

System Data Sheet

- Applicable on the
fade® Acoustic Plus+ System

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DATA SHEET-SYSTEM - v2.0

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1. fade® Acoustic Plaster System

The fade® Acoustic Plaster System – Plus+ provides customers with a seamless acoustic ceiling with great sound absorption along with the choice between a textured or ultra-smooth finish in any color.

a. System Name

fade® Acoustic – Plus+



b. Areas of Application

Ceilings & Walls

c. Materials

Acoustic Plaster:

fade® Acoustic - PLUS+

Ultra-smooth, dirt-resistant, anti-static, microporous, can be sanded

Luminous Reflectance Factor up to 93%*¹

Standard color: off white - Nearest NCS color S 0300-N

Grain size: 0.7mm (7/254")

Acoustic Boards:

Mineral wool must be produced using a minimum of 40% recycled material and re-used waste products from manufacture.

The wool must meet the requirements of Note Q of the European Regulation 1272/2008, which ensures that the fibers are bio soluble.

Board thickness available: 20/25/40mm (3/4 / 1 / 1 1/2")

¹ CIELAB L* value. CIE Y = 83.6 +/- 0.1

fade® Special Washers & Screws:

fade® Special Washer.
All screws used must be corrosion resistant.

Approved Adhesive:

GlueFast Adhesive All Season Frost Resistant, 10kg (22.05lb)

Self-adhesive Special Fiberglass Scrim Tape

fade® Special Joint Tape

d. Properties

- Ultra-smooth finishes available
- Can be colored in an extensive color palette (NCS/RAL)
- Excellent sound absorption
- Minimal installation height
- Monolithic, joint less, & seamless
- Non-flammable (A2s1d0 as per EN 13501, Class A as per ASTM E84)
- No growth of mold
- Does not require maintenance & easy to repair
- Quick & easy installation

e. Suitable Substrates

- Regular gypsum wallboard
- MF metal drywall grid system 400mm (15 3/4") c/c or similar
- Concrete
- Previously painted substrates
- Timber studs

2. Conditions for Installation & Storage

The fade® Acoustic Plaster System is a high-quality acoustic plastering system that absorbs unwanted noise in a wide range of environments.

As an acoustic plaster solution spray applied to walls and ceilings, its highly absorbent qualities allow for optimum acoustic control in a variety of spaces.

The system can be applied on virtually any surface including straight and curved walls, dramatic angles and arching domes, offering a more flexible, discreet alternative to traditional acoustic solutions such as suspended ceilings and acoustic panels.

The system can be colored in any RAL or NCS color available.

fade® Acoustic Plaster System brings together aesthetics and acoustic performance which makes it ideal for a wide range of developments ranging from historic buildings to high-end residential, commercial, retail and educational spaces.

We gently remind you that this system data sheet is a general guide on how the system is installed and specific technical advice is recommended before proceeding with any transaction.

Full technical information is available from your local fade® approved installer or from fade® Acoustic Ceilings.

Please note that the fade® Acoustic Plaster System can only be installed by fade® approved installers.

a. Conditions for Installation

Project Site Conditions

The installer must ensure that the project site is properly heated (if the installation takes place in cold climates) and that the project site can be dehumidified if necessary (if the installation takes place in a hot and humid climate). It is recommended that installation is carried out in temperatures above 4°C (39.20 °F).

Please note:

- In cold or humid conditions, the acoustic plaster will have a longer drying time and in some cases the plaster can crack due to the plaster drying from the "inside" and out.
- The building must be watertight to prevent any water leaks destroying the acoustic plaster system.
- The project site must have access to clean running water.
- When installing the system in buildings where there is a risk of movement in the construction due to materials settling the installer must take the necessary precautions.

Substrate

Suitable substrates are:

Regular gypsum wallboard/drywall, MF metal drywall grid system or similar 400mm (15 3/4") c/c, concrete, previously painted substrates, timber or steel studs 400mm (15 3/4") c/c.

Please note:

- If installation of the suitable substrate is done by others the installer must ensure that the substrate is acceptable, installed 400mm (15 3/4") c/c and completely flush before installing the acoustic boards.
- If the acoustic boards are installed onto a previously painted substrate with adhesive the installer must ensure that the bond-strength of the substrate is suitable for installation.
- If the acoustic boards are installed "direct-to-grid" the installer must ensure, that the building or the construction between floors is airtight to prevent dust deposits on the finished ceiling from airflow.

Acoustic Boards

The installer must ensure that the acoustic boards are being protected from direct and indirect sunlight at all times prior to the application of the acoustic plaster. If the acoustic boards are exposed to direct or indirect sunlight, there is a risk that the resin in the acoustic boards will activate and the acoustic plaster may discolor due to the activated resin. Once the first layer of acoustic plaster has been applied there will be no problems with direct sunlight.

Please note:

- The installer must ensure that the acoustic plaster is applied immediately after the acoustic boards are fixed to prevent any problems occurring from exposure to direct or indirect sunlight.

Acoustic Plaster

fade® Acoustic Plaster comes pre-mixed in buckets. The installer may need to add water to the plaster and mix again before installation. The amount of water that should be added to the acoustic plaster depends on the spray machine being used.

Please note:

- If acoustic plaster is sprayed directly on gypsum, please ensure that the gypsum has been primed prior to spraying. If not primed the sprayed area might discolor.
- The installer must ensure that each layer of fade® Acoustic Plaster is completely dry before applying a new layer of acoustic plaster on top. Failure to do so may result in the acoustic plaster cracking.

Colored Acoustic Plaster (fade® Acoustic – COLOR)

The color dye comes in bottles. Light colors will be filled in 100-250ml (3.38-8.45fl oz) bottles whereas strong colors will be filled in 500-1000ml (16.91-33.81fl oz) bottles. The bottles should be mixed into the acoustic plaster as per the instructions given by either your local distributor or from fade® Acoustic Ceilings.

Please note:

- The installer must ensure that the color dye is thoroughly mixed together with the acoustic plaster.
- Please ensure that the person in charge of the project site always approves the colored finish before the installation begins either by installing a mock-up or by asking fade® Acoustic Ceilings to provide you with a colored sample with the exact finish you are looking to achieve.

b. Storage

Acoustic Plaster

Always store in containers that are made of the same material as the original container used by fade® Acoustic Ceilings. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Storage temperature: Frost free and dry conditions

Shelf life: 12 months

Acoustic Boards

Always store away from direct and indirect sunlight to avoid resin bleed through and damage to the acoustic boards.

Storage temperature: Frost free

Shelf life: 12 months

c. Inspection or Approval

When inspecting the finished acoustic plaster system for approval purposes please note that the inspection should be as per BS EN 13914 -2, which advises that works should be inspected for acceptance from positions normally used in adjacent areas. This is normally from an entrance doorway and from the center of a room in a domestic house and from about 2m (78 3/4") away from the surface in larger areas.

3. Types of Installation

Direct Installation (Type A)

The acoustic boards are installed directly onto the substrate either

- with approved adhesive or
- mechanically fixed with fade® Special Washers.

If the acoustic boards are installed using adhesive, please test the substrate for bond strength and clean the substrate prior to installation them.

It is the installers responsibility to ensure that the substrate is suitable for the use of adhesive as a fixing method.

Direct to Grid (Type E)

The acoustic board is installed directly to a MF metal drywall grid system 400 mm (15 3/4") c/c or similar with the fade® Special Washers.

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.

fade® Acoustic Plaster without Acoustic Board

The acoustic plaster is sprayed directly onto a primed plasterboard or concrete substrate to a total thickness of 3mm (1/8").

The installer must ensure that any cracks or indents in the substrate has been filled before spraying the plaster.

Suitable substrates:

- Regular gypsum wallboard
- MF metal drywall grid system 400mm (15 3/4") c/c or similar
- Concrete
- Previously painted substrates
- Timber/steel frame system 400mm (15 3/4") c/c or similar

4. Installation & Aftercare

This is a general guide on how the system is installed. The guide will only show the installation of the fade® Acoustic Plaster System. For information about suitable substrates and how to properly install substrates (e.g. MF metal grid) please see our construction details or our DWG library or consult with your local fade® distributor.

Please Note:

To prevent dust deposits on the surface due to airflow we recommend testing the air tightness of the building before installing the system direct-to-grid.

a. Standard Installation

- *Suitable substrate:*
Done by others
- *Acoustic board:*
The acoustic boards are installed to the suitable substrate with tight joints. Installation can be done either mechanically with screws and special washers 400mm (15 3/4") c/c or with an approved adhesive.
- *Self-adhesive fiberglass scrim tape:*
fade® Special Joint Tape is applied to the joints with acoustic plaster. Any irregularities and indents from washers filled and levelled with acoustic plaster.
**This step may have to be repeated once the plaster has dried out and until one has achieved a completely levelled surface with no indents or irregularities.*

The spray applied acoustic plaster is sanded lightly when dry to remove any irregularities

- *Spraying:*
The acoustic plaster is spray applied in two layers and left troweled nicely. The build-up of both plaster layers combined should be 3-4mm (1/8-3/16") thick in total. Please allow the acoustic plaster to dry completely in between layers.
- *Finishing:*
For a completely smooth surface sand the entire surface until satisfied.

Maintenance, Cleaning, Repairing, & Refreshing:

Maintenance:

The system does not require any regular maintenance. The extent to which the individual surface requires cleaning or refreshing will vary as this depends on the effects of dirt, smoke etc. The acoustic plaster is not statically charged and therefore does not attract dust or dirt from the air.

Cleaning:

The surface can be cleaned using a dry, soft brush or pressurized air. Any application of water or cleaning fluid will lead to clogging of the porous structure and a resultant reduction of the sound absorbing effect.

Repairing:

Stains or any other damages that have penetrated the surface and cannot be removed by the previous actions can be repaired by applying a thin layer of acoustic plaster onto the imbedded stain or damaged area.

Apply the acoustic plaster gently and do not "force" the acoustic plaster onto the stain or damaged area. If the surface had been sanded originally do sand the repaired area lightly when the applied acoustic plaster is dry. If the surface had been troweled originally, do trowel the acoustic plaster on the imbedded stain or damaged area to make it look as the existing surface.

Recoating and refreshing the surface:

In harsh environments or after several years the surface might need a refreshment.

The surface can be given a light sanding or can be recoated to refresh the surface. The surface will then appear as new.

If recoating, we recommend giving the surface a light sanding before recoating to maintain the sound absorption levels.

There is no limitation to how many times the surface can be recoated.

b. Installation with Reinforced Mesh (Installation on Walls)

- *Suitable substrate:*
Done by others

- *Acoustic board:*
The acoustic boards are installed to the suitable substrate with tight joints. Installation can be done either mechanically with screws and special washers 400mm (15 3/4") c/c or with an approved adhesive.

- *Spraying and application of the reinforced mesh:*
The 1st layer of acoustic plaster is spray applied and should build 2mm in total (approx. 2 L./m² (.50U.S. gallons/sq')). While wet, the reinforced mesh is troweled into the plaster.

When using the fibre glass mesh one does not need to apply scrim tape on the joints or fill indents and irregularities. Make sure that the fibre glass mesh is troweled completely and nicely into the 1st layer of acoustic plaster and that the surface appears completely level and homogeneous.

- *Spraying:*
Once the 1st layer of plaster is completely dry the 2nd layer of acoustic plaster is spray applied and left troweled nicely.

Once dry the 2nd layers of acoustic plaster combined should build up to 3-4mm (1/8-3/16")

- *Finishing:*
For a completely smooth surface sand the entire surface until satisfied.

Maintenance, cleaning, repairing, & refreshing:

Please see the instructions to the same section under "a. Standard Installation".

c. Installation of Bespoke RAL/NCS Colors

- *Suitable substrate:*
Done by others
- *Acoustic board:*
The acoustic boards are installed to the suitable substrate with tight joints. Installation can be done either mechanically with screws and special washers 400mm (15 3/4") c/c or with an approved adhesive.
- *Mixing the acoustic plaster with fade® Acoustic COLOR dye supplied by fade® Acoustic Ceilings:*
Mix the acoustic plaster with the colored dye provided by your local fade® distributor or fade® Acoustic Ceilings. Please ensure to mix according to guidelines set out by fade® Acoustic Ceilings to achieve the exact color.
- *Self-adhesive fiberglass scrim tape:*
Scrim tape is applied to the joints with colored acoustic plaster. Any irregularities and indents from washers filled and levelled with acoustic plaster.
Please note:
This step may have to be repeated once the plaster has dried out and until one has achieved a completely levelled surface with no indents or irregularities.

The applied acoustic plaster is sanded lightly when dry to remove any irregularities
- *Spraying:*
The colored acoustic plaster is spray applied in two layers and troweled nicely. The 2nd layers combined should build up to 3-4mm (1/8-3/16") in total. Please allow the acoustic plaster to dry completely in between layers.
- *Finishing:*
For the best results we recommend that the surface is left troweled or with a fine texture sprayed with a 2mm (1/16") nozzle.

Maintenance, Cleaning, Repairing, & Refreshing:

Maintenance:

The system does not require any regular maintenance. The extent to which the individual surface requires cleaning or refreshing will vary as this depends on the effects of dirt, smoke etc. The acoustic plaster is not statically charged and therefore does not attract dust or dirt from the air.

Cleaning:

The surface can be cleaned using a dry, soft brush or pressurized air. Any application of water or cleaning fluid will lead to clogging of the porous structure and a resultant reduction of the sound absorbing effect.

Repairing:

Stains or any other damages that have penetrated the surface and cannot be removed by the previous actions can be repaired by applying a thin layer of acoustic plaster (with the same color ID as the original color) onto the imbedded stain or damaged area.

Apply the acoustic plaster gently and do not "force" the acoustic plaster onto the stain or damaged area.

If the surface had been sanded originally do sand the repaired area lightly when the applied acoustic plaster is dry. If the surfaced had been troweled originally, do trowel the acoustic plaster on the imbedded stain or damaged area to make it look as the existing surface.

Recoating and refreshing the surface:

In harsh environments or after several years the colored surface might need a refreshment, or one might want to change the color altogether.

Changing the color can be done by recoating the surface with a different color. For instance, if one wishes to change color from green to red, the green acoustic plaster needs to be completely sanded away and red acoustic plaster with needs to be applied. Follow instructions above from the "Step 3. Mixing the Acoustic Plaster...." onwards.

If the change in color is not massive (for instance, light grey to dark grey) one can recoat without sanding away the underlying layer of colored acoustic plaster.

We recommend sanding the original surface lightly before recoating to maintain the original build up thickness so that the acoustic property remains unaffected.

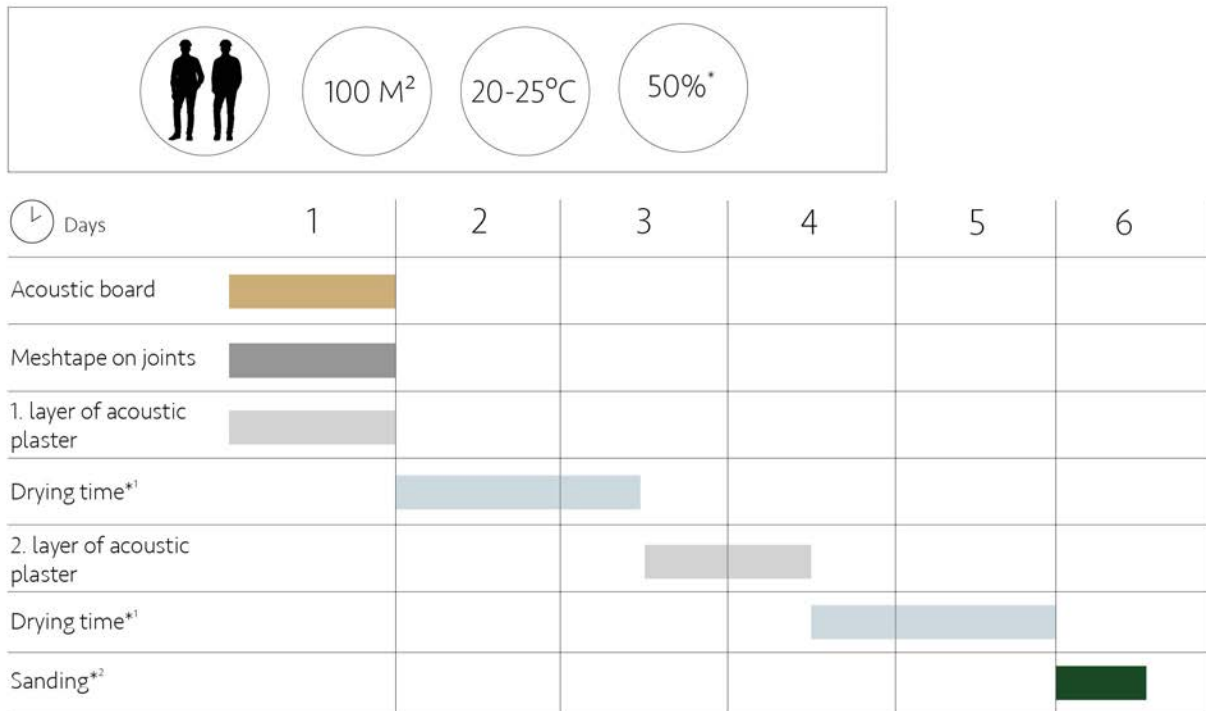
There is no limitation to how many times the surface can be re coated.

For more information please contact your local fade[®] representative.

5. Installation Time

The installation time in this example presuppose a work group of 2 installers and a ceiling size of at least 100m² (1076.39sq').

The drying time of the fade® Acoustic Plaster depends on the room temperature and the room humidity. Please allow the acoustic plaster to dry thoroughly before proceeding to the next steps.



100M² (1076.39sq'), 20-25°C (68.00-77.00 °F)

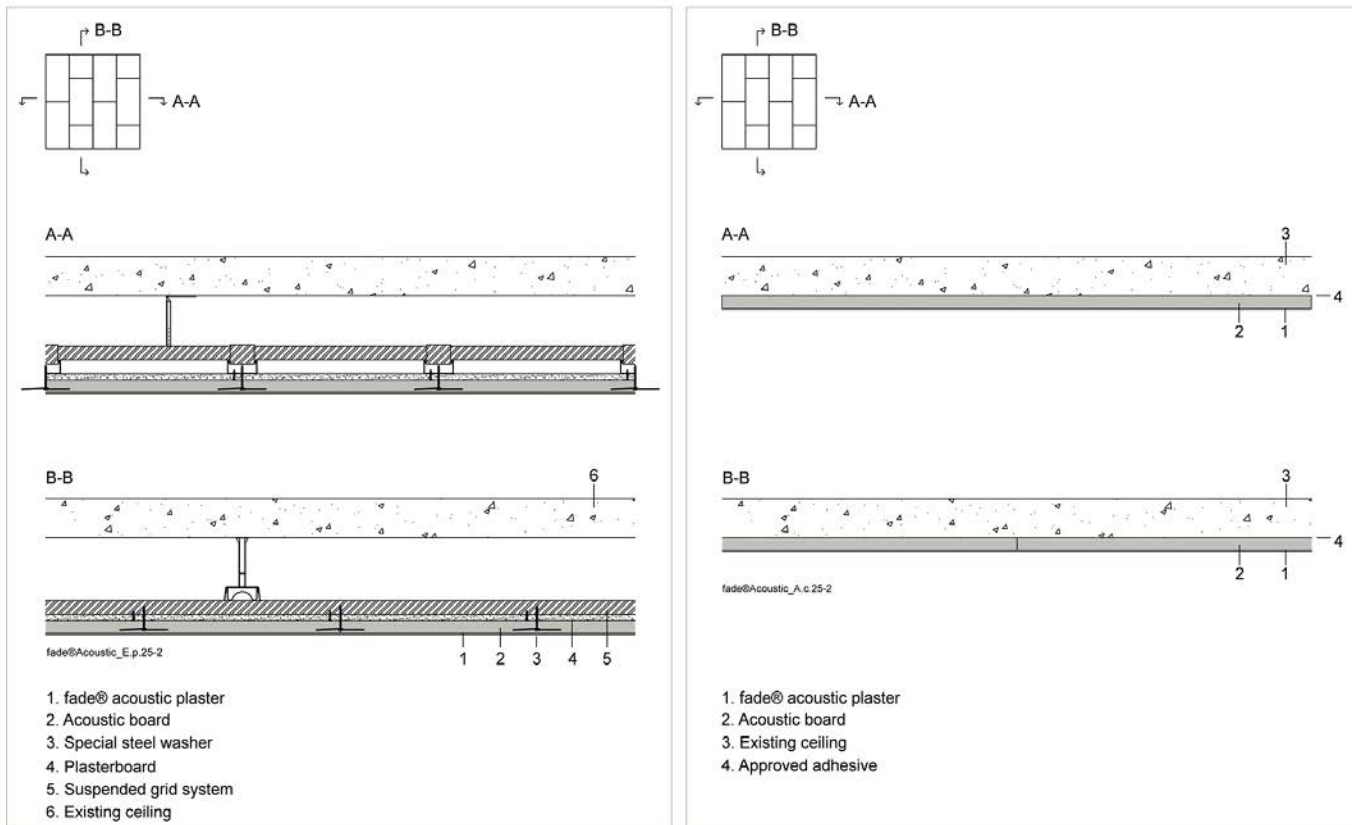
* Relative Room Humidity

*¹ Depends on the room temperature and humidity. In hot and dry conditions, the drying may be less.

*² Sanding is optional and is recommended for an ultra-smooth finish

6. System Construction

a. Type A – “Direct Installation”

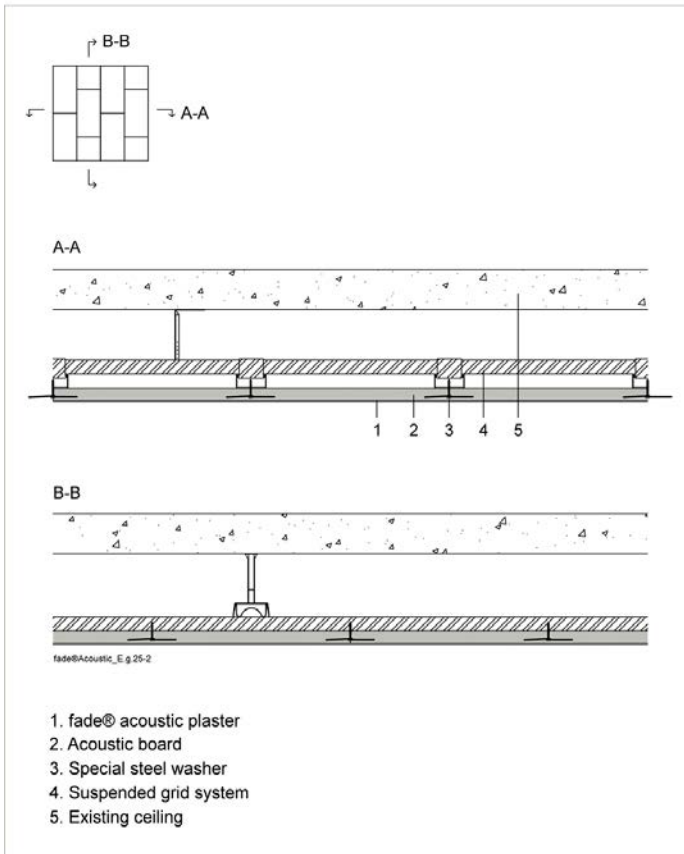


* We kindly remind you that this is a general guide on how the system is set up and specific technical advice is recommended before proceeding with any transaction.

Full technical information is available from your local fade® approved installer or from fade® Acoustic Ceilings EUROPE.

Please note the fade® Acoustic Plaster System can only be installed by fade® approved installers.

b. Type E – Suspended Installation – “Direct-to-Grid”



* We kindly remind you that this is a general guide on how the system is set up and specific technical advice is recommended before proceeding with any transaction.

Full technical information is available from your local fade® approved installer or from fade® Acoustic Ceilings EUROPE.

Please note the fade® Acoustic Plaster System can only be installed by fade® approved installers.

Please note that when installing the system direct-to-grid dust deposits may occur due to airflow.

7. Technical Data

Sound absorption		
Test	Standard	NRC
20mm (3/4") - Type A	ASTM	0.7
25mm (1") - Type A	ISO & ASTM	0.8
25mm (1") - Type E-200	ISO & ASTM	0.8
40mm (1 1/2") - Type A	ISO & ASTM	0.9
40mm (1 1/2") - Type E-200	ISO & ASTM	0.85
50mm (1 15/16) - Type A	ISO & ASTM	0.9

Fire test		
Test	Standard	Result
Fire test	ASTM - E84-11a	Class A
Fire test	BS EN ISO 11925-2: 2010	B2, s1-d0
Fire test	EN 13501-1:2002 + EN13238:2001	A2, s1-d0

Durability tests		
Test	Standard	Result
Internal stress	ASTM D6991-17	1.8 MPa
Resistance to growth of mold	ASTM D3273-16	No growth
Determination of static electrical properties for ceiling panels	Simco Electrostatic fieldmeter - model FMX.003	No static electrical charges
Resistance to humidity	DS/EN ISO 6270-2, 2005	Test conditions: 40°C (104.00 °F)/95%RH. Exposure time: 168 hours Result: No visible changes
Resistance to humidity	DS/EN ISO 6270-2, 2005	Test conditions: Constant-humidity condensation atmosphere (CH), 40±3°C (104.00±3°F) and approx. 100% condensation on test specimens. Exposure time: 48 hours Result: No visible changes
Exposure to UV-light	ASTM G 154-16 & ISO 18314-1, 2015	No visible changes after 1000 hours
Luminous Reflectance Factor	ASTM E1477	CIE Y = 83.6 +/- 0.1 CIELAB L* = 93.3 +/- 0.1

Environmental		
Test	Standard	Result
Cradle to Cradle	Version 3.1	SILVER LEVEL
EPD (Environmental Product Declaration)	ISO 14025/EN 15804	Third party verified
VOC's	Finnish Emission Classification of Building Materials	VOC: 0,014mg/m ² h Formaldehyde: 0,0044mg/m ² h



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