MD Facade – Installation & Maintenance

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1 – Product description

MD Facade expanded insulation corkboard is a special range of expanded insulation corkboard with high technical performance for exterior wall cladding, interior walls and ceilings - cork at sight.
This system is intended for thermal and acoustic insulation of building façades, contributing to their energy saving, thermal comfort, acoustic and hygrothermal performance.

The system may be applied on concrete substrates (structures or concrete parts) and masonry (e.g. bricks, concrete blocks or cellular concrete blocks), previously coated with levelling plasters of suitable mechanical characteristics.

The system may be applied directly onto wooden, OSB or VIROC substrates.
It´s also suitable for use in the acoustic and thermal renovation/refurbishment of buildings, and may therefore be applied over existing substrates, such as old masonry (technical study recommended).

2 – On site preparation

The storage on site must be carried out using the original packaging and in a place that is dry and covered. MD Facade panels must be stored on a clean, firm, horizontal base that does not make contact with the ground.

3 - Substrate preparation

New Construction

As other coatings, MDFaçade application should not be made before the support is properly cured. The support must be:

- sufficiently flat and regular;
- dry, cohesive, adherent and free from dust or dry at the time of application of the system;

Wood or OSB/VIROC supports must be flat, structurally stables and available for exterior application (waterproof). They must be also dry, cohesive and free of dust and must be dry at the time of application.

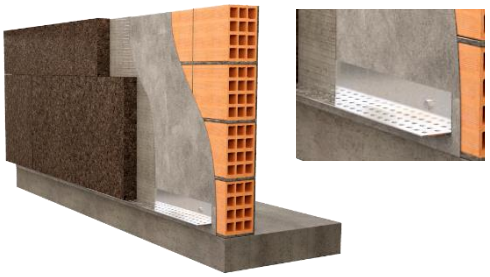
Repairing

On rehabilitation, supports cohesion and stability must be verified and ensured. Moisture content in dry periods should also be checked and solved before application.

4 – General rules of application

4.1 – Starting profile

All of the types of applications should start with a perforated metal start-profile. This profile must have the width of the board to be applied and shall be placed at a minimum distance of 50 mm from the ground or 5mm from any other structure. This profile has the function to ensure support and prevent mechanical damage by accidental impact. The use of perforated material allows the correct drainage of the water that has been absorbed by the ICB (rain water, irrigation systems, etc.)



4.2 – Connections to frames

In connection to frames, in the head jamb, the ICB should be placed at a minimum distance of 5 mm from the frame, so as to prevent the accumulation of water. If architecturally viable, connections with doors and windows can be done by applying the ICB partially protruding from the frame, thereby allowing the correct water flow.

In the side jambs, in the connections between the ICB boards and frames a minimum spacing of 5 mm must be left.

4.3 – Roof protections

The roof protection should protrude from the facade and provide continuity, to ensure it does not create water runoff areas. It can be seen that, despite the ledge, there is a discontinuity in boards thereby causing a runoff zone which, over time, can lead to an erosion zone on the ICB boards.

4.4 – Corners
The corners can be made in one of two ways:

- Corners with boards 45°cut

- Corners with staggered boards

4.5 – Scaling and cutting

MD Facade is a finishing material, so his cut must be as much perfect as possible. For that, it is recommended to use wood cutting tools:

Hand saw

Hand saw

Saw-Blade

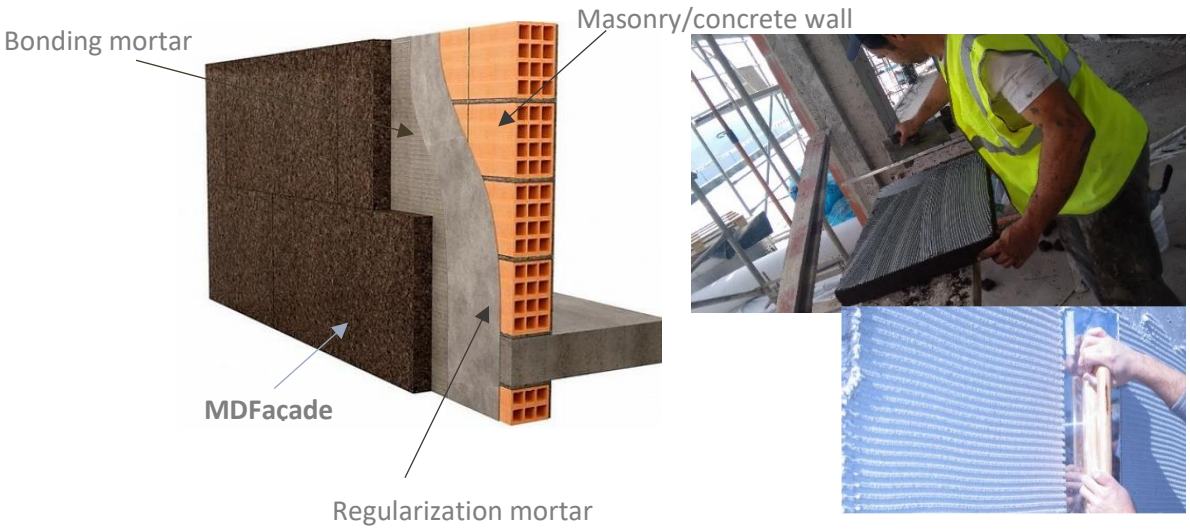
Circular saw

Chain saw

4.6 – Mounting and boards application

4.6.1) Adhesive system

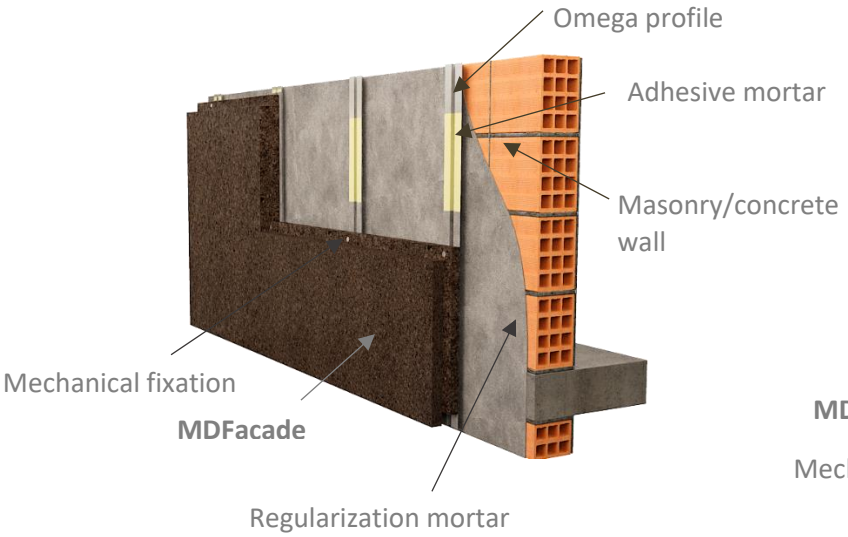
- MD Facade panels must be applied from the bottom up, to ensure they are leveled horizontally and that each row of panels is supported by the one below it;
- The fixing to the support must be, wherever possible and the support allowing, made by double bonding (adhesive supplier must be consulted);
- Panels should be arranged vertically in horizontal rows of greatest width. The rows are placed from the bottom up, with the vertical joint of each row not matching previous ones;
- Each panel must be constantly checked with suitable tools to ensure it is vertical and flat in relation to the neighbouring panel;
- Adhesive supplier must be always consulted for all the application instructions/recommendations;



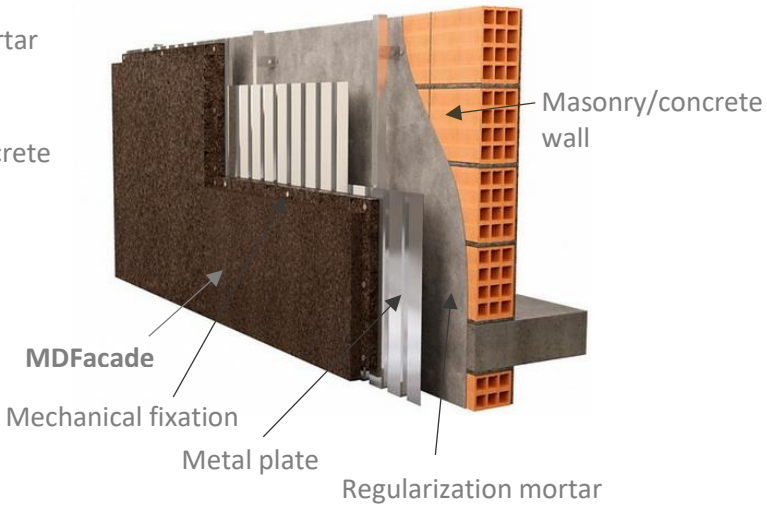
4.6.2) Mechanical fixation system

For roofing or facades, assuming the impossibility of bonding the boards to the support or due to climate conditions, the existence of an air space weakly ventilated increases the efficiency of the solution, the assembly must be carried out according the following points:

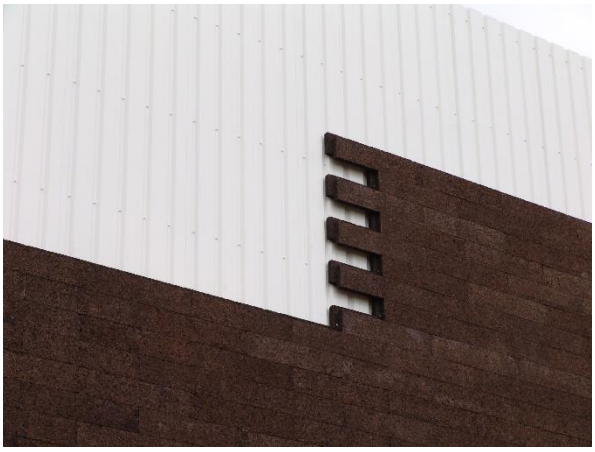
Omega profiles (adhesive + mechanical)



Metal plate (mechanical)

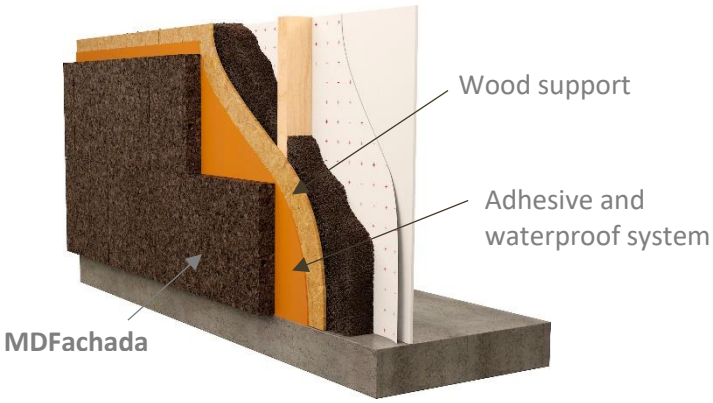


- Between two omega profiles, a maximum distance of 485 mm should not be exceeded;
- Adhesive supplier must be allways consulted;
- For the mechanical fixation (screws): 3 screws on the length and 2 screws at the height;



4.6.3) Application on wood

Adhesive / mechanical



- The waterproofing of the wood support must be ensured;
- Adhesive supplier must be always consulted;
- Mechanical fixation (screws) is also possible, with the wood support waterproofing warrantee;

5 – Maintenance

MD Facade is a completely natural material therefore, it is expectable that over time and with its continuous exposure to the elements (sun, rain, atmospheric pollution), differences in the colour and/or the presence of mosses and lichens, may occur. The use of unsuitable constructive techniques could conduct to a surface change. If on one hand, the thermal insulation properties of MDFachada don't change over years, on the other hand the appearance will change. Periodic procedures of maintenance will help to maintain the initial visual characteristics of MDfachada. The periodicity needed for the maintenance processes depends on the geographic localization; and on the cardinal orientation of the facade. Facades oriented north, which don't receive direct solar light, will have more probability of developing lichens and fungi. Identically, a building located in a place with high levels of rainfall will have more necessity of maintenance than a building located in a dry place.

The following points present the recommended maintenance procedures for buildings covered with MDFachada to keep their initial characteristics.

WASHING

To clean facades/roofs in which the accumulation of lichens or moss was verified, water under high pressure should be used. The water pressure used should not be excessive, to avoid the eventuality of material removal. Before starting with the washing, the water pressure should be tested in an invisible zone, in order to ensure that the water pressure is appropriate. In zones of protruding material, such as corners, a lower water pressure is recommended.

Areas near the coast - exposure to salt

MD Facade has been installed in numerous locations in close proximity to the water.
The product has performed well at each location although it is important to note that long term exposure to salt can eventually effect the surface appearance however the overall durability of the cladding is not effected.

We recommend washing the surface of the Cork MD Facade periodically with a high pressure washer to help keep the surface clear (note: please take care to not use too much pressure as the water jet can gouge out the Cork).

Refer project references below:

Redshank Beach House (Essex - UK)

De Agua Beach Bar (Portugal)

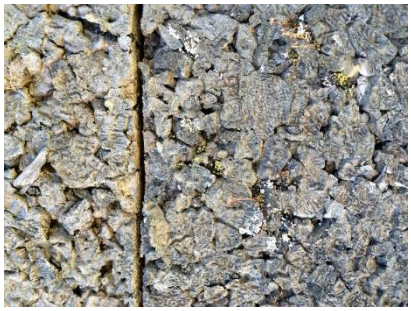
Touching up surface appearance

Surfaces in a good general condition, where colour is the only characteristic that is intended to improve

When the facade presents general good conditions and colour is the only property that needs to change, an abrasion of the surface is recommended. This abrasion should be done with a vibro grinder, using 230 grinding. After the grinding of the surface, this should be washed to remove all the dust.

Surfaces with colour and texture changed by the weather

When the facade surface is covered with MD Facade presents considerable changes in colour and texture. In this case the abrasion of the surface should be more significant.



For this case, the abrasion of the surface is recommended, using grinder disks with an 80 grain abrasive. Only the absolute minimum should be removed so that the surface recovers its characteristics. 1 to 2 mm of abrasion should be enough for most situations. Although the roller grinder could make the work faster, it leaves marks in the material, which is why its use is discouraged. After the abrasion process, the surface should be washed with a pressure machine for total removal of the powder and dust accumulated in the material's porous.