# Ecophon Fade<sup>TM</sup> Duo

Fade<sup>™</sup> Duo offers a seamless acoustic solution with a fine surface that is easy and quick to install. The system consists of only three main components; Fade<sup>™</sup> Acoustic board, Fade<sup>™</sup> Duo Primer and Fade<sup>™</sup> Duo Top.

Install the acoustic board mechanically with special metal fixings from the manufacturer or install the acoustic board with approved adhesive on the suitable substrate.

Thanks to its flexibility, possibility to colour and

seamless look, it is a solution for several applications from historic buildings to high-end residential, commercial, retail and educational spaces.



#### **SYSTEM RANGE**

| Size, mm     | 1200x1200                         | 1200x1200                         | 1200×1200                         |
|--------------|-----------------------------------|-----------------------------------|-----------------------------------|
|              | •                                 | •                                 | •                                 |
| Direct       | •                                 | •                                 | •                                 |
| Suspended    | •                                 | •                                 | •                                 |
| Thickness    | 15                                | 25                                | 40                                |
| Inst. Diagr. | M621, M622 , M623 , M624,<br>M625 | M621, M622 , M623 , M624,<br>M625 | M621, M622 , M623 , M624,<br>M625 |



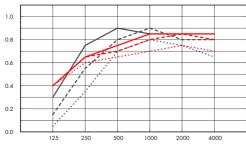
# Acoustic



# **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.

 $\alpha_{\mbox{\scriptsize n}}$ , Practical sound absorption coefficient



Frequency Hz

- ···· 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.
- ···· 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.

o.d.s = overall depth of system

| THK | o.d.s. mm |        | $lpha_{p'}$ Pr | actical soun | d absorption c | coefficient |         | $\alpha_{\scriptscriptstyle 	ext{\tiny NV}}$ | Sound absorption class  |
|-----|-----------|--------|----------------|--------------|----------------|-------------|---------|--|-------------------------|
| mm  |           | 125 Hz | 250 Hz         | 500 Hz       | 1000 Hz        | 2000 Hz     | 4000 Hz | u <sub>w</sub>                               | Souria absorption class |
| 15  | 20        | 0.05   | 0.35           | 0.70         | 0.80           | 0.75        | 0.65    | 0.65   | С                       |
| 25  | 30        | 0.15   | 0.55           | 0.80         | 0.90           | 0.80        | 0.80    | 0.80   | В                       |
| 40  | 45        | 0.30   | 0.75           | 0.90         | 0.85           | 0.85        | 0.85    | 0.90   | А                       |
| 15  | 200       | 0.40   | 0.60           | 0.65         | 0.70           | 0.75        | 0.70    | 0.70   | С                       |
| 25  | 200       | 0.40   | 0.65           | 0.70         | 0.80           | 0.85        | 0.80    | 0.80   | В                       |
| 40  | 200       | 0.40   | 0.65           | 0.75         | 0.85           | 0.85        | 0.85    | 0.85   | В                       |

| THK<br>mm | o.d.s. mm | NRC  |
|-----------|-----------|------|
| 15        | 20        | 0.65 |
| 25        | 30        | 0.75 |
| 40        | 45        | 0.85 |
| 15        | 200       | 0.65 |
| 25        | 200       | 0.75 |
| 40        | 200       | 0.80 |

# **Indoor Air Quality**











#### **Environmental Footprint**

|                  | kg CO2 equiv/kg |
|------------------|-----------------|
| Fade™ Duo Primer | 0,45            |
| Fade™ Duo Top    | 0,40            |

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



### Fire safety

| Country |            | Class    |
|---------|------------|----------|
| Europe  | EN 13501-1 | A2-s1,d0 |

The glass wool core of the tiles is tested and classified as non-combustible according to EN ISO 1182. Fire test, E 84-11a.



#### **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. Colours may vary slightly between different production batches.



## Cleanability

Surface dust and dirt can be vacuumed off using a soft brush attachment.



## Accessibility

The system supports installation of inspection hatch according to installation diagrams.



#### 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  $\approx$  3 - 7 kg/m², M623  $\approx$  5 - 8 kg/m², M624/M625  $\approx$  13 - 18 kg/m².



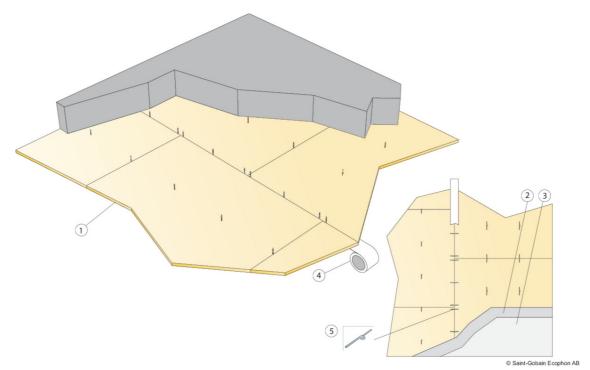
## **Mechanical properties**

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

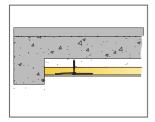


### CE

Fade™ 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.

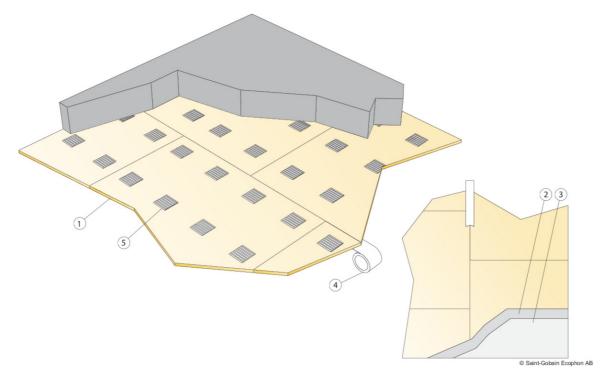


|   | Size, mm            |
|---|---------------------|
|   | 1200×1200           |
| Ecophon Acoustic board for Fade™                              | 0,7/m²              |
| Fade™ Acoustic Plaster Plus+ (valid for standard white)       | 1 kg/m²             |
| Fade™ Duo Top (valid for standard white)                      | 0,3kg/m²            |
| EU Fade™ Special joint tape (every seem on tiles)             | 1,7m/m²             |
| Fade™ Special washer (fixed with appliable screw)             | 8pcs/m <sup>2</sup> |
| $\Delta$ Min. overall depth of system: 23 mm                  |                     |
| $\delta$ Min. demounting depth: The system is non-demountable |                     |

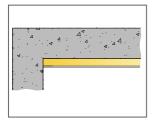


| Size, mm     | Max live<br>load (N) |   |
|--------------|----------------------|---|
| 1200x1200x15 | 0                    | 0 |
| 1200x1200x25 | 0                    | 0 |
| 1200x1200x40 | 0                    | 0 |

Live load/load bearing capacity

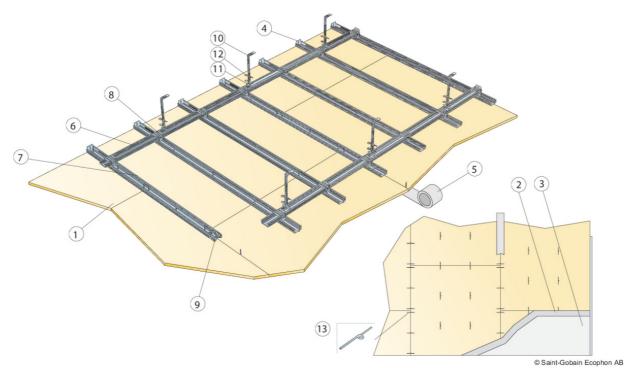


|   | Size, mm   |
|---|--|
|   | 1200×1200  |
| Ecophon Acoustic board for Fade™                              | 0,7/m²   |
| Fade™ Acoustic Plaster Plus+ (valid for standard white)       | 1 kg/m²  |
| Fade™ Duo Top (valid for standard white)                      | 0,3kg/m²   |
| EU Fade™ Special joint tape (every seem on tiles)             | 1,7m/m²  |
| Fade™ Special Adhesive 10kg                                   | 0,83kg/m²  |
| $\Delta$ Min. overall depth of system: 23 mm                  |  |
| $\delta$ Min. demounting depth: The system is non-demountable |  |
|   | Fade™ Acoustic Plaster Plus+ (valid for standard white)  Fade™ Duo Top (valid for standard white)  EU Fade™ Special joint tape (every seem on tiles)  Fade™ Special Adhesive 10kg  Δ Min. overall depth of system: 23 mm |

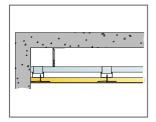


| 1000 1000 15 |   |   |
|--------------|---|---|
| 1200x1200x15 | 0 | 0 |
| 1200x1200x25 | 0 | 0 |
| 1200x1200x40 | 0 | 0 |

Live load/load bearing capacity

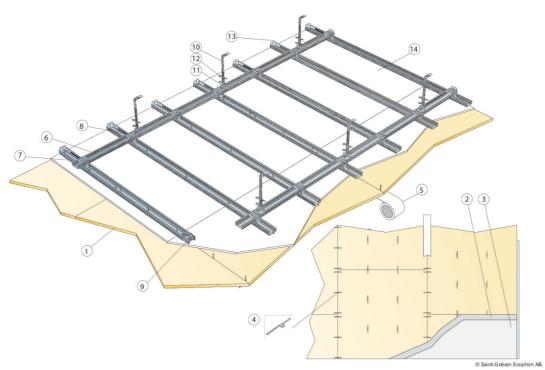


|    |   | Size, mm            |
|----|---|---------------------|
|    |   | 1200×1200           |
| 1  | Ecophon Acoustic board for Fade™                              | 0,7/m²              |
| 2  | Fade™ Acoustic Plaster Plus+ (valid for standard white)       | 1 kg/m²             |
| 3  | Fade™ Duo Top (valid for standard white)                      | 0,3kg/m²            |
| 4  | Connect Wall bracket Plus                                     | as required         |
| 5  | EU Fade™ Special joint tape (every seem on tiles)             | 1,7m/m²             |
| 6  | Connect C-profile Plus, L=3100 mm, installed 1200 mm centres  | 0,9m/m²             |
| 7  | Connect C-profile Plus, L=3100 mm, installed 400 mm centres   | 2,5m/m²             |
| 8  | Connect X-connector Plus                                      | $3,2/m^2$           |
| 9  | Connect Splice connector Plus                                 | 1,2/m²              |
| 10 | Connect Nonius hanger upper, installed at 800 mm centres      | 1,6/m²              |
| 11 | Connect Nonius hanger lower, installed at 800 mm centres      | 1,6/m²              |
| 12 | Connect Split pin [2/hanger]                                  | 3,2/m²              |
| 13 | Fade™ Special washer (fixed with appliable screw)             | 8pcs/m <sup>2</sup> |
|    | $\Delta$ Min. overall depth of system: 310 mm                 |                     |
|    | $\delta$ Min. demounting depth: The system is non-demountable |                     |

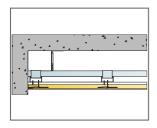


| Size, mm     | Max live<br>load (N) | Min load bearing<br>capacity (N) |
|--------------|----------------------|----------------------------------|
| 1200x1200x15 | 50                   | 160                              |
| 1200x1200x25 | 50                   | 160                              |
| 1200x1200x40 | 50                   | 160                              |
|              |                      |                                  |
|              |                      |                                  |

Live load/load bearing capacity

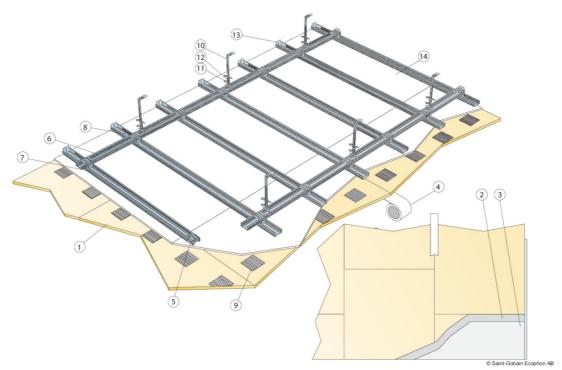


|    |   | Size, mm            |
|----|---|---------------------|
|    |   | 1200×1200           |
| 1  | Ecophon Acoustic board for Fade™                              | 0,7/m²              |
| 2  | Fade™ Acoustic Plaster Plus+ (valid for standard white)       | 1kg/m²              |
| 3  | Fade™ Duo Top (valid for standard white)                      | 0,3kg/m²            |
| 4  | Fade™ Special washer (fixed with appliable screw)             | 8pcs/m <sup>2</sup> |
| 5  | EU Fade™ Special joint tape (every seem on tiles)             | 1,7m/m²             |
| 6  | Connect C-profile Plus, L=3100 mm, installed 1200 mm centres  | 0,9m/m²             |
| 7  | Connect C-profile Plus, L=3100 mm, installed 400 mm centres   | 2,5m/m²             |
| 8  | Connect X-connector Plus                                      | 3,2/m²              |
| 9  | Connect Splice connector Plus                                 | 1,2/m²              |
| 10 | Connect Nonius hanger upper, installed at 800 mm centres      | 1,6/m²              |
| 11 | Connect Nonius hanger lower, installed at 800 mm centres      | 1,6/m²              |
| 12 | Connect Split pin (2/hanger)                                  | 3,2/m²              |
| 13 | Connect Wall bracket Plus                                     | as required         |
| 14 | Plasterboard (not supplied by Ecophon)                        |                     |
|    | $\Delta$ Min. overall depth of system: 310 mm                 |                     |
|    | $\delta$ Min. demounting depth: The system is non-demountable |                     |

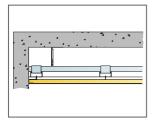


|              | Max live<br>load (N) |     |
|--------------|----------------------|-----|
| 1200x1200x15 | 40                   | 220 |
| 1200x1200x25 | 40                   | 220 |
| 1200x1200x40 | 40                   | 220 |

Live load/load bearing capacity



|    |   | Size, mm    |
|----|---|-------------|
|    |   | 1200×1200   |
| 1  | Ecophon Acoustic board for Fade™                              | 0,7/m²      |
| 2  | Fade™ Acoustic Plaster Plus+ (valid for standard white)       | 1kg/m²      |
| 3  | Fade™ Duo Top (valid for standard white)                      | 0,3kg/m²    |
| 4  | EU Fade™ Special joint tape (every seem on tiles)             | 1,7m/m²     |
| 5  | Connect Splice connector Plus                                 | 1,2/m²      |
| 6  | Connect C-profile Plus, L=3100 mm, installed 1200 mm centres  | 0,9m/m²     |
| 7  | Connect C-profile Plus, L=3100 mm, installed 400 mm centres   | 2,5m/m²     |
| 8  | Connect X-connector Plus                                      | 3,2/m²      |
| 9  | Fade™ Special Adhesive 10kg                                   | 0,83kg/m²   |
| 10 | Connect Nonius hanger upper, installed at 800 mm centres      | 1,6/m²      |
| 11 | Connect Nonius hanger lower, installed at 800 mm centres      | 1,6/m²      |
| 12 | Connect Split pin [2/hanger]                                  | 3,2/m²      |
| 13 | Connect Wall bracket Plus                                     | as required |
| 14 | Plasterboard (not supplied by Ecophon)                        |             |
|    | $\Delta$ Min. overall depth of system: 310 mm                 |             |
|    | $\delta$ Min. demounting depth: The system is non-demountable |             |



| Size, mm     | Max live<br>load (N) | Min load bearing<br>capacity (N) |
|--------------|----------------------|----------------------------------|
| 1200x1200x15 | 40                   | 220                              |
| 1200x1200x25 | 40                   | 220                              |
| 1200x1200x40 | 40                   | 220                              |

Live load/load bearing capacity