
ORGANIC MINERAL 50 ⁽¹⁾	/	Joints	0.18	0.55	1.11	1.04	0.92	1.02	0.85 (H)
ORGANIC MINERAL 75 ⁽²⁾	/	Joints	0.33	0.92	1.15	1.00	0.88	0.96	1.00
ORGANIC MINERAL 100	/	Joints	0.45	1.06	1.13	0.94	1.00	1.05	1.00
Plenum 50 mm									
ORGANIC MINERAL 50	/	Joints	0.31	0.82	1.12	1.07	0.93	1.01	1.00

See AC08-26015655 certificate on lack of influence of paint: absorption unchanged with paint concentrations of 300, 600 and 900 g/m².

(1) AC 12-26038902-1 (2) AC 05-103/15

ASSEMBLY POSSIBILITIES

Interior ceilings

Edges	Frameworks or supports	Plans	ORGANIC MINERAL				
			Thickness • 50 mm	Thickness • 75 mm	Thickness • 100 mm	Thickness • 125 mm	Thickness • 150 mm
Non-removable							
VisibleMechanicalAttachment							
VMA	CD60 or wooden battens 60 x 30 + Organic INT screw		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Concrete slab + Ejot screw (except in coastal areas)		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Plasterboard ceiling + Organic INT* screw (screwed to furring)		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
InvisibleMechanicalAttachment							
IMA	CD60 or wooden battens 60 x 30 + clip FIB IV		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
IMA	Concrete slab + IVFIB clip		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
IMA	Plasterboard ceiling + FIB IV * clip (screwed to furring)		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600

Interior sloping ceilings

Edges	Frameworks or supports	Plans	ORGANIC MINERAL				
			Thickness • 50 mm	Thickness • 75 mm	Thickness • 100 mm	Thickness • 125 mm	Thickness • 150 mm
Non-removable							
VisibleMechanicalAttachment							
VMA	CD60 or wooden battens 60 x 30 + Organic INT screw		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Plasterboard ceiling + Organic INT* screw (screwed to furring)		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600

* Ceiling dimensions to be determined according to load. ** Framework parallel to rafters.

1

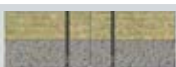
Organic Mineral (continued)

Exterior ceilings

All exterior work must be carried out subject to prior consultation with our technical support department.

Edges	Frameworks or supports	Plans	ORGANIC MINERAL				
			Thickness • 50 mm	Thickness • 75 mm	Thickness • 100 mm	Thickness • 125 mm	Thickness • 150 mm
Non-removable							
VisibleMechanicalAttachment							
VMA	wooden batten 60 x 30 + EXT Organic screw		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Concrete slab + Ejot screw (except in coastal areas)		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600

Interior walls

Edges	Frameworks or supports	Plans	ORGANIC MINERAL				
			Thickness • 50 mm	Thickness • 75 mm	Thickness • 100 mm	Thickness • 125 mm	Thickness • 150 mm
Non-removable							
VisibleMechanicalAttachment							
VMA	CD60 or wooden battens 60 x 30 + Organic INT screw		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Concrete slab + Ejot screw (except in coastal areas)		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
VMA	Plasterboard partition + Organic screw Int (screwed to upright)		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
InvisibleMechanicalAttachment							
IMA	CD60 or wooden battens 60 x 30 + clip FIB IV		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
IMA	Concrete wall + IVFIB clip		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600
IMA	Plasterboard partition + IVFIB clip (screwed to upright)		1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600	1,200 or 2,000 x 600

Specific case of interior walls

SWIMMING POOL AND EC PREMISES (contact us)

Edges	Frameworks or supports	Plans	ORGANIC MINERAL				
			Thickness • 50 mm	Thickness • 75 mm	Thickness • 100 mm	Thickness • 125 mm	Thickness • 150 mm
Non-removable							
VisibleMechanicalAttachment							
VMA	CD60 H + hanger H + EXT Organic screw		1,200 x 600				

Mechanical attachment

INTERIOR ORGANIC SCREW (EVDF ZBJ)



Electro-galvanised bichromate yellow steel,

Panel thickness	EVDF ZBJ screw	Panel thickness	EVDF ZBJ screw
25 mm	4.8 x 55	100 mm	4.8 x 120 or 130*
35 mm	4.8 x 55	125 mm	4.8 x 150
50 mm	4.8 x 80 or 65*	150 mm	4.8 x 185 or 160*
75 mm	4.8 x 100		

* only on metallic frame

web link **55YL1G**

EXTERIOR ORGANIC SCREW (EVDF 2C)

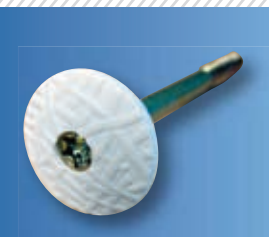


Processed hardened steel, white steel colour.

Panel thickness	EVDF 2C screw	Panel thickness	EVDF 2C screw
25 mm	4.8 x 55	100 mm	4.8 x 120 or 130*
35 mm	4.8 x 55	125 mm	4.8 x 150
50 mm	4.8 x 80	150 mm	4.8 x 180
75 mm	4.8 x 100		

web link **2QD4ML**

EJOT SCREW FOR DIRECT ATTACHMENT TO CONCRETE DDS



Screw for direct attachment to concrete EJOT DDS.

6 mm hole, Torx recess.

Hard PVC head Ø 25 mm, beige or white.

Box of 100 items.

Panel thickness	DDS screw
25 mm	7.3 x 50
35-50 mm	7.3 x 75
75 mm	7.3 x 100
100 mm	7.3 x 125
125 mm	7.3 x 150
150 mm	7.3 x 175

web link **5N6W3H**

FIB IV CLIP



Panel thickness	Type	Panel thickness	Type
Organic 25 – 35 mm	18	Organic Mineral 100 mm	83
Organic Mineral 50 mm	33	Organic Mineral 125 mm	108
Organic Mineral 75 mm	58	Organic Mineral 150 mm	133

web link **AAAAF1**

ORGANIC CLIP



For 25 or 35 mm Organic panels.

web link **4DTRMF**

Summary table

Organic – Acoustic absorptions

ACOUSTIC ABSORPTIONS

	Plenum	α_s Frequencies (Hz)						α_w	Reference
		125	250	500	1000	2000	4000		
ORGANIC 35	Without plenum	0.10	0.21	0.40	0.77	0.81	0.79	0.45 (MH)	AC 05-103/9
ORGANIC Twin 25	Without plenum	0.10	0.36	0.70	0.93	1.05	1.03	0.65 (MH)	AC 12-26039552/-1
ORGANIC Twin 35	Without plenum	0.16	0.53	0.89	1.02	1.03	1.05	0.85 (H)	AC 12-26039552/-2
ORGANIC Twin 50	Without plenum	0.20	0.65	1.05	1.05	1.00	0.90	0.95	AC09-26018151/2
ORGANIC Mineral 50	Without plenum	0.18	0.55	1.11	1.04	0.92	1.02	0.85 (H)	AC 12-26038902/1
ORGANIC Mineral 75	Without plenum	0.33	0.92	1.15	1.00	0.88	0.96	1.00	AC 05-103/15
ORGANIC Mineral 100	Without plenum	0.45	1.06	1.13	0.94	1.00	1.05	1.00	AC 12-26038902/1
ORGANIC 25	plenum 50 wall installation	0.10	0.21	0.40	0.77	0.81	0.79	0.45 (MH)	AC 05-103/9
ORGANIC 35	plenum 50 wall installation	0.13	0.25	0.46	0.81	0.90	0.86	0.50 (MH)	AC 05-103/10
ORGANIC Twin 25	50 mm wall installation	0.24	0.58	0.71	0.90	1.03	0.98	0.80 (H)	AC 12-26039552/-1
ORGANIC Twin 35	50 mm wall installation	0.27	0.71	0.90	0.98	1.04	1.02	0.95	AC 12-26039552/-2
ORGANIC Mineral 50	50 mm	0.31	0.82	1.12	1.07	0.93	1.01	1.00	AC 05-103/14
ORGANIC 15	200 mm	0.19	0.46	0.49	0.40	0.51	0.62	0.50	AC 05-103/6
ORGANIC 25	200 mm	0.22	0.60	0.64	0.54	0.66	0.82	0.65 (H)	AC 12-26038902/2
ORGANIC 35	200 mm	0.27	0.68	0.68	0.60	0.77	0.90	0.70 (H)	AC 12-26038902/2
ORGANIC Twin 25	200 mm	0.37	0.45	0.65	0.94	1.05	1.00	0.70 (MH)	AC 12-26039552/-1
ORGANIC Twin 35	200 mm	0.45	0.66	0.84	0.99	1.08	1.03	0.90	AC 12-26039552/-2
ORGANIC Twin 50	200 mm	0.40	0.70	0.95	1.05	1.00	0.95	0.95	AC09-26018151/2

REGULATIONS FOR SEISMIC AREAS

The regulations for ceilings in seismic areas can be found on p. 392.

Summary table

Organic – Packaging

PACKAGING

Length (mm)	Width (mm)	Thickness (mm)	No of boards/boxes	m ² /boxes	No of boxes/pallets	m ² /pallet
ORGANIC						
600	600	15	9/box	3.24	24	77.76
		25	6/box	2.16	24	51.84
		35	4/box	1.44	24	34.56
1,200	600	25	80/pallet	-	-	57.60
		35	56/pallet	-	-	40.32
2,000	600	25	80/pallet	-	-	96.00
		35	56/pallet	-	-	67.20

ORGANIC TWIN						
600	600	25	6/box	2.16	24	51.84
		35	4/box	1.44		34.56
1,200	600	25	80/pallet	-	-	57.60
		35	56/pallet	-	-	40.32
		50	44/pallet	-	-	31.68
2,000	600	25	80/pallet	-	-	96.00
		35	56/pallet	-	-	67.20
		50	44/pallet	-	-	52.80

ORGANIC MINERAL						
1,200	600	50	44/pallet	-	-	31.68
		75	28/pallet	-	-	20.16
		100	22/pallet	-	-	15.84
		125	18/pallet	-	-	12.96
		150	14/pallet	-	-	10.08
2,000	600	50	44/pallet	-	-	52.80
		75	28/pallet	-	-	33.60
		100	22/pallet	-	-	26.40
		125	18/pallet	-	-	21.60
		150	14/pallet	-	-	16.80





2

ACOUSTIC BLOCKS & BAFFLES

ORGANIC SOUND	P. 34
ORGANIC SOUND V	P. 36
ORGANIC SOUND 3D	P. 38

2

Organic Sound

2016
NEW PRODUCT

> TECHNICAL CHARACTERISTICS

Dimensions : 1,200 x 600/1,200 mm and 2,000 x 600 mm

Surface density: 12.2 kg/m²

Response to fire:

Organic Twin: B-s1, d0 according to PV n° RA 11-0399

Resistance to moisture: possible installation in wall-mounted brackets but not authorised in blocks due to risk of corrosion in installation accessories in chlorinated environments

Interior air quality:

DOP N° EN 13168-1105



* Information on the emission level of volatile substances in interior air presenting a risk of toxicity by inhalation on a category scale of A+ (very low emissions) to C (high emissions).

Light reflection: 54% in Foam colour

Maintenance: by blowing

Installation accessories available for installation in blocks (sold separately)

2 kits each containing:

- 2 hooks
- 2 2-m cables
- 2 decorative end pieces
- 2 screws for wooden or concrete support

> PRESENTATION

Organic Sound, a rectangular or square acoustic block, consists of an Organic Twin panel and an aluminium frame.

Organic Sound gives ceilings a different feel with its superimposition on blocks.

It is installed in wall-mounted brackets and offers a solution for smaller rooms or an additional acoustic feature alongside blocks.

> APPLICATION

- New buildings
- All types of building in which acoustic correction is required without work being carried out
- Private and collective premises classified as EA, EB and EB+
- Particularly suitable for premises which are known to be noisy such as bars, fast food outlets and cafeterias as well as open plan offices



KNAUF'S STRENGTHS

- Natural product: wood wool and plant-based paint made from sunflower oil
- Wide range of colours
- High level of acoustic absorption
- Meets HQE® project requirements
- Ease of installation



Web link
www.knauf-batiment.fr

EW69FZ

STANDARD COLOURS



Pure



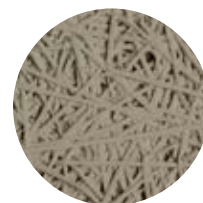
Tobacco



Carbon



Foam



Twilight Grey

All the colours in the Organic range are available – see pages 282 and 283.

ACOUSTIC PERFORMANCES:

Acoustic absorption α_w for Organic Sound 1,200 x 600 mm

Centre distance between blocks (mm)	Distance between blocks in the same row (mm)	Distance between ceiling and blocks (mm)	α_z Frequencies (Hz)						α_w
			125	250	500	1000	2000	4000	
300	300	300	0.15	0.30	0.35	0.50	0.55	0.70	0.45 (H)
600	300	300	0.10	0.25	0.30	0.40	0.45	0.60	0.40 (H)

Equivalent absorption area by block (in m²) for Organic Sound 1,200 x 600 mm

Distance between ceiling and blocks (mm)	Frequencies (Hz)					
	125	250	500	1000	2000	4000
300	0.10	0.40	0.60	0.90	1.00	1.00
600	0.10	0.30	0.70	1.00	1.10	1.20

Report N°: RE AC15-26055095

The equivalent absorption area (EAA) of an element is the product of an acoustic absorption coefficient (α) and its surface (S), i.e. $\alpha \times S$.
This coefficient represents the surface of a completely absorbent material ($\alpha = 1$).

Targeted acoustic correction

By adding panels.

Wide range of installation combinations

Variable gauge and height, possible superimposition of blocks, direct installation on vertical support.

Customisation of your areas

According to your installation and colour choices.

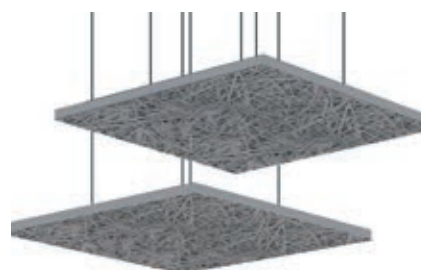
Possibility of incorporating lights in blocks

INSTALLATION

Suspension by cable or directly against support for wall installation

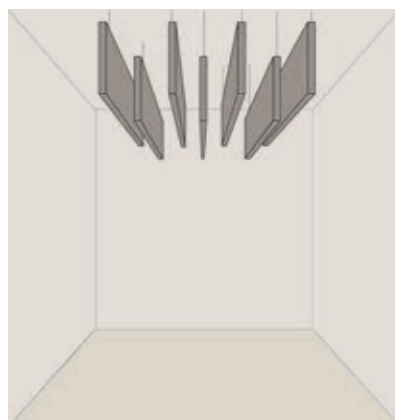
Installation	Dimensions (mm)	Installation
Suspension by cable or horizontal "block" type installation	1,200 x 600 2,000 x 600 1,200 x 1,200* Thickness • 35 mm	2 installation accessory kits for wooden or concrete supports. See DTU 25.41 for plasterboard supports.
Direct installation against vertical support	1,200 x 600 2,000 x 600 Thickness • 35 mm	2 attachments per panel depending on support (not supplied)

* upon request



2

Organic Sound V

2016
NEW PRODUCT

> TECHNICAL CHARACTERISTICS

Dimensions: 1,200 x 600/300 mm and 2,000 x 600/300 mm

Thickness: 35 mm

Surface density: 12.2 kg/m²

Response to fire:

Organic Twin: B-s1, d0 according to PV n° RA 11-0399

Resistance to moisture: possible installation in wall-mounted brackets but not authorised in blocks due to risk of corrosion in installation accessories in chlorinated environments

Interior air quality:

DOP N° EN 13168-1105



* Information on the emission level of volatile substances in interior air presenting a risk of toxicity by inhalation on a category scale of A+ (very low emissions) to C (high emissions).

Light reflection: 54% in Foam colour

Maintenance: by blowing

Installation accessories available for installation in blocks (sold separately)

14 kit containing:

- 2 hooks
- 2 2 m cables
- 2 decorative end pieces
- 2 screws for wooden or concrete support

> PRESENTATION

Organic Sound V, a rectangular acoustic baffle, consists of an Organic Twin panel and an aluminium frame. Organic Sound V baffles are particularly suitable for high ceiling rooms and are arranged in parallel with short centre distances and variable heights to guarantee efficient acoustic correction.

> APPLICATION

- New buildings
- All types of building in which acoustic correction is required without work being carried out
- Private and collective premises classified as EA, EB and EB+
- Recommended for educational environments (classrooms, test laboratories) as well as hotel reception halls and offices



KNAUF'S STRENGTHS

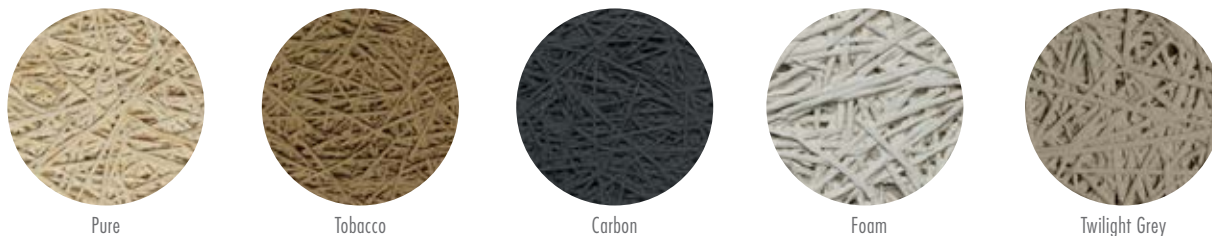
- Natural product: wood wool and plant-based paint made from sunflower oil
- Wide range of colours
- High level of acoustic absorption
- Meets HQE® project requirements
- Ease of installation



Web link
www.knauf-batiment.fr

GRR9NR

STANDARD COLOURS



All the colours in the Organic range are available – see pages 282 and 283.

ACOUSTIC PERFORMANCES:

Acoustic absorption α_w for Organic Sound V 1,200 x 600 mm

Centre distance of baffle rows (mm)	Distance between baffles in the same row (mm)	Distance between ceiling and baffles (mm)	α_s Frequencies (Hz)						α_w
			125	250	500	1000	2000	4000	
600	0	0	0.30	0.25	0.50	0.75	0.75	0.80	
1,000	0	0	0.25	0.20	0.40	0.55	0.60	0.65	0.45 (H)
600	0	300	0.15	0.25	0.55	0.75	0.75	0.80	0.55 (H)
1,000	0	300	0.15	0.20	0.40	0.55	0.60	0.65	0.45 (H)
600	1,200	300	0.10	0.20	0.45	0.60	0.60	0.65	0.45 (H)
1,000	1,200	300	0.10	0.15	0.30	0.45	0.45	0.55	0.35 (H)

Equivalent absorption area by block (in m²) for Organic Sound V 1,200 x 600 mm

Distance between ceiling and baffles (mm)	Frequencies (Hz)					
	125	250	500	1000	2000	4000
0	0.3	0.5	0.8	1.1	1.1	1.1
300	0.2	0.3	0.7	1.1	1.1	1.2
600	0.1	0.3	0.7	1.1	1.1	1.1

Report N°: RE AC15-26055095

The equivalent absorption area (EAA) of an element is the product of an acoustic absorption coefficient (α) and its surface (S), i.e. $\alpha \times S$. This coefficient represents the surface of a completely absorbent material ($\alpha = 1$).

The acoustic absorption is higher the shorter the centre distance

Wide range of dimension combinations creating a decorative effect

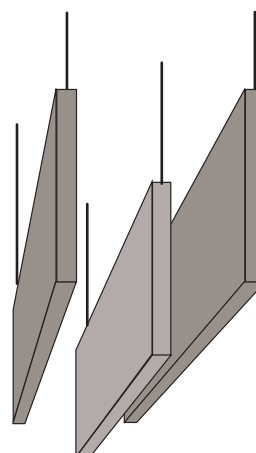
(1,200 x 600, 1,200 x 300, 2,000 x 600, 2,000 x 300 mm)

2 absorbent surfaces to reduce noise pollution

INSTALLATION

Suspension by cable using the installation kit.

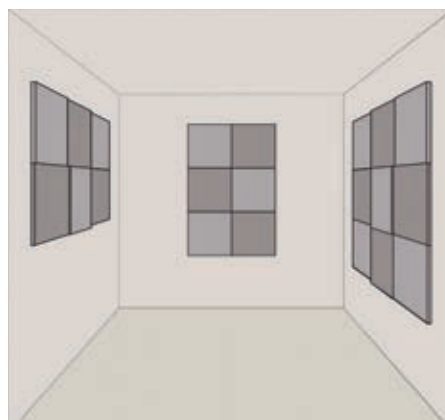
Implementation	Dimensions (mm)	Installation
Suspension by cable (Vertical installation)	1,200 x 600/300 2,000 x 600/300 Thickness • 35 mm	Organic Sound V installation kit (hook or threaded M6)



2

Organic Sound 3D

**2016
NEW PRODUCT**



> TECHNICAL CHARACTERISTICS

Dimensions:

- 1,800 x 1,200 mm (kit of 6 panels)
- 1,800 x 1,800 mm (kit of 9 panels)

Response to fire:

Organic Twin & Mineral: B-s1, d0 according to PV n° RA 11-0399

Resistance to moisture: installation possible in swimming pools

Weight: 25 kg/kit of 6 panels and 37 kg/kit of 9 panels

Interior air quality:

DOP N° EN 13168-1105



* Information on the emission level of volatile substances in interior air presenting a risk of toxicity by inhalation on a category scale of A+ (very low emissions) to C (high emissions).

Light reflection: 54% in Foam colour

Maintenance: by blowing

Installation accessories included in the kit

(either 6 or 9 panels):

- 4 corner profiles
- 4 straight profiles
- 8 splice plates
- 1 tube of glue (2 tubes for the kit with 9 panels)
- screws
- pegs

Implementation: begin by installing the aluminium frame and then attach the panels by sticking them directly to the vertical support

> PRESENTATION

Wall-mounted square or rectangular acoustic baffle consisting of 6 or 9 600 x 600 panels respectively with different thicknesses creating a 3D visual effect.

A discreet aluminium frame creates a clean finish for the different panels which constitute the Organic baffle.

> APPLICATION

- New buildings and renovations
- All types of building in which acoustic correction is required without work being carried out
- Private and collective premises classified as EA, EB and EB+
- Suitable for places which are known to be noisy such as restaurants, offices and, in particular, swimming pools



KNAUF'S STRENGTHS

- Natural product: wood wool and plant-based paint made from sunflower oil
- Aluminium frame finish
- Wide range of colours
- High level of acoustic absorption
- Meets HQE® project requirements
- Ease of installation



STANDARD COLOURS



Pure



Tobacco



Carbon



Foam



Twilight Grey

All the colours in the Organic range are available – see pages 282 and 283.

ACOUSTIC PERFORMANCES:

Acoustic absorption for Organic Sound 3D

	α_s Frequencies (Hz)						α_w
	125	250	500	1000	2000	4000	
Alpha calculated for the kit with 6 and 9 panels without plenum	0.15	0.50	0.85	1.00	0.95	1.00	0.80 (H)

Installation possible in swimming pools

Decorative 3D effect

Rapid implementation (less than an hour)

Possibility of positioning 2 kits side by side

2 KITS AVAILABLE: 6 OR 9 PANELS

The Organic Sound 3D panels are installed using Knauf glue (cartridge).

Kit with 6 panels: • 2 Organic Twin 25 • 2 Organic Twin 35 • 2 Organic Mineral 50	600 x 600 x 25 mm 600 x 600 x 35 mm 600 x 600 x 50 mm	
Kit with 9 panels: • 3 Organic Twin 25 • 3 Organic Twin 35 • 3 Organic Mineral 50	600 x 600 x 25 mm 600 x 600 x 35 mm 600 x 600 x 50 mm	





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IMPLEMENTATION GUIDE

ACOUSTIC WALLS & CEILINGS (WOOD WOOL) **P 42**

ACOUSTIC BLOCKS & BAFFLES **P 56**

Installation on T24 or T35 frame

For use on ceilings only.

3 edges available:

- Straight edge A T24 – T35
- Bevelled recessed edge E T24 (for 25 mm panel) + edge E T35 (for 35 mm panel)
- Edge with concealed removable frame D T35 (for 35 mm panel)

General information

The Organic ceilings must be implemented according to the regulations under DTU 58.1 and the Knauf recommendations. Interior installation only.

Assembly

The most common type of assembly involves supports every 1,200 mm and 1,200 and 600 mm spacers. The supports are positioned with a centre distance of 600 mm for heavier loads or wider ranges. The effects of wind are not taken into

consideration for the values indicated in the table below (interior ceiling) (due to the porosity of the panels to air).

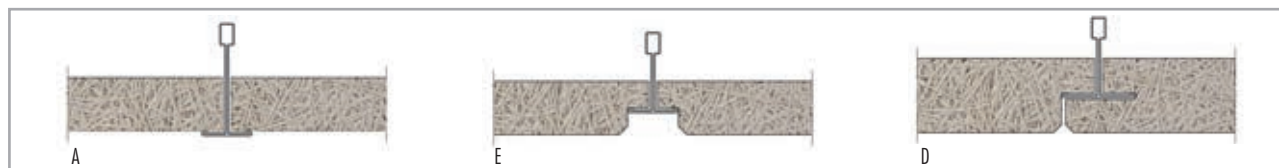
The installation tolerance of the attachment points is 3 mm.

Unless specific instructions are provided for the ceiling, the shafts must be within 2 metres and correspond to:

- 1/500 of the range for non-visible frames;
- 1/300 of the range for visible frames.

NB

In the case of **implementation in a suspended ceiling with a removable concealed frame**, the frame will consist of a T35 support with a thickness of 35 mm. The supports arranged with a centre distance of 600 mm must be accompanied by spacers on the plenum side to ensure that the frame is positioned correctly. In certain configurations, the structure may be reinforced with anti-uplift clips and/or additional spacers.

**Distance between hangers depending on the slab and centre distance between supports**

Slab	Surface density of slab	T24 installation		T35 installation	
		Centre distance 1,200	Centre distance 600	Centre distance 1,200	Centre distance 600
Organic Pure 15	6 kg/m ²	1,400	1,500	1,500	1,500
Organic 25	11 kg/m ²	1,200	1,500	1,200	1,500
Organic 35	14 kg/m ²	1,000	1,200	1,200	1,200

Accessories

Clix T24/38 supports + Clix T24/32 (1,200) and/or T24/28 (600) spacers.

Installed by means of mechanical attachments

Used on walls or ceilings

- 1 type of edge: bevelled 4 sides
- 2 thicknesses : 25 or 35 mm
- 2 types of installation
 - IMA: invisible mechanical attachment using IVFIB clip or Organic clip
 - VMA: visible mechanical attachment using Organic through screw



Wall installations are always above 1.80 m for all products in the Organic range.



Web link
www.knauf-batiment.fr

JL5H1T



Implementation principles for interior ceiling

Description

Covering of interior ceiling by attaching Organic panels.

The aim is to obtain acoustic correction and reduce the reverberation time.

The panels may be attached by means of screws or specific clips depending on the type of panel and type of support.

Areas of use

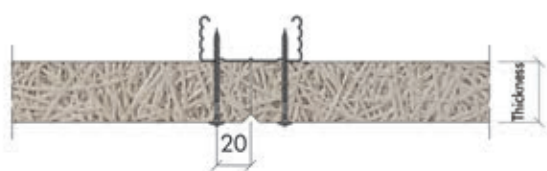
Premises classified as EA, EB and EB+, all types of private and collective building, either new or renovated: residential buildings, public access buildings (PAB) such as schools, hospitals, hotels, industrial and commercial buildings,

The Organic panels are not sensitive to moisture but the attachment systems must be protected against rust in case of significant

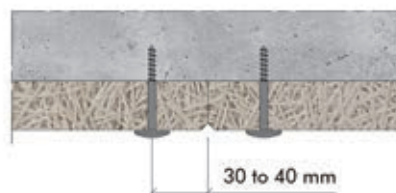
rainfall. Suitable for theatres, community centres, educational or catering facilities and public areas requiring controlled reverberation and improved intelligibility. For sports halls, resistance to ball impacts requires a mesh type mechanical protection or the use of a double CD 60 frame with a reduced centre distance.

Organic implementation on interior ceiling

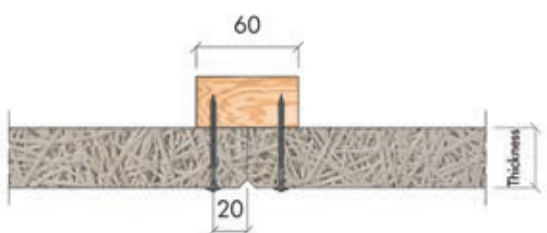
Implementation by mechanical attachment on interior wall	Dimensions (in mm)	Frame – Accessories	Implementation comments
Screwing to metallic structure Installation of panels perpendicular to frames. VMA	1,200 x 600 2,000 x 600 Thickness 25, 35 mm	CD 60 Thickness 25, 35 mm: range 1.40 m Interior Organic screw (EVDF ZBJ)	3 screws / width 600 mm 2 cm from edge centre distance 600 mm (px L1200) centre distance 500 mm (px L2000)
Screwed to wooden frame Installation of panels perpendicular to frames. VMA	1,200 x 600 2,000 x 600 Thickness 25, 35 mm	60 x 30 batten, attached every 1 m Interior Organic screw (EVDF ZBJ)	3 screws / width 600 mm 2 cm from edge centre distance 600 mm (px L1200) centre distance 500 mm (px L2000)
Screwed directly onto concrete VMA	1,200 x 600 2,000 x 600 Thickness 25, 35 mm	EJOT – DDS screw, 6 mm hole, head Ø 25 beige or white	5 attachments (px L1200) 6 attachments (px L2000)
Organic clips IMA	1,200 x 600 Thickness 25, 35 mm	F47 turned over, plugged, or F47 suspended	Centre distance F47 600 mm Range F47 1,200 mm Clip every 600 mm max
IVFIB clips on concrete. IMA	1,200 x 600 2,000 x 600 Thickness • 35 mm	Plugged or stud shot	Clip every 600 mm max
IVFIB clips on CD 60 frame or wood Installation of panels perpendicular to frames. IMA	1,200 x 600 2,000 x 600 Thickness • 35 mm	Wooden frame and wood screws or CD 60 and TRPF screws, Thickness 35 mm: Range 1.40 m	Centre distance 600 mm (px L1200) Centre distance 500 mm (px L2000) Clip every 600 mm



Screwed to CD 60, joint between panels



Screwed to concrete, joint between panels



Screwed to wooden batten, joint between panels



Installation on IVFIB clip

Installation on T24 or T35 frame

For use on ceilings only.

2 edges available:

- Straight edge A T24 – T35
- Edge with concealed removable frame D T35 (for 35 mm panel)

General information

The Organic ceilings must be implemented according to the regulations under DTU 58.1 and the Knauf recommendations.

Assembly

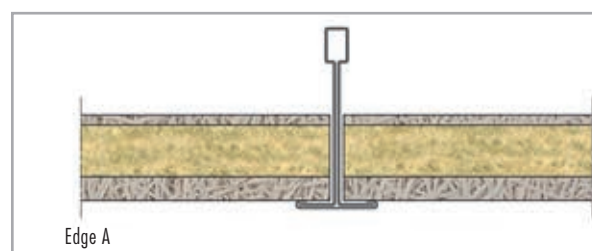
The most common type of assembly involves supports every 1,200 mm and 1,200 and

600 mm spacers. The supports are positioned with a centre distance of 600 mm for heavier loads or wider ranges.

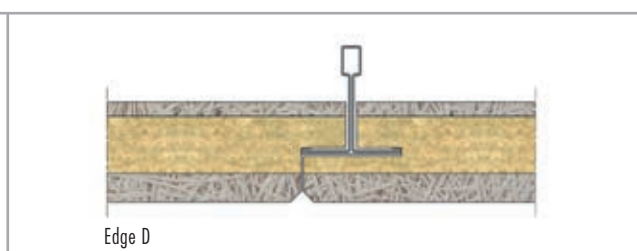
NB

In the case of **implementation in a suspended ceiling with a removable concealed frame**, the frame will consist of a T35 support with a

thickness of 35 mm. The supports arranged with a centre distance of 600 mm must be accompanied by spacers on the plenum side to ensure that the frame is positioned correctly. In certain configurations, the structure may be reinforced with anti-uplift clips and/or additional spacers.



Edge A

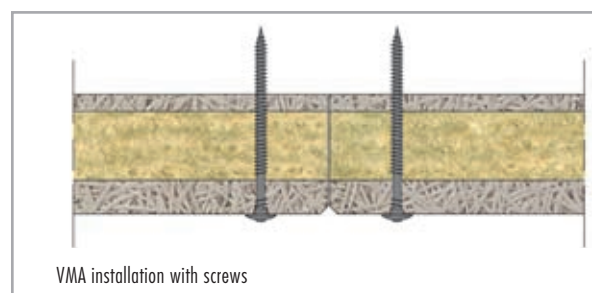


Edge D

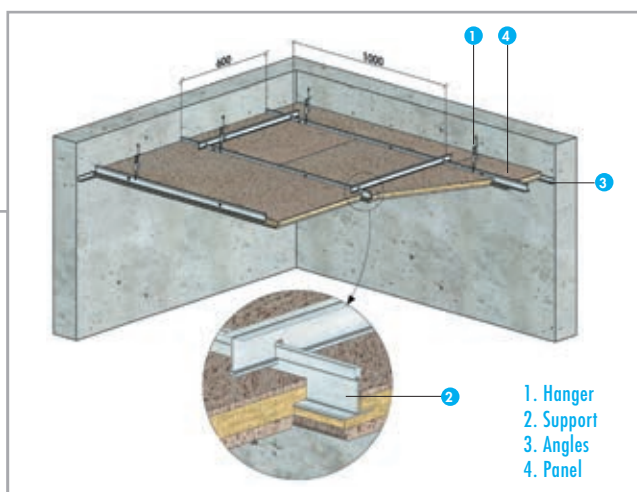
Installed by means of mechanical attachments

Used on walls or ceilings

- 1 type of edge: bevelled 4 sides
- 2 thicknesses : 35 or 50 mm
- 1 type of installation:
 - VMA: visible mechanical attachment using Organic through screw



VMA installation with screws



1. Hanger
2. Support
3. Angles
4. Panel

Implementation principles**Description**

Covering of interior ceiling by attaching Organic Twin panels.

The aim is to obtain acoustic correction and reduce the reverberation time.

The panels may be attached by means of screws or specific clips depending on the type of panel and type of support.

Areas of use

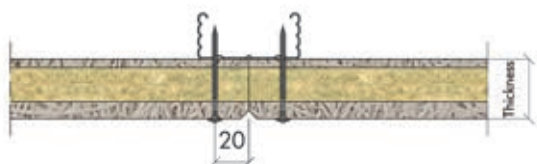
Premises classified as EA, EB and EB+, all types of private and collective building, either new or renovated: residential buildings, public access buildings (PAB) such as schools, hospitals, hotels, industrial and commercial buildings, The Organic panels are not sensitive to moisture but the attachment systems must be

protected against rust in case of significant rainfall. Suitable for theatres, community centres, educational or catering facilities and public areas requiring controlled reverberation and improved intelligibility. For sports halls, resistance to ball impacts requires a mesh type mechanical protection or the use of a double CD 60 frame with a reduced centre distance.

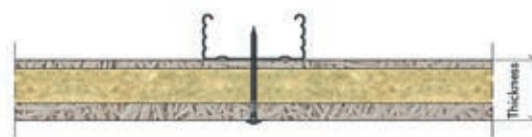


Organic Twin implementation on interior ceiling

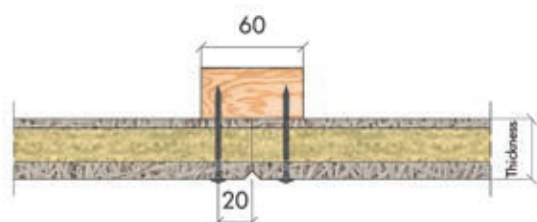
Implementation by mechanical attachment on interior wall	Dimensions (in mm)	Frame – Accessories	Implementation comments
Screwing to metallic structure Installation of panels perpendicular to frames. VMA	1,200 x 600 2,000 x 600 Thickness 35, 50 mm	CD 60 Thickness 25, 35 mm : range 1.40 m Interior Organic screw (EVDF ZBJ)	3 screws / width 600 mm 2 cm from edge centre distance 600 mm (px L1200) centre distance 500 mm (px L2000)
Screwed to wooden frame Installation of panels perpendicular to frames. VMA	1,200 x 600 2,000 x 600 Thickness 35, 50 mm	60 x 30 batten, attached every 1 m Interior Organic screw (EVDF ZBJ)	3 screws / width 600 mm 2 cm from edge centre distance 600 mm (px L1200) centre distance 500 mm (px L2000)
Screwed directly onto concrete VMA	1,200 x 600 2,000 x 600 Thickness 35, 50 mm	EJOT – DDS screw, 6 mm hole, head Ø 25 beige or white	5 attachments (px L1200) 6 attachments (px L2000)



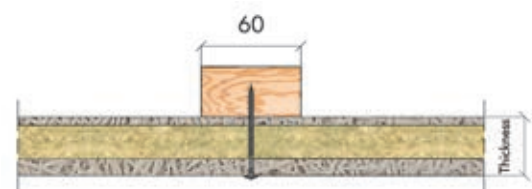
Screwed to CD 60, joint between panels



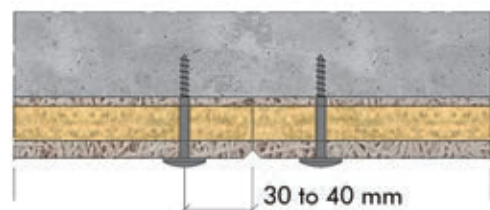
Screwed to CD 60, running section



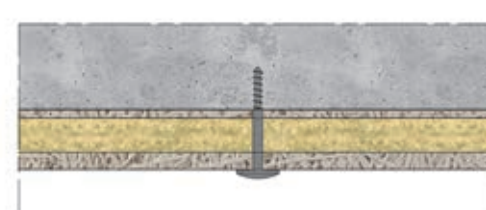
Screwed to wooden batten, joint between panels



Screwed to wooden batten, running section



Screwed to concrete, joint between panels



Screwed to concrete, running section



Organic Mineral

Product detail p. 26

Implementation principles

Description

Covering of interior ceiling by attaching Organic Mineral panels.

The aim is to obtain acoustic correction and reduce the reverberation time.

The panels may be attached by means of screws or specific clips depending on the type of panel and type of support.

Areas of use

Premises classified as EA, EB and EB+, all types of private and collective building, either new or renovated: residential buildings, public access buildings (PAB) such as schools, hospitals, hotels, industrial and commercial buildings.

The Organic panels are not sensitive to moisture but the attachment systems must be protected against rust in case of significant rainfall. Suitable for theatres, community centres, educational or catering facilities and public areas requiring controlled reverberation and improved intelligibility. For sports halls, resistance to ball impacts requires a mesh type mechanical protection or the use of a double CD 60 frame with a reduced centre distance.

Installed by means of mechanical attachments

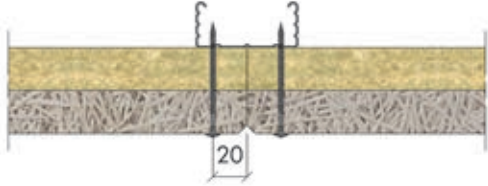
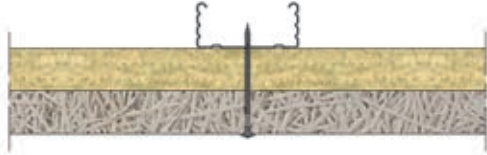
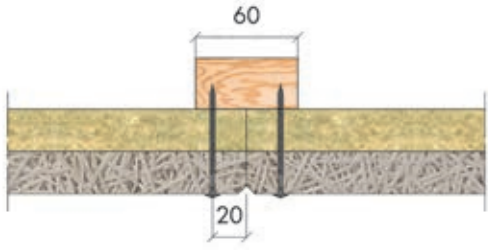
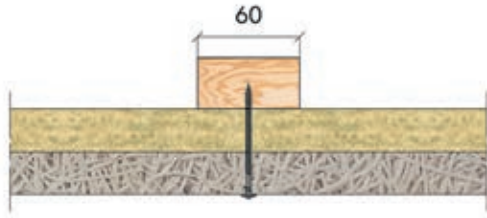
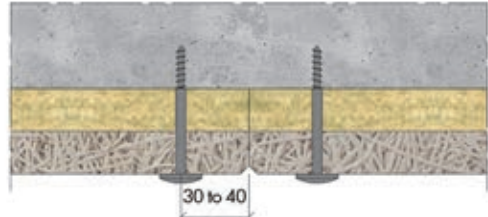
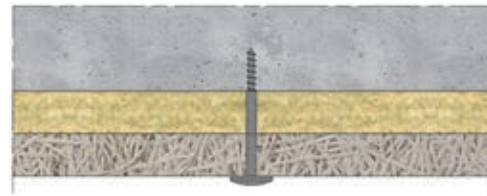
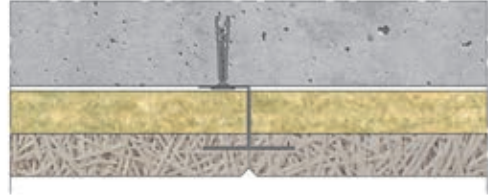
Used on walls and ceilings

- 1 type of edge: bevelled 4 sides
- 5 thicknesses : 50, 75, 100, 125, 150 mm
- 2 types of installation:
 - VMA: visible mechanical attachment using Organic through screw
 - IMA: invisible mechanical attachment using IVFIB clip

Organic Mineral implementation on interior ceiling

Implementation by mechanical attachment on interior ceiling	Dimensions (in mm)	Frame – Accessories	Implementation comments
Screwing to metallic frame Installation of panels perpendicular to frames. VMA	1,200 x 600 2,000 x 600 Thickness 50, 75, 100, 125, 150 mm	CD 60 Thickness 50 (25+25), 75 (25+50) mm: Range 1.40 m Thickness 100 (25+75), 125 (25+100), 150 (25+125) mm: Range 1.00 m Interior Organic screw (EVDF ZBJ)	3 screws / width 600 mm 2 cm from edge Centre distance 600 mm (px L1200) Centre distance 500 mm (px L2000)
Screwed to wooden frame Installation of panels perpendicular to frames. VMA	1,200 x 600 2,000 x 600 Thickness 50, 75, 100, 125, 150 mm	60 x 30 batten, attached every 1 m Interior Organic screw (EVDF ZBJ)	3 screws / width 600 mm 2 cm from edge Centre distance 600 mm (px L1200) Centre distance 500 mm (px L2000)
Screwed directly onto concrete VMA	1,200 x 600 2,000 x 600 Thickness 50, 75, 100, 125, 150 mm	EJOT – DDS screw, 6 mm hole, head Ø 25 beige or white	5 attachments (px L1200) 6 attachments (px L2000)
Plugged on concrete VMA	1,200 x 600 2,000 x 600 Thickness 50, 75, 100, 125, 150 mm	FIB M full body (all thicknesses) FIB M CC hollow body (<100 mm) Light cap	Drive peg Screw peg 8 attachments/px of 2,000 x 600
IVFIB clips on concrete. IMA	1,200 x 600 2,000 x 600 Thickness 50, 75, 100, 125, 150 mm	Plugged or stud shot clip	Clip every 600 mm max
IVFIB clips on CD 60 frame. Installation of panels perpendicular to frames. IMA	1,200 x 600 2,000 x 600 Thickness 50, 75, 100 mm	Wooden frame and wood screws CD 60 and TRPF screws Thickness 50 (25+25), 75 (25+50) mm: Range 1.40 m Thickness 100 (25+75) mm: Range 1.00 m	Centre distance of CD 60 / Clips Centre distance 600 mm max



 Screwed to CD 60, joint between panels	 Screwed to CD 60, running section
 Screwed to wooden batten, joint between panels	 Screwed to wooden batten, running section
 Screwed to concrete, joint between panels	 Screwed to concrete, running section
 Installation on IVFIB clip	

NB

Installation with IVFIB means that the first panel will be resting on the floor or a load recovery will be applied. A height-dependent load recovery will be applied every 5m (wooden batten or metal profile under IVFIB).

m The Organic Wall installation range

Product details

p. 16-26

Implementation principles for interior wall

Description

Covering of interior wall by attaching Organic, Organic Twin or Organic Mineral panels.

The aim is to obtain acoustic correction and reduce the reverberation time.

The panels may be attached by means of screws to metal or wooden frames or using specific clips depending on the type of panel and type of support.

Areas of use

- Premises classified as EA, EB and EB+, all types of private and collective building, either new or renovated: residential buildings, public access buildings (PAB) such as schools, hospitals, hotels, industrial and commercial buildings,
- The Organic panels are not sensitive to moisture but the attachment systems must be protected against rust in case of significant rainfall.

- Organic panels should be installed above a height of 2m to prevent users of the premises from suffering aggressive friction.
- Suitable for theatres, community centres, educational or catering facilities and public areas requiring controlled reverberation and improved intelligibility.
- For sports halls, resistance to ball impacts requires a mesh type mechanical protection.

Implementation on interior walls

Organic, Organic Twin, Organic Mineral: 1,200 x 600, 2,000 x 600 mm.

Implementation by mechanical attachment on interior wall	Profile – accessories	Implementation comments
Screwing to metallic structure CD 60 attached by U DH hanger	CD 60, vertical hanger U DH (Knauf) / 1 m Interior Organic screw (Knauf / Etanco)	3 screws / width 600 mm – 2 cm from edge centre distance 600 mm (px L1200) centre distance 500 mm (px L2000) Height ≥ 2 m, premises open to the public
Screwed to wooden frame	Vertical 60 x 30 batten, attached every 1 m Interior Organic screw (Knauf / Etanco)	3 screws / width 600 mm – 2 cm from edge centre distance 600 mm (px L1200) centre distance 500 mm (px L2000) Height ≥ 2 m, premises open to the public
Screwed directly onto concrete	EJOT – DDS screw, head Ø 25 mm, beige or white	6 DDS attachments per panel Height ≥ 2 m, premises open to the public 6 mm hole
Screwed to plasterboard (KM)	Interior Organic screw (Knauf / Etanco)	3 screws / width 600 mm – 2 cm from edge must be screwed to frame (frame centre distance 600 mm max) Height ≥ 2 m, premises open to the public
Mechanical crosswise attachment	FIB M full body FIB M CC hollow body (<100 mm) Light cap	Drive peg Screw peg 8 attachments/panel of 2,000 x 600
FIB IV clips on concrete (except Organic Twin)	Plugged or stud shot clip	Clip every 660, 6 mm max, according to L Px
FIB IV clips on frame (except Organic Twin)	Wood or metal	Clip every 660, 6 mm max, according to L Px



Self-supporting installation (2 m between beams)

Process used for decorative acoustic ceilings consisting of wood wool installed between walls or between frame elements, either horizontal or slanting. 2,000 x 600 mm panels. Non-visible frame. Implemented between beams (only possible if centre distance between beams ≤ 2.00).

Attachment of profile between beams

Positioning and screwing in of UA48 angle brackets on inner surface of beams

- use two screws (45 mm) per bracket,
- for sloping ceilings, position the first profile or the first panel against a fixed point,
- position the end of the profile against the brackets and screw in.

Installing the panel

- cut the panel to the exact length if necessary (frame tolerance),
- the panel groove interlocks with the bottom flange of the profile,
- temporarily hold the panel in place during the next phase (rods or wedge).

Attachment of the next profile

- Positioning and screwing in of angle brackets on inner surface of beams Two 45 mm screws per bracket,
- insert the profile in the panel groove
- position the end of the profile against the brackets and screw in.

Final panel

Cutting and screwing underneath a profile positioned slightly higher or under a wooden batten positioned in advance. Possible installation of decorative lateral profile (wood or metal)

Technical characteristics

- Characteristics of a board:
 - L x w: 2,000 x 600 mm
 - Thicknesses: 25 – 35 mm
 - Surface density: 11 kg/m² – 16 kg/m²

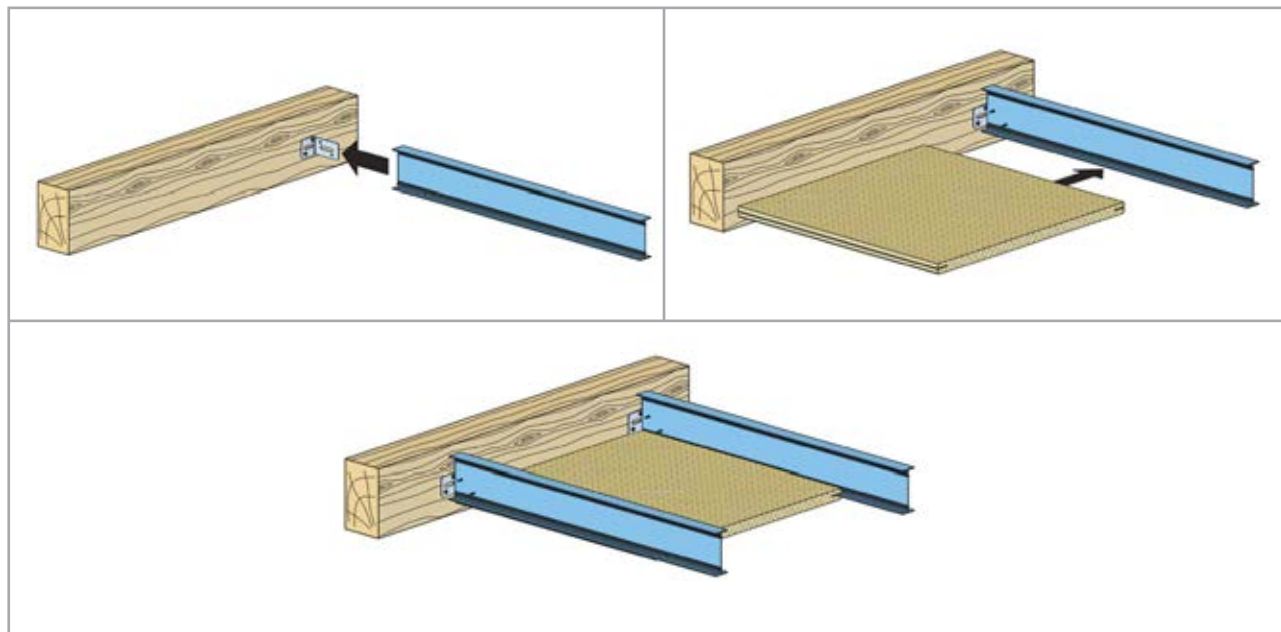
Accessories:

- I-TEC 50 or I-TEC 70 profiles, thickness 10/10;
- UA 48 bracket (thickness 2 mm) or bracket with minimum thickness of 1.5 mm and minimum width of 40 mm;
- tightening of brackets: wood screw or TTPC screw with minimum length of 45 mm.
- Organic RB4 panels, thickness 25 or 35 mm, VK09/VK09D, L2000.

NB

Identical performances to Organic panels and ceiling slabs.

The finer structure of the fibre (1 mm width) compared with that of Fibracoustic (1.5 mm width) with an equivalent density has led to an increase in the acoustic absorption coefficients by around 10% with the average and high frequencies of Organic panels and ceiling slabs.



m IMA Organic with plenum (Organic clip)

Organic clip

Implementation of hangers and F47 furring (centre distance 0.60, range 1.20 m)

- Attachment of W-Organic profile on 3 sides. Cutting of the end of profile W to allow for the continuity of the hollow joint at the connecting point. Positioning of the top flat side in line with the underside of F47 and the bottom flat side in line with the underside of the Organic panel.
- The axis of the first F47 is positioned 625 mm from the partition (fig. 1).

Installation of 25 and 35 mm panels

- Positioning of the first row. Installation of the panel on the flange of the

W-Organic profile, supported against the first furring and insertion of Organic clips. This covers the furring and the lugs press into the panel groove to hold it in place. It is finally hammered into position (fig. 2).

- The panels are installed in staggered rows. An Organic clip helps to hold the three panels in place (fig. 3).
- Attach furring 5 mm from the partition to install the final row. Cut the panel lengthways corresponding to the remaining width minus 25 to 27 mm, position and hold in place with a rod. Position the final W-Organic profile and screw into the furring with a TRPF screw (fig. 4).

- The dividing joints are not relevant; the expansion joints are used as a reference.

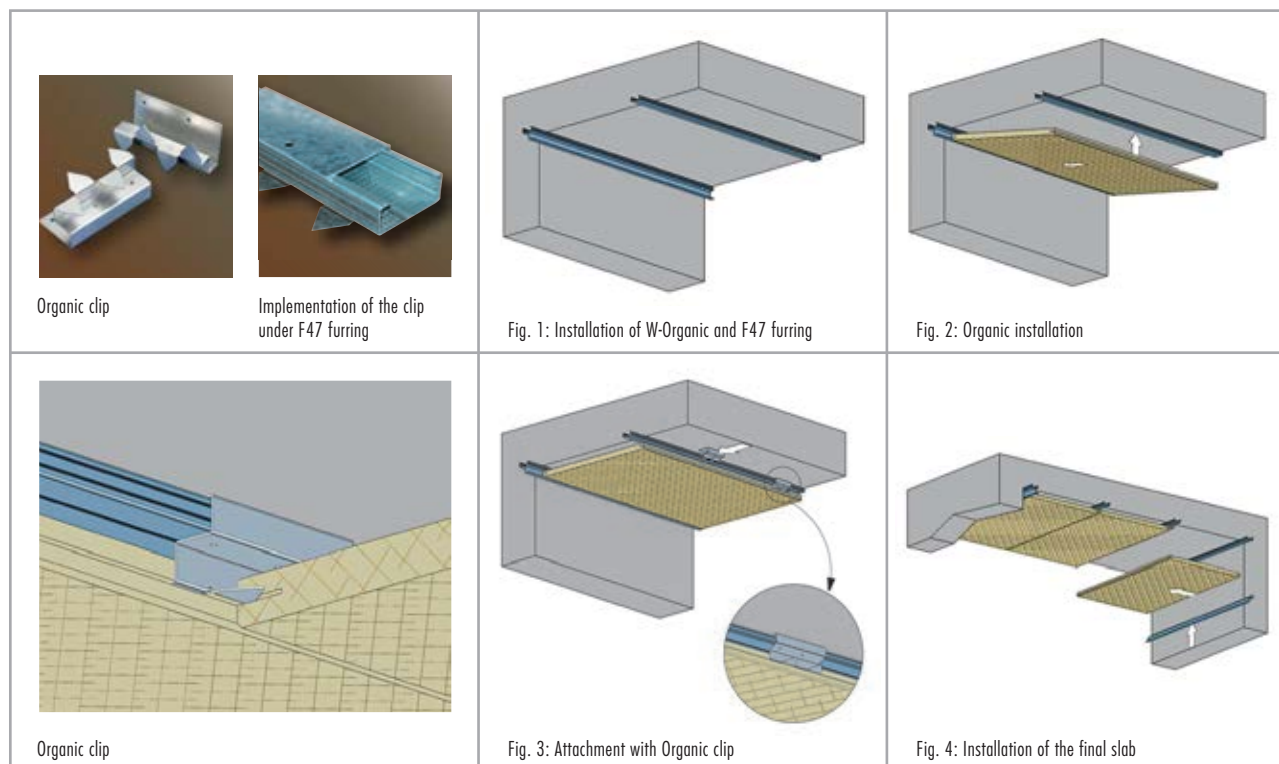
Scope of application

- Completion of Organic ceiling under F47 furring.
- All types of premises with the exception of outdoor and damp premises (application not suitable in windy environments or courtyards).

The advantages of the Organic Clip

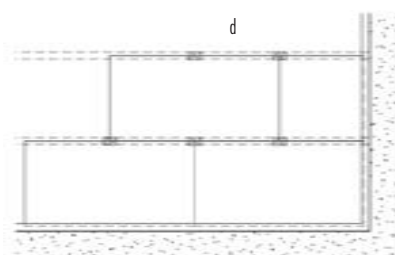
- No screws and non-visible frame.
- Acoustic correction and decorative appearance.

Step by step installation of the Organic clip



Installation details

Layout of panels and clips
1,200 mm panels: d = 600

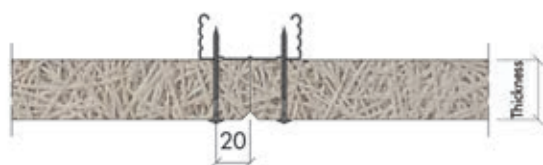


VMA Organic in gymnasiums

Implementation with visible mechanical attachment

The Organic panels are screwed on in a perpendicular position, namely

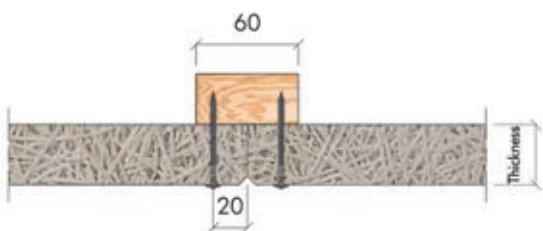
- on CD 60 type frame **with centre distance of 300 mm**
- on wooden battens (60 x 30 mm) **with centre distance of 300 mm**
- directly onto the concrete



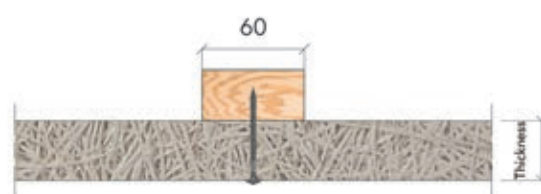
Screwed to CD 60, joint between panels



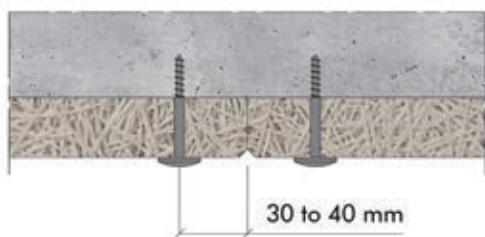
Screwed to CD 60, running section



Screwed to wooden batten, joint between panels



Screwed to wooden batten, running section



Screwed to concrete, joint between panels



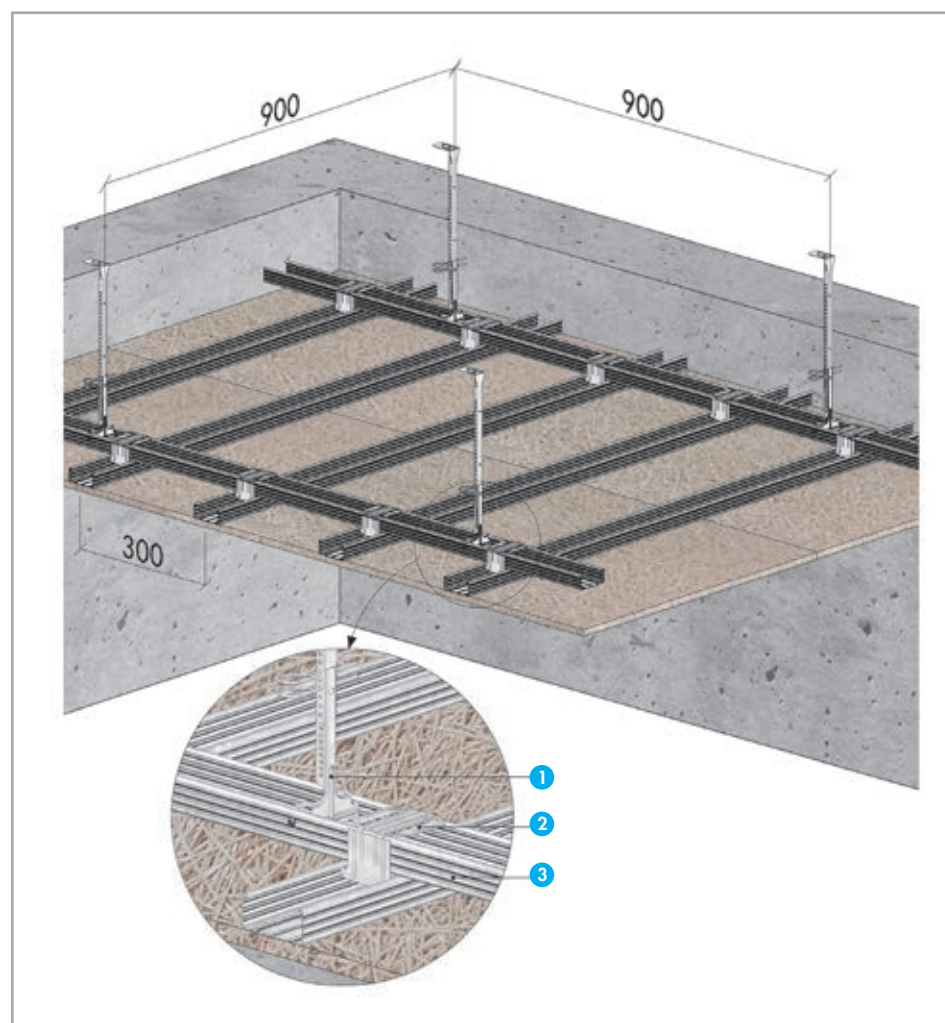
Screwed to concrete, running section



VMA Organic in gymnasiums (continued)

Implementation of VMA in gymnasiums

Implementation by mechanical attachment on interior ceiling	Dimensions (in mm)	Frame – Accessories	Implementation comments
Screwing to metallic structure Installation of panels perpendicular to frames. VMA	1,200 x 600 Thickness 25 and 35 mm	CD 60 secondary frame –centre distance 900 mm and range 900 mm CD 60 secondary frame –centre distance 300 mm CD 60 connecting bracket Interior Organic screw (EVDF ZBJ)	3 screws / width 600 mm 2 cm from edge 15 screws/px
Screwing to metallic structure Installation of panels perpendicular to frames VMA	1,200 x 600 Thickness 25 and 35 mm	60 x 30 batten, attached every 1 m Interior Organic screw (EVDF ZBJ)	3 screws / width 600 mm 2 cm from edge 15 screws/px
Screwed directly onto concrete VMA	1,200 x 600 2,000 x 600 Thickness 25 and 35 mm	EJOT – DDS screw, 6 mm hole, head Ø 25 beige or white	5 attachments (px L1200) 6 attachments (px L2000)
Plugged on concrete VMA	1,200 x 600 2,000 x 600 Thickness 25 and 35 mm	FIB M full body FIB M CC hollow body Light cap	Drive peg Screw peg 8 attachments/px of 2,000 x 600



Organic installation on CD 60 double frame

1. Furring CD 60
2. Connecting bracket
3. CD 60 top and bottom hanger + pins

Installation on ceiling on metal frame

The frame system consists of CD 60 primary profiles with a centre distance of 900 mm, maximum range 900 mm and CD 60 secondary profiles, centre distance 300 mm. These two frames are linked perpendicularly by a CD 60 connecting bracket. The peripheral UD 60 angles are attached along the walls every 400 mm. This system is suspended with adjustable CD

60 hangers (top and bottom hangers) and connected by means of two pins.

The panels are screwed perpendicular to the frames by means of interior Organic screws (EVDF ZBJ).

Installation on wall covering on metal frame

The frame system consists of CD 60 primary profiles with a centre distance of 900 mm, maximum range 900 mm and CD 60

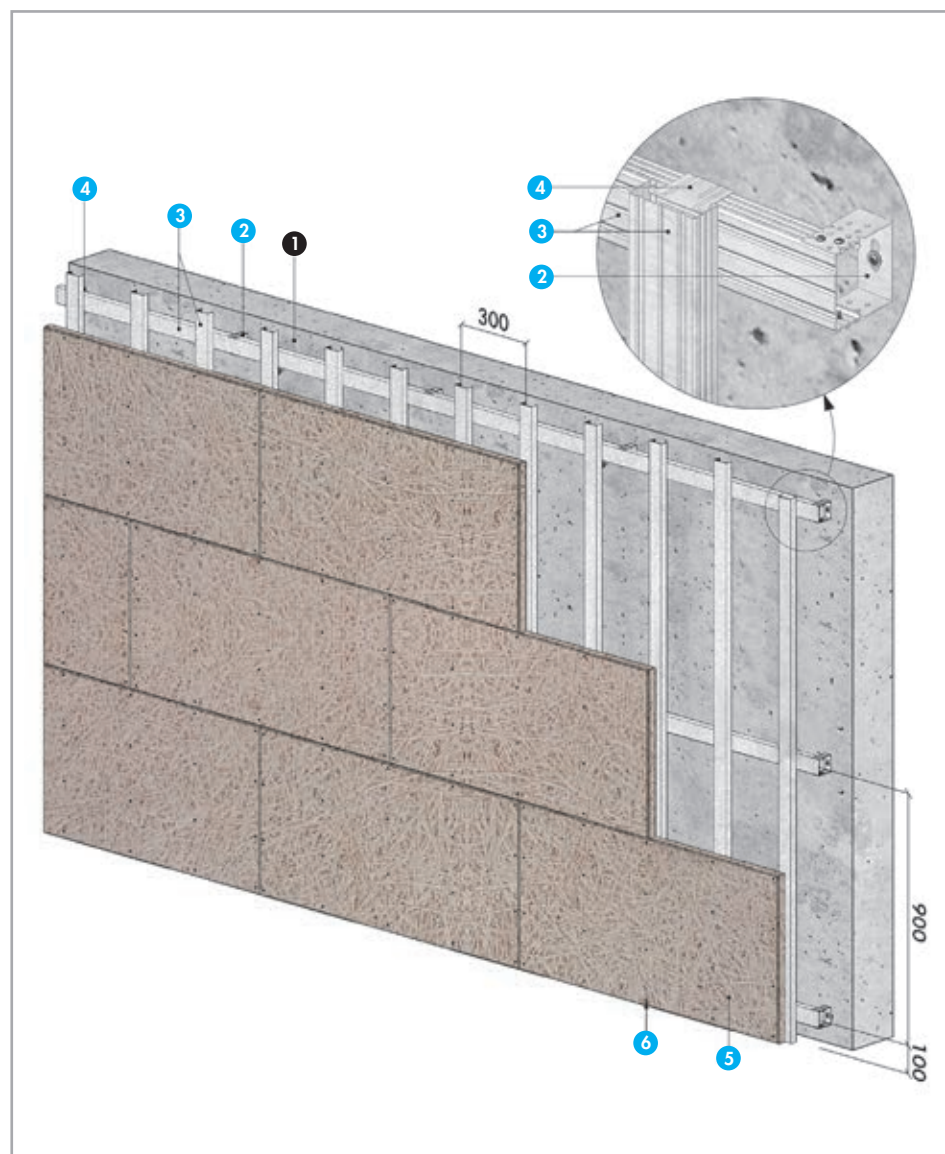
secondary profiles, centre distance 300 mm. These two frames are linked perpendicularly

by a CD 60 connecting bracket.

The peripheral UD 60 angles are attached along the walls every 400 mm.

This system is attached by means of UDH hangers plugged directly to the support.

The panels are screwed perpendicular to the frames by means of interior Organic screws (EVDF ZBJ).



Organic FMV – installed on CD 60

1. Supporting wall
2. Hanger U
3. Furring CD 60
4. Connecting bracket
5. Organic
6. Organic screw

m Instructions for use and maintenance

Handling

Site conditions

The firm is responsible for keeping the Organic slabs in good condition and for guaranteeing the implementation of the product from the point of delivery until the acceptance of the work.

Storage on site

The installation firm must ensure that the delivered products are stored flat in a dry building which is protected against adverse weather and damp.

The panels must not come into direct contact with the ground.

Since the pallets are packaged using a minimum amount of plastic for environmental reasons, an outer box will be used to protect the slabs during transport.

The protective materials are to be removed when the products are placed in storage in their final position.

The firm must ensure that the products are handled with the utmost care from their removal from the pallets through to implementation.

The panels are to be stored with the visible sides facing one another with a protective film.

Installation

Cutting

The wood wool panels are to be cut using a hand or electric saw taking care to ensure that a new blade is used so that the product is not damaged.

The panels should be cut on the back to avoid tearing the fibres on the visible side of the product.

Electrical tools must be fitted with a dust collector to prevent dust from accumulating on the premises.

As far as possible, cutting should take place in a different building from the one in which the product is to be implemented. These activities should be carried out as far as possible from the installation area.

We recommend that goggles be worn during the cutting phase and that gloves be worn for the handling and installation of the panels.

The installation firm will touch up the products using pots of paint delivered with the Organic panels (except for the Pure finish which is not painted, the 9010 white shade and the graphite finish).

Installation conditions

The Organic panels must be stored for a minimum of 48 hours on the premises in which they are to be installed in order to limit dimension variations.

In case of damage to the panels, additional products may be ordered from the company Knauf Fibre. However, we should draw your attention to the fact that these products, including the paint, are natural and that under these conditions differences in shade may be noted in spite of the care taken to respect the colours.

In the event of the replacement of a panel, we recommend replacing all the panels taken from an area which has already been completed. The new panel can be installed in a less visible area.

In the event of additional work which is not being completed quickly, we recommend that you provide us with a sample as it may be possible to reproduce the shade.

Reminder

In the case of a quality problem, the panels must not be installed and the firm will contact its Knauf advisor to obtain an opinion as to the action to be taken.

Safety instructions

The firm must ensure that the products are implemented in accordance with the safety rules.

Knauf will provide safety data sheets upon request.

Maintenance

Upon completion of the project

The firm must ensure that the Organic panels have been dusted and the paint has been touched up in the case of damage.

Repainting

If the application of a coat of paint is required, the firm will contact Knauf in order to determine the application conditions. In all events, this operation may only be carried out using a gun with a range of 200 g for a 300 g/m² coat of paint. This is to ensure that the acoustic characteristics of the product are not altered.

The application of paint using a roller is prohibited.

Renovation

The Organic panels are labelled on the back for product identification purposes. This identification is necessary when the product is recommended to Knauf Fibre.

Cleaning

Dust may be removed from the panels using a vacuum cleaner. The vacuum cleaner must not come into contact with the product to prevent the fibres from being torn.

- Abrasive products must never be used.
- Chemical products which could cause the paint to become discoloured must never be used.
- The use of brushes is prohibited.

Cleaning with water

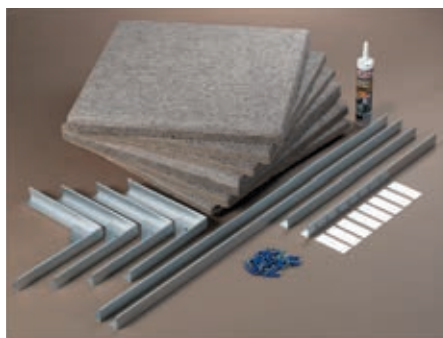
The panels may be rubbed carefully using a damp sponge soaked in clear water.



PANEL INSTALLATION GUIDE



Tools required for installation



In the kit



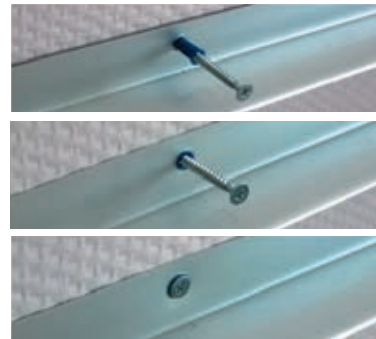
Remove the protective film from the aluminium profiles



Mark out the bottom line using a spirit level



Position the 1,200 profile on the line and drill the 3 holes



Position and screw in the pegs



Insert the splice plates with the retention pin visible



Drill and plug the first bracket



Screw in



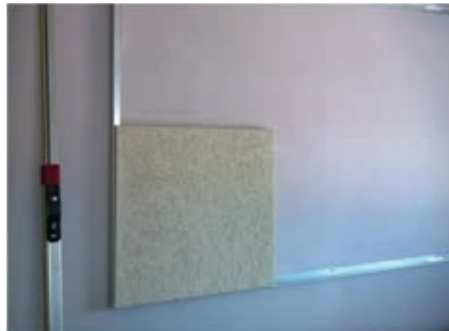
Attach the other bracket



Position and attach the remaining profiles



Apply glue the back of the panels with 5 15 cm cords



Position the panel in the frame pressing it against the support



Position and attach the remaining panels



Your notes

[illegible]

Your notes

[illegible]

Your notes

This image shows a full page of blank, lined paper. It features approximately 20 horizontal grey lines spaced evenly apart, typical of notebook paper. The lines extend across the entire width of the page, leaving small margins at the top and bottom. There are no vertical lines or other markings present.

Your notes

This image shows a full page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page, typical of notebook paper. There are no margins, text, or other markings on the page.

GENERAL CONDITIONS OF SALE

KNAUF FIBRE

PREAMBLE :

Unless there is a special, written agreement made with the customer, the placement of an order implies his compliance with these general conditions of sale which constitute the basis of the commercial negotiations, in accordance with the provisions of article L.441-6 of the Commercial Code, whatever clauses may appear in his own documents. These conditions may be revised at any time without notification, with it being understood that any new version shall take effect on the date of its reception by the customer.

1. ORDER :

Any orders, along with any modifications or cancellations of orders, must be made in writing by our customers and shall be subject to a written acceptance on our part, setting out the conditions and methods according to which the order, or modification or cancellation of order received, is to be honoured.

Our company reserves the right to refuse orders in the event of the customer's failure to fulfil any of his obligations whatsoever and, more generally, to refuse any order which is of an abnormal nature for whatever reason or which is placed in bad faith.

Our company reserves the right, even during the execution of an order, to demand a performance guarantee for the undertakings, with any refusal authorising the cancellation of all or part of the accepted orders.

2. RETENTION OF TITLE :

Our goods and tools shall remain our property, until their price has been fully paid to us, both the principal and other charges. Nevertheless, the liability for risks relating to these goods and tools shall be incumbent on the customer (even in the case of carriage free sale) as soon as they are handed over, either to the customer or his agent or to the carrier; as from the time of this hand-over, the customer shall take charge of their costs, safekeeping and conservation, and shall assume the liability for any damage they may cause. He undertakes to take out any insurances necessary for these purposes.

In application of this retention of title, we are authorised to make an inventory of the goods that are as yet not paid for and which originate from our premises, at any time, either on the customer's premises or on the premises of any third party he has transferred them to. The handing over of a security which creates an obligation to pay, a draft or other paper does not constitute a payment until the said security is actually collected. The payment may only be deemed to have been made, once the amount of the price has actually been collected by our company.

Until the full payment of their price, the products under retention of title shall be kept by the customer in such a way that they are individualised and cannot be confused with products originating from other suppliers; they may not be transferred, sold, pledged, or more generally be the subject of rights accorded to third parties.

If the products which are the subject of the retention of title have been sold by the customer, our company's amount receivable shall be automatically transferred to the amount receivable of the price of the products sold in this way by the customer. As of now, the customer shall assign to our company all receivable amounts which might arise from the resale of unpaid products under retention of title. In the event of a reclaim of goods for partial or total non-payment, the products in stock shall be deemed to correspond to the unpaid amounts receivable. The customer undertakes to inform any third party, especially in the event of seizure, of the fact that the products which come under the retention of title clause belong to our company, and to inform our company immediately of any seizure or similar operation. It is specified, as needs be, that this retention of title clause complies with the legal and regulatory provisions in force and, in this respect, to the provisions of order no. 2006-346 of 23 March 2006 "pertaining to securities".

3. DELIVERY, CLAIM :

The leadtimes given in our order confirmations are purely for information purposes. The customer may not under any circumstances invoke any possible delay, for whatever reason.

Unless expressly stipulated to the contrary by us in the order acknowledgement, the delivery, and as a result the transfer of risks to the customer, both in terms of the losses or damage to the products which are the subject of the customer's order on the one hand, and in terms of the liability arising from the said products on the other hand, shall be deemed to have been carried out as soon as they are individualised on our premises, and at the latest when they are handed over to the first carrier.

As a result, the customer must take out a policy covering the damage liable to occur to the products being transported, along with a policy covering the financial consequences of his liability arising from the damage that may be caused by the

products which are the subject of his order, as from the point of transfer of the risks.

Any possible claims of any nature whatsoever, in particular relating to the defectiveness of the products, must be communicated to us within 24 hours of receipt of the goods. Once this time has expired, the customer shall be deemed to have accepted the goods without reservation. Except in the case of an explicit prior agreement, no return of the goods shall be accepted. In any event, every return of goods must be organised carriage free.

In his relations with the carriers, the customer undertakes to check the products at the time of their reception and to immediately make any necessary reservations with the carrier, under the conditions specified in article L. 133-3 of the Commercial Code (reservations on receipt, confirmed by recorded delivery letter within three days, not including public holidays). If this procedure is not adhered to, any possible recourse with respect to our company shall be declared to be ineffective.

4. QUALITY OF OUR PRODUCTIONS/ WARRANTIES :

We guarantee that our products comply:

- With the standards in force,
- With the technical evaluations and certifications,
- With our specifications,
- With the code on the uses of plastic packaging from the « chambre syndicale des emballages en matière plastique » [the French plastic packaging manufacturer's trade association],
- With the specifications drawn up and handed over by our customers, and more generally with the specifications shown in our customers' orders.

Unless there is an explicit stipulation to the contrary which has been agreed by us, orders are carried out with the normal tolerances in terms of regular quality.

We cannot be held responsible:

- for a defect in the product established with regard to the specific use for which our customer intended it, even if the latter has informed us about this, and without there being a special undertaking on our part,
- for the consequences of a use of our products which is not advised by us and certainly of a use which does not conform to our instructions or to standard industry practices,
- for the imperfections of products arising from their storage or handling conditions.

We exclude any liability for any damage suffered by any product, any equipment, any system or any application when components other than ours, or those whose use we recommend, have been incorporated or used in an assembly. Our liability shall likewise be excluded when the failure of one of our products has been caused by another component which the customer has used in conjunction with our product. We strictly limit our warranty to the replacement of the products for which we have established the defectiveness within the context of a joint inspection carried out with the customer.

At our discretion, we will propose reimbursement for the disputed products at their invoiced value.

Our liability is strictly limited to the obligations thus defined and there is explicit agreement that we shall not under any circumstances be bound to indemnify the consequential and/or indirect losses which the customer (or a possible subsequent purchaser) might claim, with this being for whatever cause and on whatever grounds (contractual warranty, legal warranty, contractual liability, such as non-conformity, etc.).

As a result of this, we cannot under any circumstances be bound to indemnify, in particular, production, running or profit losses, costs or expenses of any kind, especially in the case of the supplied products, or the goods in which the supplied products might have been incorporated, not being available or not being fit for their purpose, along with losses suffered by third parties, and more generally any compensable loss other than of a physical or material nature.

5. PRICES — TERMS AND CONDITIONS OF PAYMENT :

Our products are invoiced at the prices in force on the date of delivery.

Our goods are payable at the head office by an accepted 'protestable' draft [draft with additional guarantees under French law] or a promissory note at forty-five days, and of month.

A discount of 0.65% shall be given for settlement within fifteen calendar days from the date of the invoice. No discount is given for export sales.

By explicit agreement, and unless there is a deferment requested in good time and granted by us, failure to pay for our supplies, even where partial, by the set due date, with the occurrence of the due date constituting official notification, shall result in:

- the immediate enforceability of payment of all other

invoices, even those having given rise to the introduction of a draft, and the immediate enforceability of payment of all sums owed by the customer for whatever reason,

- ipso jure enforceability of payment, in compliance with the provisions of article L.441-6 of the Commercial Code, of a penalty for delay calculated as from the day following the due date at the legal rate of interest in force multiplied by 3.

Our company shall be able to deduct the said penalties for delay ipso jure from any price reduction due to the customer. In the event of payment by commercial paper, the failure to return the paper shall be considered to be a refusal of acceptance that is deemed to be a failure to pay. Failure to accept a draft or failure to subscribe to a promissory note within sixty days of the issue of the invoice shall also be considered to be a failure to pay.

No payment may be the subject of compensation on the sole initiative of the customer, in particular, and in compliance with the provisions of article L.442-6-4-8° of the Commercial Code, in the event of an allegation by the customer of a delay in delivery or a non-conformity of the products supplied, as the prior written agreement of our company is essential, with this being the case whatever provisions to the contrary that may appear in the customer's purchasing conditions.

In the event of manifest insolvency, of payment after the due date, of court-supervised administration or liquidation, our company can:

- proceed, ipso jure and without any other formalities, with the reclaim of the goods corresponding to the order concerned and, if applicable, to previous unpaid orders, whether or not their payment is due,
- cancel the contract in full, ipso jure, via a simple notification given to the customer by recorded delivery letter with request for acknowledgement of receipt, without any other formality and without prejudice to the exercise of all its other rights.

Any deterioration in the customer's credit status at any time, may, depending on the risks incurred, justify the fixing of a deficit ceiling, if applicable authorised by the customer, and the requirement of certain payment terms, of cash settlement of current and future orders and of certain guarantees.

This will particularly be the case if a disposal, lease management, collateral pledging or investment of the customer's business or of some of its elements, or if a change in the control or structure of the customer's company or the person of its manager, is likely to have an undesirable effect on the customer's credit.

By explicit agreement, in the case of a judicial protection, court-supervised administration or court-supervised liquidation procedure being opened with respect to the customer, the amount as yet unpaid for the invoices which he may have issued in terms of the services provided for the benefit of our company and the amount of the price reductions which may be due, shall be offset against the sums which he may still owe to our company, with these becoming immediately due for payment.

If, in addition, our company is obliged to appoint an agent (lawyer, bailiff, etc.) to obtain the payment of the amounts owed, it is explicitly agreed in terms of a penalty clause stipulated as a lump sum which cannot be reduced, ipso jure, that a surcharge shall be applied, calculated at the rate of 10% of the total of the amounts owed by the customer, with this being without prejudice to any possible delayed payment interest and damages.

6. INTELLECTUAL PROPERTY - TRADEMARKS AND PATENTS :

Unless there is an explicit provision to the contrary, the plans, stipulations, computer files, technical and commercial documentation, specifications, test results, photographs, samples, prototypes, studies, reports, mail, patents, models and drawings, etc. which we send to our customers remain our property. As a result, the customer undertakes not to distribute them in any way whatsoever without our prior written agreement and undertakes to only use them within the strict limits of the agreed purpose.

Our customers are guarantors on our behalf and have a duty to us to indemnify any consequences of objections raised at the time of the manufacture of goods carried out by us in accordance with their plans, drawings and specifications and which might infringe the industrial or intellectual property rights of third parties.

If the customer should be aware of any infringement of patents, trademarks and other intellectual property rights held by our company, he must inform us immediately of this by fax or email, confirmed by a recorded delivery letter with request for acknowledgement of receipt.

7. STOCKS :

The stocks of raw material(s), components, inserts, tooling and finished and semi-finished products which are established to meet our customers' needs will be invoiced to them in full when their account is closed, whatever the reason for this.

8. MOULDS/MODELS/TOOLING :

Unless there is evidence to the contrary, the moulds, models and tooling which we develop and make with a view to the production of products conforming to the specifications of our customers shall remain our property.

Any financing by the customer with a view to covering all or part of the manufacturing cost of the specific tooling cannot in any way justify a transfer of title of the said tooling to the benefit of the customer, and does not authorise the customer to request its transfer to another manufacturer without our agreement or to restrict our possibility of producing for other customers on the same tooling.

We reserve the right of retention on the moulds, models and tooling provided for us by our customers to ensure the manufacture of the products we supply to them, with this being until the full and final settlement of the invoices corresponding to our deliveries.

9. RETURNS :

No product return shall be accepted without our company's prior written agreement. In any event, the costs relating to the transport of the returned products shall still be borne by the customer.

10. CONFORMITY OF THE PROCUREMENT AND INSTALLATION OF OUR PRODUCTS :

Any person who procures and/or installs our products shall do so under their sole responsibility. It is their responsibility to check at the time of procurement and/or installation that they are in possession of the latest issue of the regulations in force and the latest version of our technical and commercial documentation.

11. EXCLUSION OF ALL PENALTIES :

No penalty shall be accepted by our company, unless it has given its prior written agreement, whatever the reasons for the penalty.

12. FORCE MAJEURE :

The performance by the parties of all or part of their obligations shall be suspended in the event of the occurrence of unforeseeable circumstances or of force majeure which might disrupt or delay the performance. In particular, in the meaning of this clause, the following are deemed to be such circumstances: industrial disputes, and in particular full or partial strikes, lock-outs, disruptions of transport, impediments to the movement of goods, difficulties in the procurement of raw materials or energy supplies, destruction of manufacturing premises and/or production resources, even partial, tooling accidents occurring at our premises or at our suppliers' premises, circumstances outside the parties' control arising from acts "of state" and in general any other cause impeding the activity of our plants, such as fire, flood, earthquake, actions taken by the public authorities, without this list being restrictive.

In the event of this suspension continuing beyond a period of seven days, the other party would have the right to cancel the order in progress.

13. DISPUTES :

French law is the sole law governing our company's sales. The provisions arising from the United Nations Convention on Contracts for the International Sale of Goods, signed in Vienna on 11 April 1980, shall not apply to the relations maintained by our company with its customers.

For any dispute, the courts of our company's head office shall have sole jurisdiction, even in the case of an incidental claim introducing third parties or in the case of there being multiple defendants. However, our company reserves the right to refer the case to the court with jurisdiction over the place where the customer's head office or his establishment is located or where the products are delivered. Payment by commercial paper or any other payment method does not lead to novation, or to dispensation from this clause



**Further information can be
obtained from:**

WWW.KNAUF-BATIMENT.FR

KNAUF FIBRE

14 route de Palante
F-70200 La Côte - France
Tél. : +33 384 89 02 40
Fax : +33 384 30 31 76

Trade stamp