

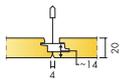
Ecophon Hygiene Protec™ Ds

Ecophon Hygiene Protec™ Ds has a concealed grid and is particle repellent for clean rooms, where disinfection and/or cleaning is required on a regular basis. The fully sealed absorbers have low emission levels, ensuring high indoor air quality. They are resistant to mould and bacteria growth.



Pharma Labor-Vorbereitung, Greven, Germany

SYSTEM RANGE



| | | |
|-------------|---------|----------|
| Size, mm | 600x600 | 1200x600 |
| T24 | • | • |
| Thickness | 20 | 20 |
| Inst. Diag. | M615 | M615 |



Hygiene Protec Ds tile



Hygiene Protec Ds C1 section with Connect Hold down clip Ds



Sealed junction with wall



Hygiene Protec Ds C1 system

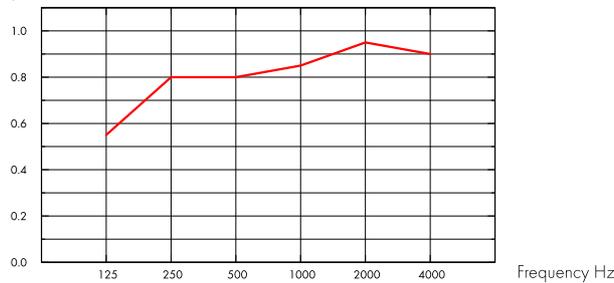
Acoustic



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.

α_p , Practical sound absorption coefficient



— Hygiene Protec Ds 20 mm, 200 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 | | |
| 20 | 200 | 0.55 | 0.80 | 0.80 | 0.85 | 0.95 | 0.90 | 0.85 | B |

| THK mm | o.d.s. mm | NRC | SAA |
|-----------|-----------|------|------|
| 20 | 200 | 0.85 | 0.85 |

Indoor Air Quality



| Certificate / Label | |
|------------------------------|----------|
| Eurofins Indoor Air Comfort® | IAC Gold |
| French VOC | A+ |
| Finnish M1 | • |



Cradle to Cradle Certified®



This product is Cradle to Cradle Certified® at Bronze level (version 4.0).



Material Health

This product has received a C2C Certified Material Health Certificate™ at the Silver level (standard version 4.0). 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

| | kg CO ₂ equiv/m ² | Life-cycle stages A1 to C4 from EPD, in conformity with ISO 14025 / EN 15804 |
|-------------------|---|--|
| Hygiene Protec Ds | 7,06 | |



Circularity

| | |
|--|------------------|
| Minimum post-consumer recycled content | 47% |
| Recyclability | Fully recyclable |



Fire safety

| Country | Fire standard | 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.



Humidity Resistance

Class C, relative humidity 95% and 30°C, according to EN 13964:2014



Visual appearance

White 500, nearest NCS colour sample S 0500-N, 84% light reflectance.



Cleanability

Daily dusting and vacuum cleaning. Weekly wet wiping.



Advanced Cleanability

Steam cleaning. Can withstand use of hydrogen peroxide vapour.



Surface Endurance

Product tested according to ISO 11998, and withstand 200 cycles.



Chemical resistance/Disinfection

| Chemical | Active Substance | Concentration |
|-------------|---|---------------|
| Ethanol | Ethanol | 70% |
| Chlorine | Sodium Hypochlorite solution | 2,5% |
| Virkon S | Dipotassium peroxodisulphate; Sulphamic acid | 1% |
| Isopropanol | Isopropyl Alcohol | 70% |

Tested according to ISO 11998 and withstand the following chemicals or disinfectants.



Mould and Bacterial Resistance

| Standard/Method | |
|-----------------|---|
| ISO 846 A | 0 |
| ISO 846 C | 0 |



Clean Room

| | Standard/Method | Class |
|-------------|-------------------------------|-----------|
| ISO 14644 | Particle cleanliness class | ISO 3 |
| NF S 90-351 | Microbiological class | M1/area 4 |
| NF S 90-351 | Particle elimination kinetics | CP(0,5) 1 |



Accessibility

The tiles are demountable.



Installation

Installed according to installation diagrams, installation guides and drawing aid. Cut panels must be sealed with Connect Edge sealant.



System weight

The weight of the system (including suspension grid) should be approximately 3,5-4 kg/m².



Mechanical properties

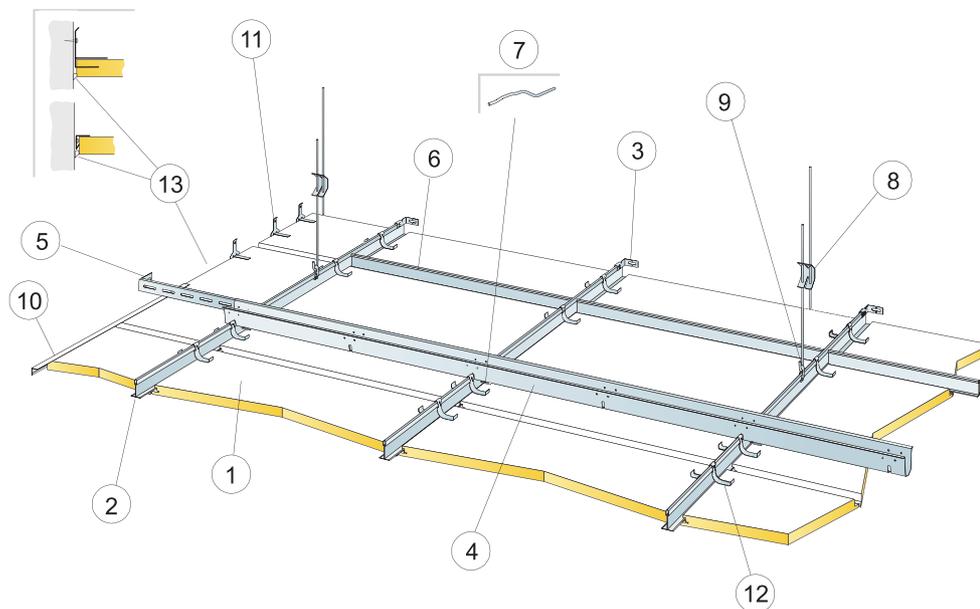
See table about Max live load and Min load bearing capacity and Functional demands, Mechanical properties at www.ecophon.com.



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.

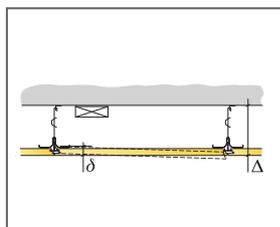
INSTALLATION DIAGRAM (M615) FOR ECOPHON HYGIENE PROTEC™ DS. SUSPENDED INSTALLATION



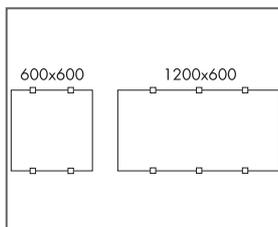
© Saint-Gobain Ecophon AB

QUANTITY SPECIFICATION (EXCL. WASTAGE)

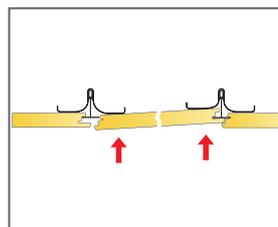
| | Size, mm | |
|---|----------------------------------|----------------------------------|
| | 600x600 | 1200x600 |
| 1 Hygiene Protec Ds | 2,8/m ² | 1,4/m ² |
| 2 Connect T24 Main Runner PL, installed at 600 mm centres | 1,7m/m ² | 1,7m/m ² |
| 3 Connect Wall Bracket for T-profiles | 1/suspended row of Main runner | |
| 4 Connect Space Bar, installed at 1500 mm centres (max. distance from wall 300 mm) | 0,7m/m ² | 0,7m/m ² |
| 5 Connect Wall Bracket, L=700 mm, for Connect Space Bar | 1/row of Space bar | |
| 6 Connect T24 Cross Tee, L=600 mm | 2/row of Main runner | |
| 7 Connect Space Bar Winch, installed one per joint Connect Main Runner/Connect Space Bar | 1,4/m ² | 1,4/m ² |
| 8 Connect Adjustable Hanger, installed at 1200 mm centres (max. distance from wall 600 mm) | 0,7/m ² | 0,7/m ² |
| 9 Connect Hanger Clip (not to be used in swimming hall environments) | 0,7/m ² | 0,7/m ² |
| 10 Alt. Connect Frieze Trim, fixed c300 mm | as required | as required |
| 11 Connect Frieze Bracket 0043, installed at 500 mm centre. Minimum free depth above tile 150 mm. | 2/cut tile with one bearing edge | 3/cut tile with one bearing edge |
| 12 Connect Hold Down Clip Ds | 2/tile, 50-100 mm from corners | 3/tile, 50-100 mm from corners |
| 13 Joint sealant (not supplied by Ecophon) | as required | as required |
| Δ Min. overall depth of system: 170 mm | - | - |
| δ Min. demounting depth: 30 mm | - | - |



See Quantity Specification



Arrangement of clips



Demounting of tile from below

| Size, mm | Max live load (N) | Min load bearing capacity (N) |
|-------------|-------------------|-------------------------------|
| 600x600x20 | 30 | 160 |
| 1200x600x20 | 30 | 160 |

Live load/load bearing capacity