ecophon
SAINT-GOBAIN

ECOPHON

FADE™ DUO

GOOD DESIGN WITHOUT COMPROMISING ACOUSTICS

SAINT-GOBAIN

04 ABOUT ECOPHON

06 TOWARDS NET-ZERO ACOUSTICS

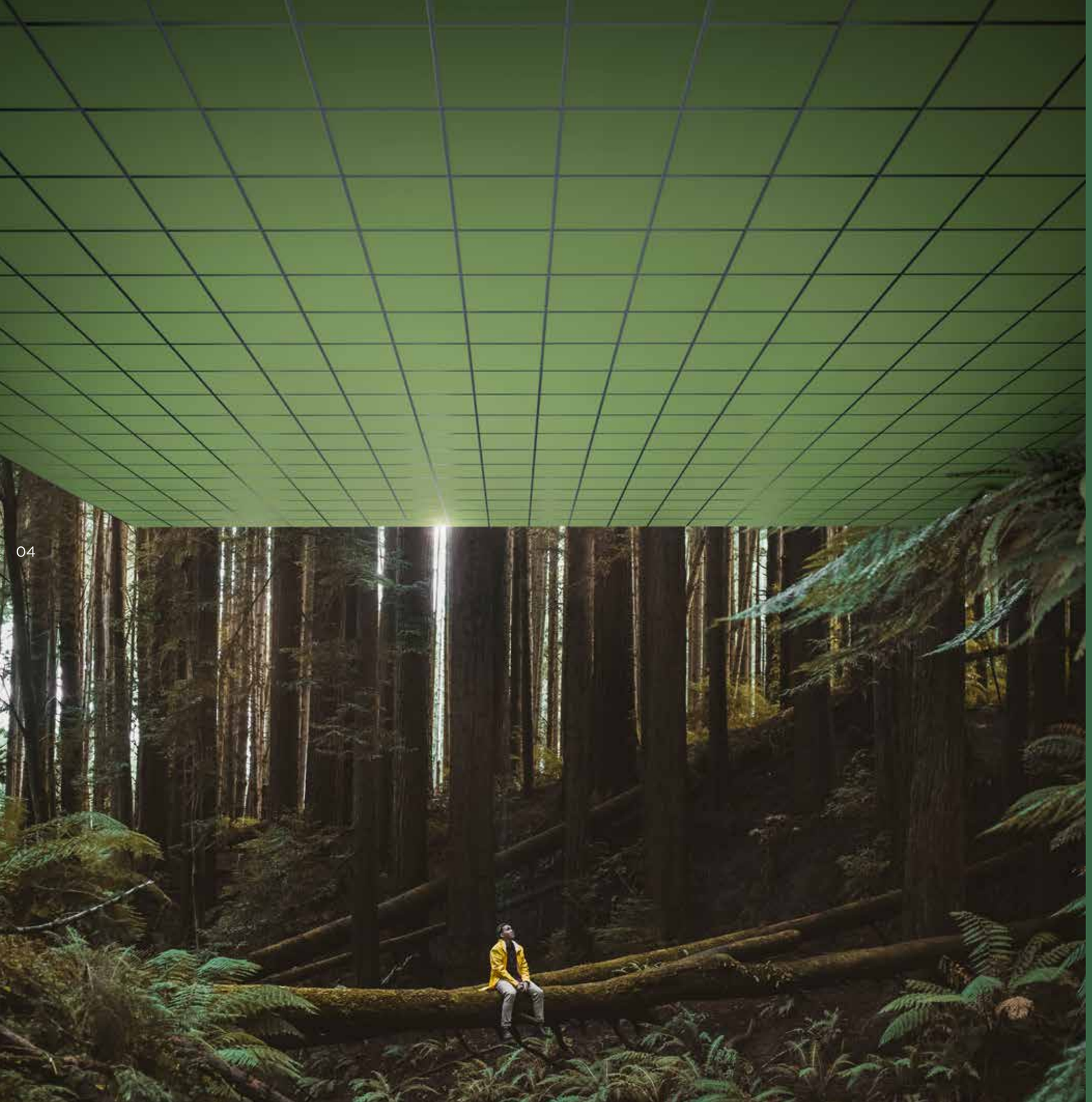
08 GOOD DESIGN WITH ECOPHON FADE™ DUO

10 GOOD ACOUSTICS MATTER EVERYWHERE

12 INSTALLATION TIMELINE

16 SYSTEM PROPERTIES

Acoustics, technical properties and installation diagrams

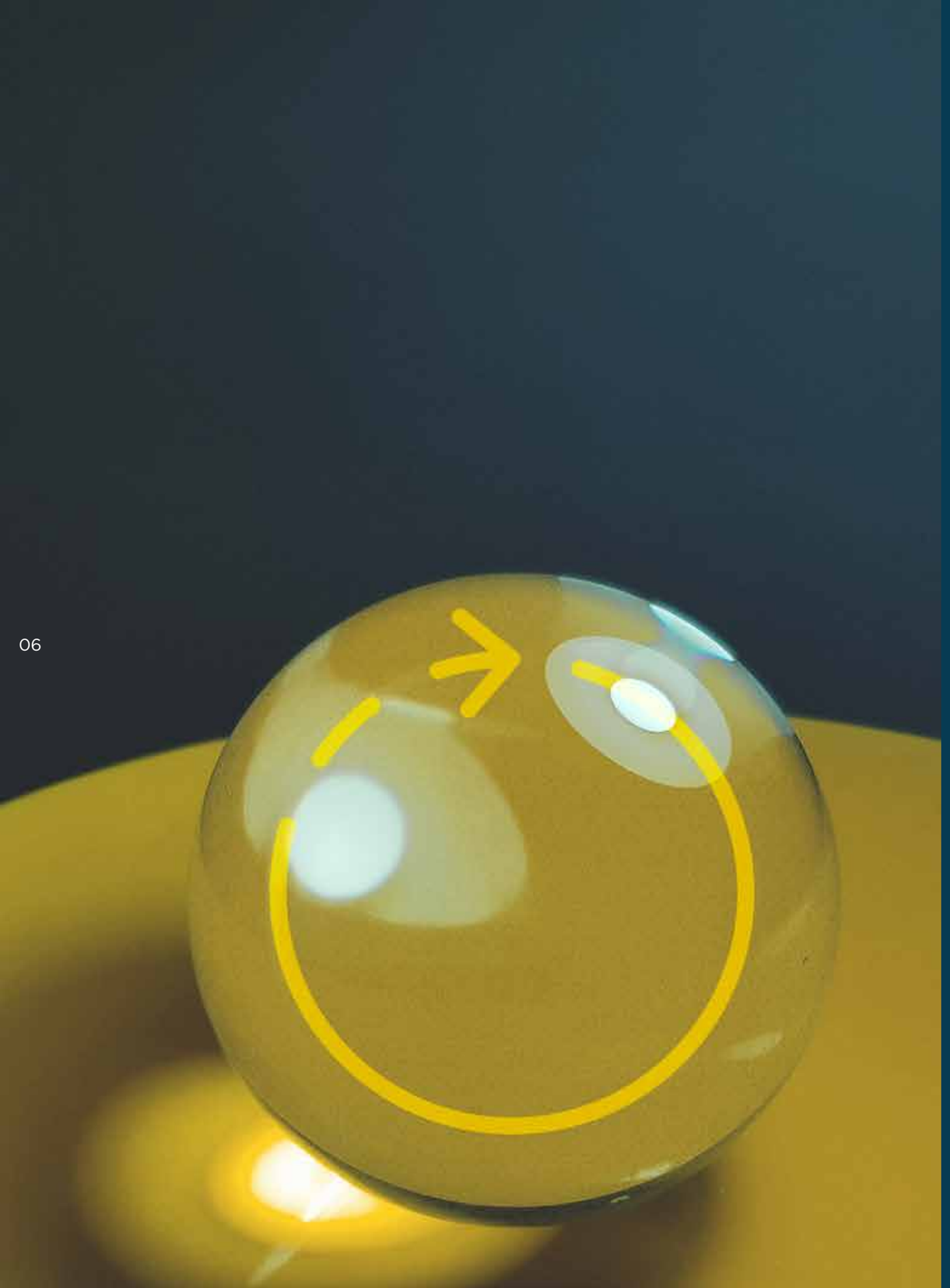


A SOUND EFFECT

ON PEOPLE

Saint-Gobain Ecophon contributes to good indoor environments for working, healing and learning. We do this by developing, manufacturing and delivering acoustic products and systems designed around the natural evolution of human hearing – replicating the outdoor sound experience indoors, because that's just better for people.

Having a sound effect on people, in every way we can, is what we do proudly. That promise makes every one of us a passionate advocate for the importance of room acoustics to people's wellbeing – whatever the space, activity or need.



TOWARDS

NET-ZERO ACOUSTICS

Sustainability is more than a word – it's a collective movement to protect people and the planet that requires honest commitment and genuine care. That's why Ecophon is building on better materials, transparency, and principles, to name just a few.

We actively support an industry-wide drive to standardised, easy-access Environmental Product Declarations for individual products, rather than product families. Their inclusion of full lifecycle data, from raw material sourcing to end of life, rather than only the favourable stages. A move away from self-declared labels, or non-independently verified sustainability claims. And for any promises of net zero carbon emission targets to be validated by the Science-Based Targets initiative.

If we're going to build a sustainable future, it has to start with an honest approach, high ambition and the best of intentions – to build on better together.

ECOPHON

FADE DUO™

The Fade Duo system is a high-quality acoustic plastering system that absorbs unwanted noise. As a spray applied acoustic plaster solution, its absorbent qualities allow for acoustic control in a variety of spaces. The system offers a more flexible, seamless and discreet alternative to traditional modular acoustic solutions.

Fade Duo brings together aesthetics and acoustic performance which makes it ideal for a wide range of applications ranging from historic buildings to high-end residential, commercial, retail and educational spaces.

Products developed and produced in Nordics, focusing on design, sustainability and acoustic functionality.

ECOPHON FADE DUO

- **Up to absorbtion class A***
- **Textured or smooth seamless acoustic plaster ceiling**
- **Easy installation**
- **Possible to colour (with fine texture only)**

* Fade Duo 40 mm acoustic board, direct fixing. To achieve the acoustic performance outlined in the product data sheets you must respect the instructions in the installation guides for Ecophon Fade™ Duo, both documents available on Ecophon.com

ECOPHON FADE DUO SMOOTH

- **Absorbtion class C***
- **Smooth surface**
- **Easy installation**

* Fade Duo Smooth 25 or 40 mm acoustic board, direct fixing or suspended 200 mm. To achieve the acoustic performance outlined in the product data sheets you must respect the instructions in the installation guides for Ecophon Fade™ Duo Smooth, both documents available on Ecophon.com

Fade Duo sound-absorbing substrate is made from 65% minimum post-consumer recycled content mainly from recycled glass bottles and jars.

Our products are very durable, highly UV and humidity resistant, anti-static and can be recoated. This helps to reduce the building's life-cycle impact.

GOOD ACOUSTICS
MATTER EVERYWHERE

WITHOUT COMPROMISING

Our promise ”A sound effect on people” is the core backbone of everything we do. Our products meet the reverberation time requirements set out in the LEED reference standard.

Sound impacts us in daily life, and the scientific support for improving our indoor sound environments is well-documented.

And what exactly is an ideal indoor sound environment for people? One based on how we experience sound outside. The human auditory sense is naturally adapted to an outdoor environment where there is not any sound reflections from ceilings and walls.

That’s why most of what we do at Ecophon is about replicating the acoustic qualities found in nature for indoor environments. We want to optimise indoor spaces to our natural way of hearing, so that speech and sound is easy to hear and understand, when needed, improving performance and wellbeing.

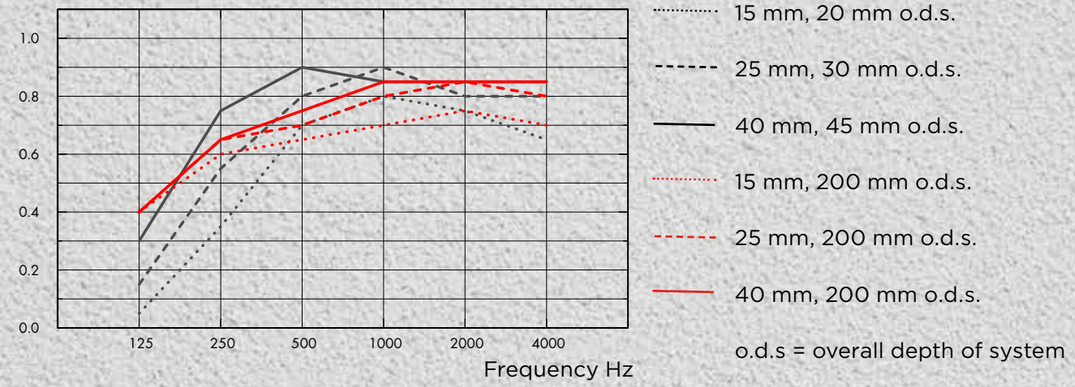
Usually that starts with the ceiling. A wall-to-wall acoustic ceiling is the easiest way to get a large sound-absorbing surface area into a space, and is usually the best way to reduce sound strength, shorten reverberation times, and increase speech clarity and overall hearing comfort.

SOUND ABSORPTION

Test results according to EN ISO 354. Classification according to EN ISO 11654, and the single value rating for Noise Reduction Coefficient, NRC, according to ASTM C 423(page 16 & 20).

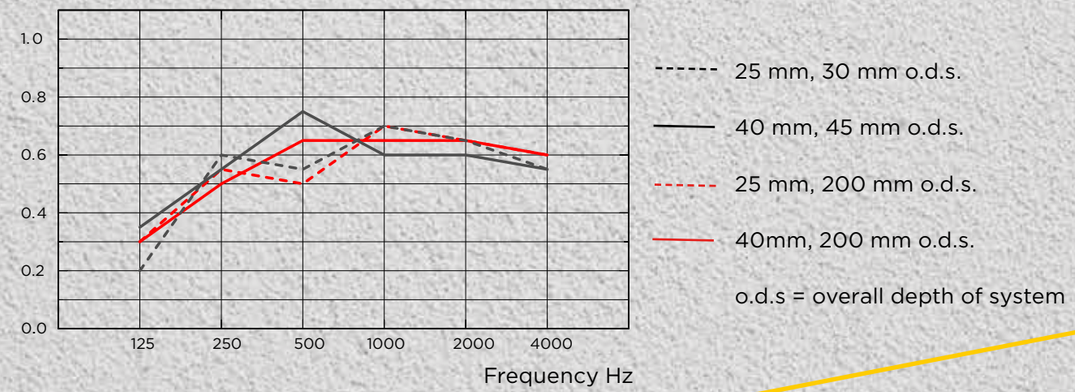
Ecophon Fade Duo

αp, Practical sound absorption coefficient



Ecophon Fade Duo Smooth

αp, Practical sound absorption coefficient



ECOPHON WORKS WITH ACCREDITED AND WELL-RENOWNED LABORATORIES TO PERFORM ACOUSTIC TESTS ON ALL PRODUCTS. THIS IS YOUR SECURITY FOR YOUR WELLBEING.

FADE DUO

FINE TEXTURE FINISH

Please note, the timeline serves as orientation, lists the necessary work steps and defines the minimum amount of time that must be taken into account.

* A thicker plaster layer (compared to the recommended thickness of 1 mm) may be employed to achieve a smoother aesthetic and visual finish. However, this may reduce the acoustic performances of the product.

INSTALLATION TIMELINE

A step-by-step guide to installing the Ecophon Fade Duo acoustic plaster system. The drying time depends on the room temperature and the room humidity. In hot and dry conditions, the drying may take less time. Please allow the acoustic plaster to dry thoroughly before proceeding to the next steps.

DAY 1 ON SITE

INSTALL THE FADE ACOUSTIC BOARDS. FILL JOINTS, WASHERS AND IRREGULARITIES

The acoustic boards are installed with adhesive or screws and Fade Special Washers. Joints are taped with Fade Special Tape. Joints, washer gaps and irregularities are filled with Fade Duo Primer plaster.

DAY 2

LET THE FILLING AND JOINTS DRY COMPLETELY

The drying time depends on the room temperature and the room humidity. In hot and dry conditions, the drying may take less time.

Please allow the acoustic plaster to dry thoroughly before proceeding to the next steps.

DAY 3 ON SITE

SAND IRREGULARITIES, FILL JOINTS AND SPRAY FIRST LAYER OF FADE DUO PRIMER

Sand irregularities on the board, fillings, and joints. Gaps between acoustic ceilings and walls that aremore than 3 mm, should be filled with acrylic sealant.
Spray the first layer of Fade Duo Primer. Smooth the sprayed surface with a wide trowel.
Consumption 1 kg/m² of Primer.

DAY 4

LET THE FIRST LAYER OF FADE DUO PRIMER DRY

The drying time depends on the room temperature and the room humidity. In hot and dry conditions, the drying may take less time.

Please allow the acoustic plaster to dry thoroughly before proceeding to the next steps.

DAY 5 ON SITE

SAND THE WHOLE SURFACE AND SPRAY SECOND LAYER WITH FADE DUO TOP

Once the first layer of acoustic plaster is completely dry, sand the entire surface until satisfied for a smooth result.

Spray the second layer with Fade Duo Top as a fine texture.

Consumption 0.3 kg/m² of Top.
Total thickness of acoustic plaster full installation (1 layer Primer and 1 layer Top) approx. 1 mm*.

FADE DUO SMOOTH

SMOOTH SANDED FINISH

Please note, the timeline serves as orientation, lists the necessary work steps and defines the minimum amount of time that must be taken into account.

* A thicker plaster layer (compared to the recommended thickness of 1 mm) may be employed to achieve a smoother aesthetic and visual finish. However, this may reduce the acoustic performances of the product.

INSTALLATION TIMELINE

A step-by-step guide to installing the Ecophon Fade Duo Smooth acoustic plaster system. The drying time of the plaster depends on the room temperature and the room humidity. Please allow the acoustic plaster to dry thoroughly before proceeding to the next steps.

DAY 1 ON SITE

INSTALL THE FADE ACOUSTIC BOARDS. FILL JOINTS, WASHERS AND IRREGULARITIES

The acoustic boards are installed with adhesive or screws and Fade Special Washers. Joints are taped with Fade Special Tape. Joints, washer gaps and irregularities are filled with Fade Duo Primer plaster.

DAY 2

LET THE FILLING AND JOINTS DRY COMPLETELY

The drying time depends on the room temperature and the room humidity. In hot and dry conditions, the drying may take less time.

Please allow the acoustic plaster to dry thoroughly before proceeding to the next steps.

DAY 3 ON SITE

SAND IRREGULARITIES, FILL JOINTS AND SPRAY FIRST LAYER OF FADE DUO PRIMER

Sand irregularities on the board, fillings, and joints. Gaps between acoustic ceilings and walls that are more than 3 mm, should be filled with acrylic sealant. Spray the first layer of Fade Duo Primer as a texture.

Consumption 0.6 kg/m^2 of Primer.

DAY 4

LET THE FIRST LAYER OF FADE DUO PRIMER DRY

The drying time depends on the room temperature and the room humidity. In hot and dry conditions, the drying may take less time.

Please allow the acoustic plaster to dry thoroughly before proceeding to the next steps.

DAY 5 ON SITE

SAND THE WHOLE SURFACE AND SPRAY SECOND LAYER WITH FADE DUO TOP

Once the first layer of acoustic plaster is completely dry, give the entire surface a light sand to smooth out any unevenness. Spray the second layer of Fade Duo Top. Smooth the sprayed surface with a wide trowel.

Consumption 0.7 kg/m^2 of Top. Total thickness of acoustic plaster full installation (1 layer Primer and 1 layer Top), approx. 1mm*.

DAY 6 ON SITE

SAND THE WHOLE SURFACE FOR A SMOOTH FINISH

Once the second layer of acoustic plaster is completely dry, sand the whole surface for a smooth finish. Use a sanding machine. Grain size 220, 10+1 holes.

SYSTEM
PROPERTIES

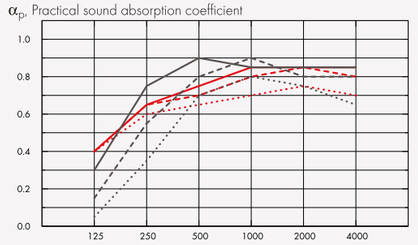
ACOUSTICS, TECHNICAL PROPERTIES AND INSTALLATION DIAGRAMS

17 Fade™ Duo
20 Fade™ Duo Smooth

Ecophon Fade™ Duo

Acoustic:

Sound Absorption:
Test results according to EN ISO 354. Classification according to EN ISO 11654, and the single value ratings for Noise Reduction Coefficient, NRC and Sound Absorption Average, SAA according to ASTM C 423.



···· Fade Duo, 15 mm, 200 mm o.d.s.
--- Fade Duo, 25 mm, 200 mm o.d.s.
– Fade Duo, 40 mm, 200 mm o.d.s.
···· Fade Duo, 15 mm, 20 mm o.d.s.
--- Fade Duo, 25 mm, 30 mm o.d.s.
– Fade Duo, 40 mm, 45 mm o.d.s.
o.d.s = overall depth of system

THK mm	o.d.s. mm	α_p, Practical sound absorption coefficient						α_w	Sound absorption class
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz		
15	200	0.40	0.60	0.65	0.70	0.75	0.70	0.70	C
25	200	0.40	0.65	0.70	0.80	0.85	0.80	0.80	B
40	200	0.40	0.65	0.75	0.85	0.85	0.85	0.85	B
15	20	0.05	0.35	0.70	0.80	0.75	0.65	0.65	C
25	30	0.15	0.55	0.80	0.90	0.80	0.80	0.80	B
40	45	0.30	0.75	0.90	0.85	0.85	0.85	0.90	A

	THK mm	o.d.s. mm	NRC	SAA
	15	200	0.65	0.67
	25	200	0.75	0.74
	40	200	0.80	0.78
	15	20	0.65	0.65
	25	30	0.80	0.77
	40	45	0.90	0.84

Indoor Air Quality:

Certificate / Label	
French VOC	A+
Finnish M1	•

Cradle to Cradle Certified®: This product is Cradle to Cradle Certified® at Silver level (version 3.1).

Material Health: This product has received a C2C Certified Material Health Certificate™ at the Silver level (standard version 3.1). The C2C Certified Material Health Certificate™ is a verification of the health and safety of a product's composition using the Material Health requirements of the Cradle-to-Cradle Certified Product Standard.

Environmental Footprint: Life-cycle stages A1 to A3 from EPD, in conformity with ISO 14025 / EN 15804+A1

	kg CO_2 equiv/kg
Fade Duo Primer	0,45
Fade Duo Top	0,40

Fire safety: The glass wool core of the tiles is tested and classified as non-combustible according to EN ISO 1182. Fire test, E 84-11a. Europe: EN 13501-1, A2-s1,d0,

Humidity Resistance: Resistance to Humidity (RH 100%, 40°C) - ISO DS/EN 6270-2

Visual appearance: White NCS S 0502-Y20R, CIE Y=80% light reflectance. Exposure to UV-light - ASTM G 154-16 . Gloss < 1 . Colours may vary slightly between different production batches.

Cleanability: Surface dust and dirt can be blown off using pressurized air.

Accessibility: The system supports installation of inspection hatch.

Installation: Installed according to installation diagrams, installation guides and drawing aid. For information regarding minimum overall depth of system see quantity specification. When installing direct-to-grid the installer must ensure that the building is airtight to prevent dust deposits from airflow through the open-pored acoustic plaster system.

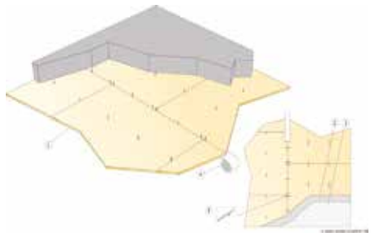
System weight: The weight of the system (including suspension grid) should be approximately M621/M622 ≈ 3 - 7 kg/m², M623 ≈ 5 - 8 kg/m², M624/M625 ≈ 13 - 18 kg/m².

Mechanical properties: Additional load (lighting, ventilation, etc.) should be supported by the suspension system according to the manufacturers recommendation or be hung directly from the soffit.

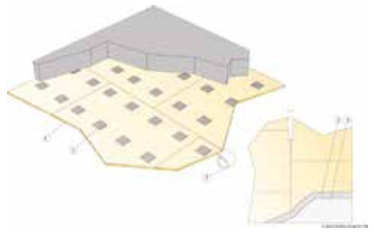
CE: Ecophon ceiling systems are CE marked according to the European harmonized standard EN13964:2014. CE marked construction products are covered by a Declaration of Performance (DOP) which enables customers and users to easily compare performance of products available on the European market.

Installation diagram in detail www.ecophon.com

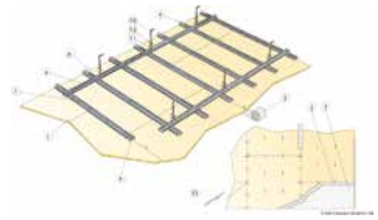
M621
Installation diagram (M621) for Ecophon Fade Duo direct fixation, mechanical



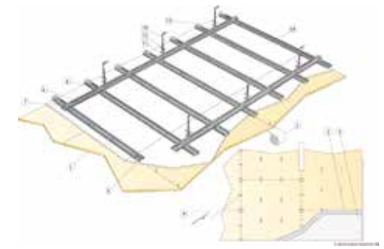
M622
Installation diagram (M622) for Ecophon Fade Duo direct fixation with glue



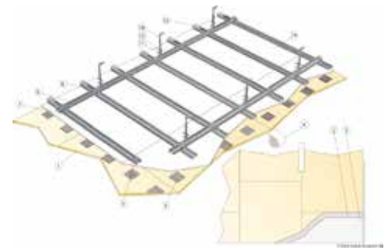
M623
Installation diagram (M623) for Ecophon Fade Duo suspended grid, mechanical fixation



M624
Installation diagram (M624) for Ecophon Fade Duo suspended grid, mechanical fixation to substrate



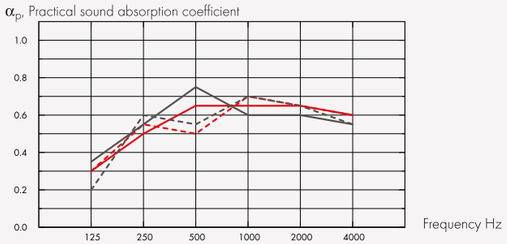
M625
Installation diagram (M625) for Ecophon Fade Duo suspended grid, glued to substrate



Ecophon Fade™ Duo Smooth

Acoustic:

Sound Absorption:
Test results according to EN ISO 354. Classification according to EN ISO 11654, and the single value ratings for Noise Reduction Coefficient, NRC and Sound Absorption Average, SAA according to ASTM C 423.



--- Fade Duo Smooth, 25 mm, 200 mm o.d.s.
– Fade Duo Smooth, 40 mm, 200 mm o.d.s.
--- Fade Duo Smooth, 25 mm, 30 mm o.d.s.
– Fade Duo Smooth, 40 mm, 45 mm o.d.s.
o.d.s = overall depth of system

THK mm	o.d.s. mm	α_p, Practical sound absorption coefficient						α_w	Sound absorption class
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz		
25	200	0.30	0.55	0.50	0.70	0.65	0.60	0.60	C
40	200	0.30	0.50	0.65	0.65	0.65	0.60	0.65	C
25	30	0.20	0.60	0.55	0.70	0.65	0.55	0.65	C
40	45	0.35	0.55	0.75	0.60	0.60	0.55	0.65	C

	THK mm	o.d.s. mm	NRC	SAA
	25	200	0.60	0.60
	40	200	0.65	0.63
	25	30	0.65	0.63
	40	45	0.70	0.63

Indoor Air Quality:

Certificate / Label	
French VOC	A+
Finnish M1	•

Fire safety: The glass wool core of the tiles is tested and classified as non-combustible according to EN ISO 1182. Fire test, E 84-11a. Europe: EN 13501-1, A2-s1,d0,

Humidity Resistance: Resistance to Humidity (RH 100%, 40°C) - ISO DS/EN 6270-2

Visual appearance: White NCS S 0601-Y, CIE Y=80% light reflectance. Exposure to UV-light - ASTM G 154-16 . Gloss < 1 . Colours may vary slightly between different production batches.

Cleanability: Surface dust and dirt can be blown off using pressurized air.

Accessibility: The system supports installation of inspection hatch.

Installation: Installed according to installation diagrams, installation guides and drawing aid. For information regarding minimum overall depth of system see quantity specification. When installing direct-to-grid the installer must ensure that the building is airtight to prevent dust deposits from airflow through the open-pored acoustic plaster system.

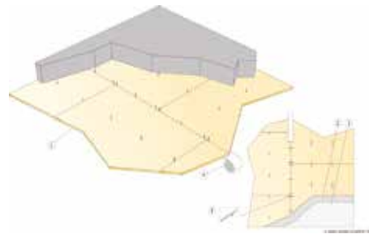
System weight: The weight of the system (including suspension grid) should be approximately 3 – 7 kg/m² for the direct fixed mechanical or glued. App. 5 – 8 kg/m² for direct mechanical installation to suspended grid system. For system mechanical or glued to plasterboard fixed to suspended grids app. 13 – 18 kg/m².

Mechanical properties: Additional load (lighting, ventilation, etc.) should be supported by the suspension system according to the manufacturers recommendation or be hung directly from the soffit.

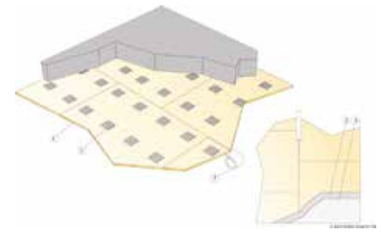
CE: Ecophon ceiling systems are CE marked according to the European harmonized standard EN13964:2014. CE marked construction products are covered by a Declaration of Performance (DOP) which enables customers and users to easily compare performance of products available on the European market.

Installation diagram in detail www.ecophon.com

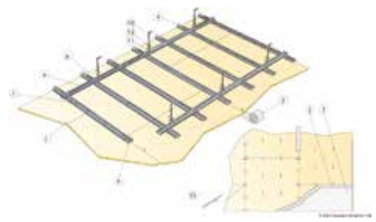
M639
Installation diagram (M639) for Ecophon Fade Duo Smooth direct fixation, mechanical



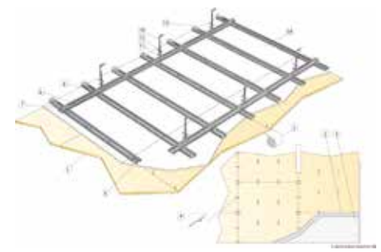
M640
Installation diagram (M640) for Ecophon Fade Duo Smooth direct fixation with glue



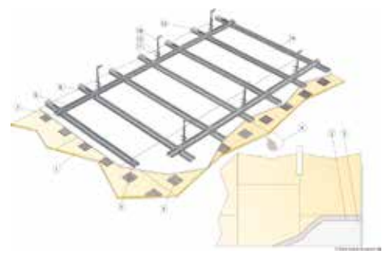
M641
Installation diagram (M641) for Ecophon Fade Duo Smooth suspended grid, mechanical fixation



M642
Installation diagram (M642) for Ecophon Fade Duo Smooth suspended grid, mechanical fixation to substrate



M643
Installation diagram (M643) for Ecophon Fade Duo Smooth suspended grid, glued to substrate



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Ecophon is the leading supplier of indoor acoustic solutions that improve working performance and quality of life. We believe in the difference sound can make to our everyday lives, and are passionate advocates for the importance of room acoustics to people's wellbeing – whatever the space, activity or need.

Having a sound effect on people is the principle that guides all we do. We're proud of the Swedish heritage and human approach that promise is founded on. And, as members of the Saint-Gobain Group, to be doing our part in making the world a better home.

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