

# AquaBoard system

Created by  
experts



# AquaBoard

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## ADVANTAGES OF AQUABOARD

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Developed as an alternative to existing outdoor boards, AquaBoard plasterboard provides an exceptional resistance to high humidity, mold protection, sound insulation and high impact resistance.

### What is AquaBoard?

AquaBoard is a special type of plasterboard with a yellow outer coating made of a fiberglass mesh treated to prevent water absorption. The core composition contains a waterproof silicone additive and other additives that prevent mold.

The board is used to protect spaces which require high resistance against humidity and mold.

AquaBoard meets the requirements of standards EN 520 (type D,E,F,H1,I) and EN 15283-1 (type GM-H1, GM-I).



## ADVANTAGES OF AQUABOARD

AquaBoard is a plasterboard intended for use in excessive humidity environments

### Benefits of AquaBoard

- Exceptional resistance to extreme humidity conditions
- Easy to transport and assemble - only 10.8 kg/m<sup>2</sup>
- Treated to provide protection against mold growth
- High acoustic performance\*
- The board is installed similarly to regular plasterboards, thus reducing the installation time and total cost of the work.
- Easy to cut with a regular cutter
- Dimensional stability
- Resistance to bad weather conditions
- 6-month warranty under direct exposure to bad weather conditions

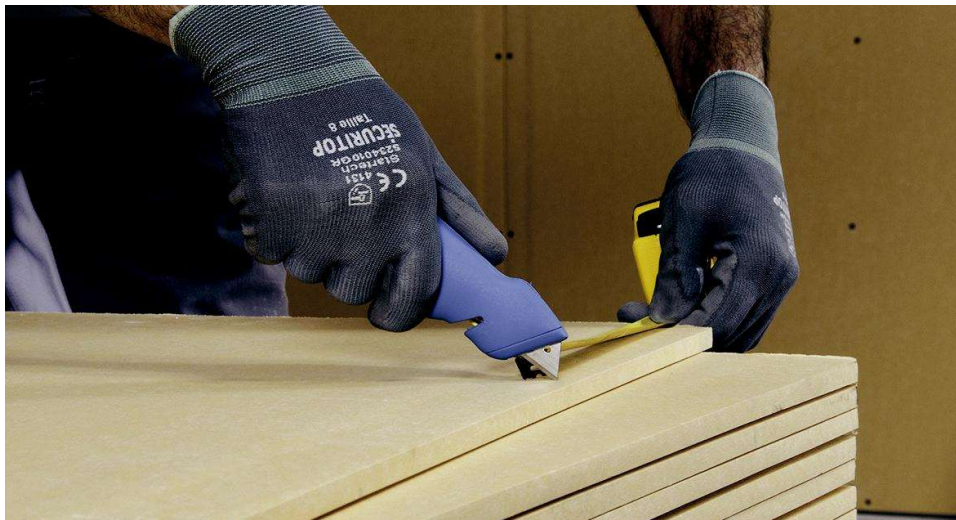
### AquaBoard innovation in dry systems

AquaBoard system is the innovative solution for the execution of façades and ceilings directly exposed to atmospheric agents and indoor spaces with high humidity (pools, saunas, baths).

AquaBoard is the first plasterboard developed by Siniat, intended for use in dry systems for outdoor applications, providing a wide range of technical or environmental advantages, being able to satisfy even the most demanding specifications or designs.

### Rapid installation, safety, low costs

- Easy to cut and install. No special tools are needed, just a regular cutter. No dust is released during cutting.
- The lightweight board (10.8 kg/m<sup>2</sup>) provides ease of handling and installation, lowering the total labor cost.



\*the performance depends on the overall system

## CHARACTERISTICS OF AQUABOARD



### SAVINGS:

- Optimum workability and versatility allow the development of some of the most complex solutions in contemporary architecture in a simple and fast manner.
- Opportunity to develop the site only with dry systems starting with the exterior walls.
- Applications that are not directly exposed to atmospheric agents do not require sheathing on the whole surface, but only joint finishing using Pregywab jointing paste.



### TECHNICAL PERFORMANCE:

- Possibility to develop façade systems which comply with the highest applicable standards in thermal and acoustic insulation
- High dimensional stability: expansion joints provided every 15 m.
- AquaBoard holds the CE marking in accordance with EN15283-1 (type GM-H1, GM-I). It is also in conformity with standard EN520 (type D, E, F, H1, I).



### TECHNICAL CERTIFICATIONS:

- Technical Certificate issued by the ITC-CNR, no. 648/2011 for non-loadbearing envelope systems with direct exposure to atmospheric agents.
- Technical Approval issued by the BBA (British Board of Agrément) for the application of façade systems.
- Rated as adequate by the Steel Construction Institute (SCI) in the UK.
- The system has received the anti-theft certificate from Giordano Institute.
- AquaBoard system has been tested extensively in the research and development centers of Siniat group.



### RESISTANCE TO MOLD AND FUNGI:

- AquaBoard has a core made of gypsum containing biocides, to prevent the growth of mold and fungi.



### RESISTANCE TO ATMOSPHERIC AGENTS:

- Once installed, the board can be directly exposed to atmospheric conditions up to 6 months without immediate plastering or surface protection.
- Exceptional water resistance (absorption < 3% according to EN520).



### WORKABILITY:

- Easy handling: AquaBoard is up to 50% lighter than cement-based boards.
- Easy to cut, fix and handle. AquaBoard is cut similarly to regular plasterboards (with a cutter) without the need for using an electric saw.



### SUSTAINABILITY

- Plasterboard solutions enable compliance with the current requirements on sustainable constructions: the main component of the board is gypsum, which can be fully recycled for an indefinite number of cycles.
- 100% recyclable board with recycled material content less than 84%.

## INDOOR APPLICATIONS

For indoor applications:

- As substrate for ceramic tiles in environments with high humidity (bathroom, kitchen)
- As protective cladding for walls and ceilings in rooms with high humidity:
  - bathrooms and restrooms in individual homes;
  - collective restrooms in public buildings;
  - restaurants, canteens;
  - swimming pools, saunas, spas;
  - garages, basements;
  - rooms with high mold resistance requirements.



**AquaBoard is the ideal solution for indoor applications with high resistance to humidity.**

### High humidity

Residential environment: kitchens, restrooms, bathrooms, garages.

### Severe humidity

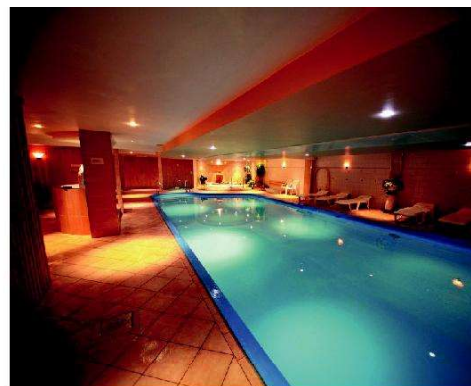
Residential environment: Jacuzzi bathrooms

Public buildings: shower areas, showers (stadiums, sport halls), high pressure dry-cleaners, swimming pools, spa centers.

### Extreme humidity

Residential environment: swimming pools

Public buildings: swimming pools with spa, industrial washhouses.



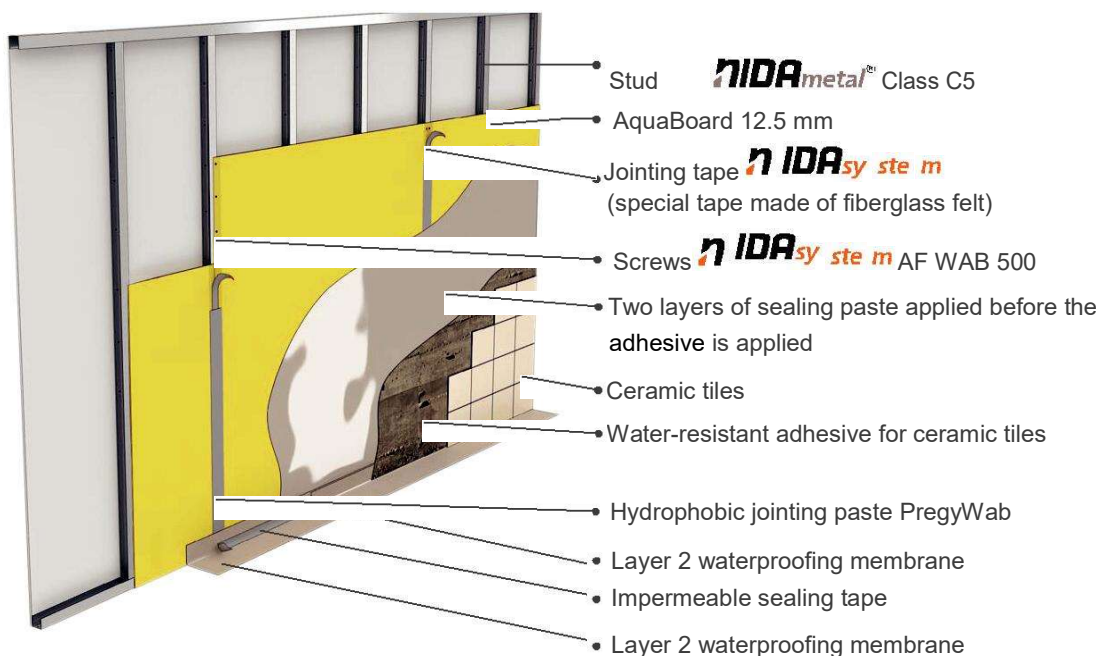
Humidity exposure class	Metal structure	Board type	Fixing accessories	Jointing compounds
<b>HIGH HUMIDITY (Eb+private)</b>	<b>NIDA<sup>metal</sup></b> Standard	<b>AquaBoard</b>	Screws <b>NIDA<sup>system</sup></b> AF Standard	Hydrophobic jointing paste PregyWab
<b>SEVERE (Eb+collective)</b> <b>(EXTREME (E+) HUMIDITY)</b>	<b>NIDA<sup>metal</sup></b> Class C5 with high zinc	<b>AquaBoard</b>	Screws <b>NIDA<sup>system</sup></b>	Hydrophobic jointing paste

## Extreme exposure to humidity

Fig.3 illustrates the preparation of surfaces in rooms exposed to extreme humidity conditions. In such cases, you must use the special profiles **IDA metal**<sup>®</sup>, Class C5, and **IDA sy ste m** AF WAB 500 screws, sealing the base and the entire surface of the board with waterproofing sealant.

At all times, you should take into consideration the manufacturers' recommendations regarding the use of the system components.

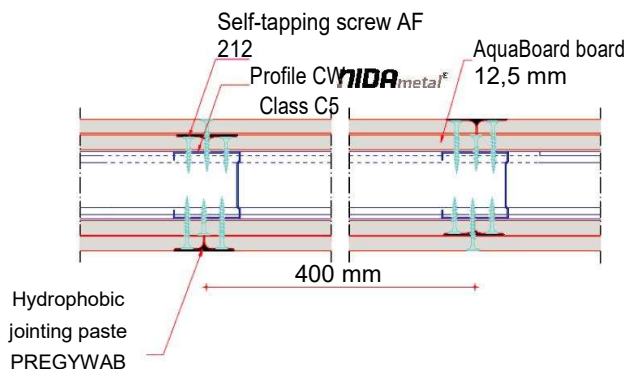
Fig.3



## Average consumption / m<sup>2</sup> of wall

### Double wall cladded on each side with AquaBoard plasterboards

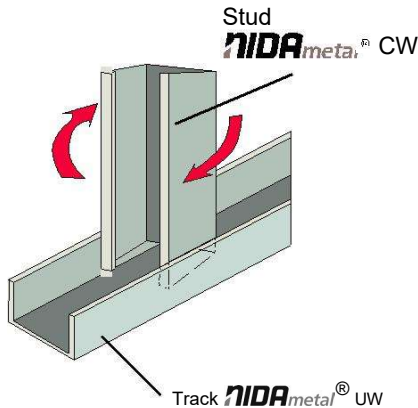
Product name	Quant. / m <sup>2</sup>
Board AquaBoard 12.5 mm	4.00 m <sup>2</sup>
Profile <b>IDA metal</b> <sup>®</sup> Class C5 CW thickness 0.6 mm	3.00 ml
Profile <b>IDA metal</b> <sup>®</sup> Class C5 UW thickness 0.6 mm	0.70 ml
Hydrophobic jointing paste PregyWab	0.80 kg
Jointing tape <b>IDA system</b>	3.50 ml
Self-tapping screws WAB500 AF 212x25	18.00 pcs
Self-tapping screws WAB500 AF 212x45	36.00 pcs
Self-drilling screws AP 421x9,5	1.00 pcs
Dowels for fixing upper/lower tracks	1.50 pcs
Adhesive tape support track	1.00 ml



## INDOOR INSTALLATION OF AQUABOARD SYSTEM

### 1. Fixing profiles and tracks **NIDA metal**

Fix **NIDA metal**® UW tracks on the floor and ceiling. Cut the **NIDA metal**® CW studs 5 mm shorter than the height between the floor and the ceiling. Embed into tracks by torsion. Fix the CW studs with a spacing between axes of maximum 600 mm (or shorter if necessary), with the opening facing in the same direction. For simple claddings, covered with ceramic tiles, position the CW studs with a spacing (between axes) of maximum 400 mm.



In order to properly apply and use products which are not produced by Siniat, please see the technical data sheets and specifications of the respective manufacturers.

### 3. Joint treatment

Cut the **NIDA system** jointing tape at the desired length and then position it on top of the joints between the AquaBoard boards. Apply the hydrophobic jointing paste PregyWab on the joints between the boards, covering the tape with a layer approximately 1 mm thick. Remove the surplus and allow to dry, then apply a second layer of PregyWab paste, 50-60 mm wider than the previous layer. When the surface is completely dry, apply a third layer of PregyWab paste.

### 2. Fixing of AquaBoard board

Fix the AquaBoard boards on the side of the room exposed to humidity, taking into account the exposure degrees. Cut the AquaBoard board 10 mm shorter than the height between the floor and the ceiling, firmly frame the board onto the ceiling and fix with the **NIDA system** AF screws to the metal structure, at distances of maximum 300 mm. Leave a space of 5 mm from the walls on which the jointing will be made. On the opposite side, stagger the boards so that the joints on the two sides do not overlap on the same stud. In order to ensure the acoustic insulation performance and the humidity resistance of the system, seal the lateral and upper ends of the wall with sanitary water-resistant silicon. Insulate the base of the wall with an impermeable paste (such as Loggia Gum\* or similar) and waterproof sealing tape (such as Sika Sealing Tape\* or similar).



## INDOOR INSTALLATION OF AQUABOARD SYSTEM

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### 4. Insulation at wall or cladding base

Cut the impermeable sealing tape at the desired length. Coat the surfaces with a primer and then apply a generous layer of impermeable paste on the bottom part of the wall or cladding, covering a height of 100 mm on the wall and a length of 200 mm on the floor.

**Note:**

**Read the technical data sheet of the primer manufacturer before applying!**

Apply the impermeable sealing tape over the paste layer, at the joint between the plasterboards and the floor, folded along the joint at a 90° angle. Apply the impermeable tape using a spatula, so as to avoid creasing and maintain the tape smooth and well-stretched. At the meeting point between two tape lengths, make sure they overlap on at least 50 mm. Allow to dry completely and then apply a second layer of impermeable paste, fully covering the tape and the first layer.

### 5. Additional applications

(only for areas with extreme exposure)

In extreme humidity environments, apply two layers of impermeable paste on the entire surface of the AquaBoard boards.

\* In order to properly apply and use products which are not produced by Siniat, please see the technical data sheets and specifications of the respective manufacturers.

### 6. Types of possible finishes on AquaBoard board

#### Finishing with ceramic tiles

Ceramic tiles can be fixed directly on the surface of AquaBoard boards using a proper adhesive compound. The adhesive for the tiles should be water resistant and suitable for applications on plasterboard substrates. Before applying the adhesive, place a primer, taking into account the manufacturer's specifications.

The water absorption of the ceramic tiles should be under 5%. The maximum allowed weight applied on the wall should be 30 kg/m<sup>2</sup>, and the distance between the CW metal studs should be 400 mm. After the adhesive has dried and the ceramic tiles are firmly in place, finish the joints with water-resistant caulk.

Recommendations of materials used:

Primer and adhesive for ceramic tiles: Ceresit CT17+CM17, AdesilexP9 or a product with similar properties.

Impermeable paste: Loggia Gum or similar.

Impermeable sealing tape: Sika Sealing Tape S or similar.

#### Paint coating

A proper, water-resistant paint can be applied directly on the surface of the AquaBoard plasterboards. The surfaces should be coated with a primer according to the manufacturer's specifications so as to ensure proper adhesion between the layers.

Note: Always take into account the manufacturers' recommendations regarding the materials composing the system.

\* The recommendations contained in the catalogue are based on compatibility tests performed in our own labs.

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## OUTDOOR APPLICATIONS

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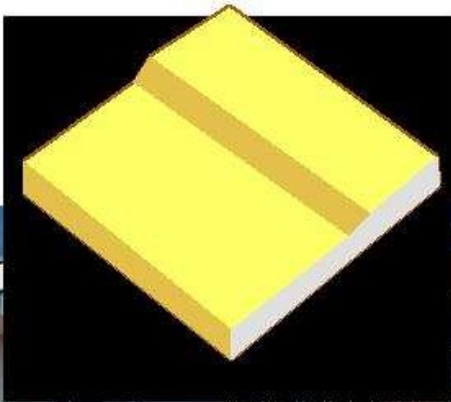


## A rapid solution for dry constructions

## Easy cutting and processing

### Outdoor applications

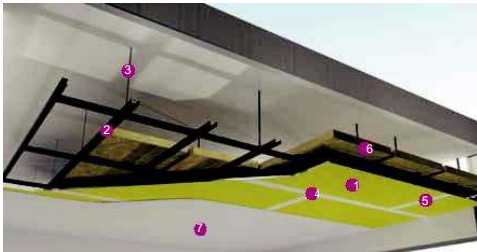
- Board for outdoor applications used in association with a render and decorative plastering
- Board used in ventilated façades
- Board for outdoor applications used in association with a thermal insulation system
- Ceilings and partitioning walls between balconies
- Lining of intradoses for: roofs, balconies, exterior soffits, overhangs
- For projects which require the fixing of plasterboard partitioning systems prior to the execution of the roof or building envelope



## OUTDOOR APPLICATIONS – CONSTRUCTION SYSTEMS

### Exterior ceilings

Fig. 3



- ❶ AquaBoard plasterboard
- ❷ Metal structure NIDAmetal CD60 Class C5
- ❸ System NONIUS Class C5
- ❹ Hydrophobic jointing paste Pregywab
- ❺ Screws WAB500 AF 212
- ❻ Mineral wool
- ❼ Approved finishing system

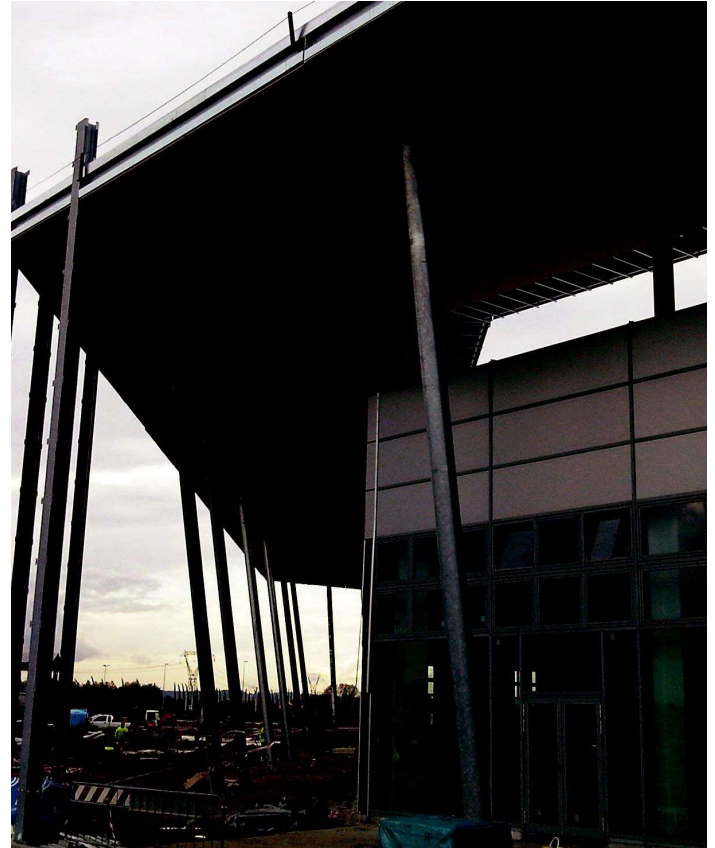
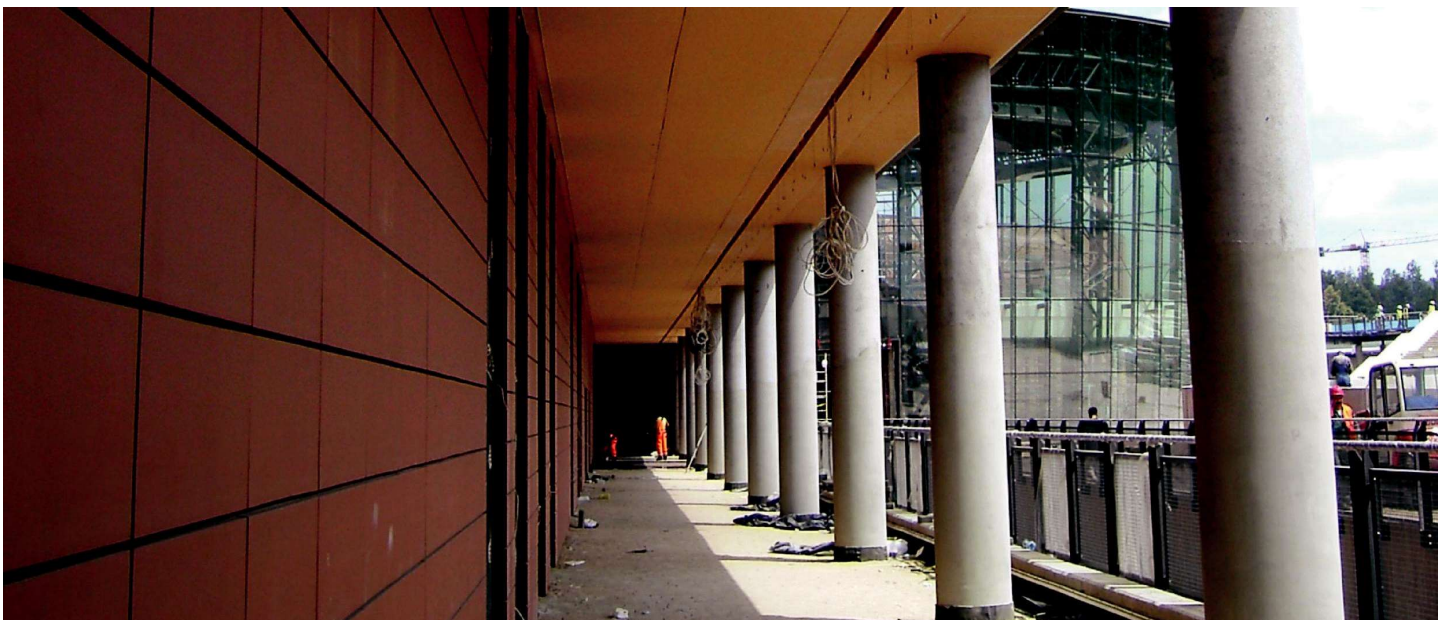


Fig.3 presents the execution of a suspended exterior ceiling on a double support structure using NONIUS Class C5 system.



## OUTDOOR APPLICATIONS – CONSTRUCTION SYSTEMS

### Overhangs

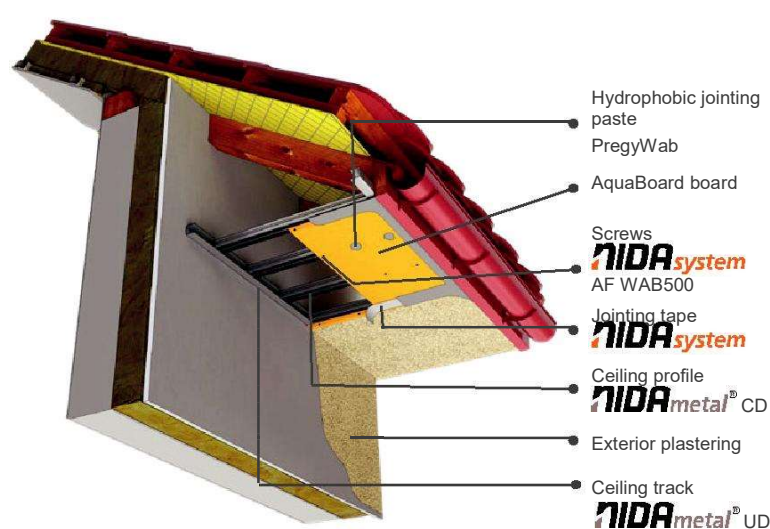


Fig.1

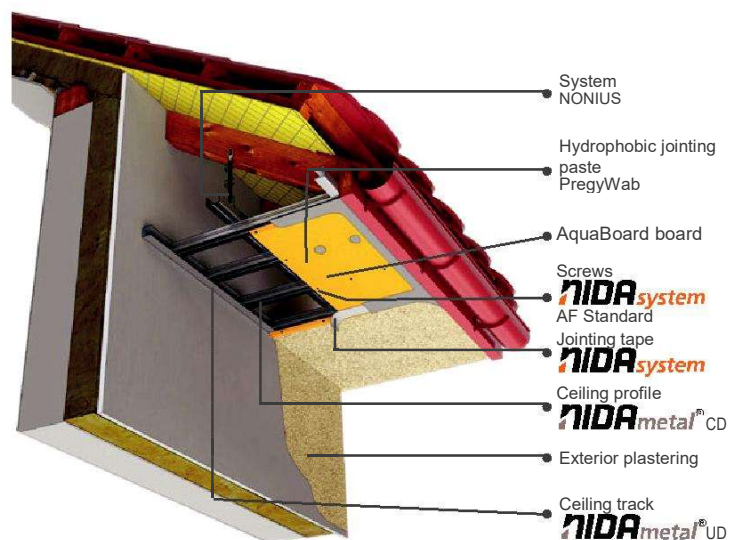


Fig.2

**Note:**

To ensure the system performance, all joints must be perfectly sealed!

Depending on the overhang width, there are two possible solutions:

Fig.1 illustrates the implementation of an overhang system less than 60 cm wide (distance from the wall to the fascia board) – with a double structure and self-supporting system.

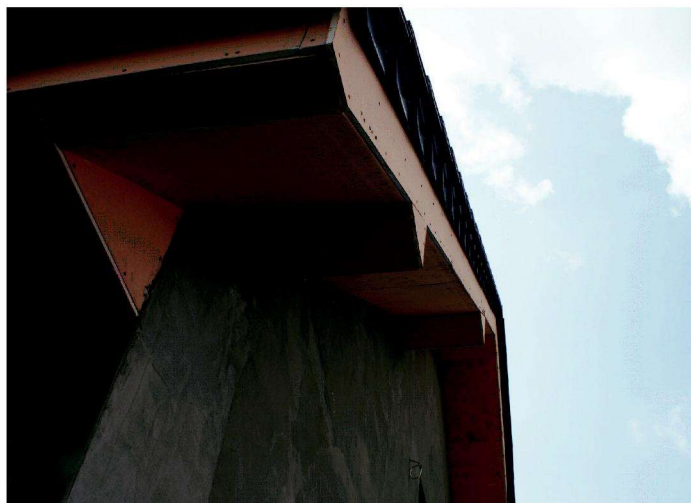
Fig.2 illustrates the implementation of an overhang system more than 60 cm wide (maximum distance from the wall to the fascia board of 100 cm) – with a double structure and supporting system.

If the overhang is more than 100 cm wide, follow the assembly instructions of the suspended ceiling, taking into account the exterior assembly conditions.

For this type of application, the exterior plaster coating can be applied directly on the AquaBoard board after surface priming.

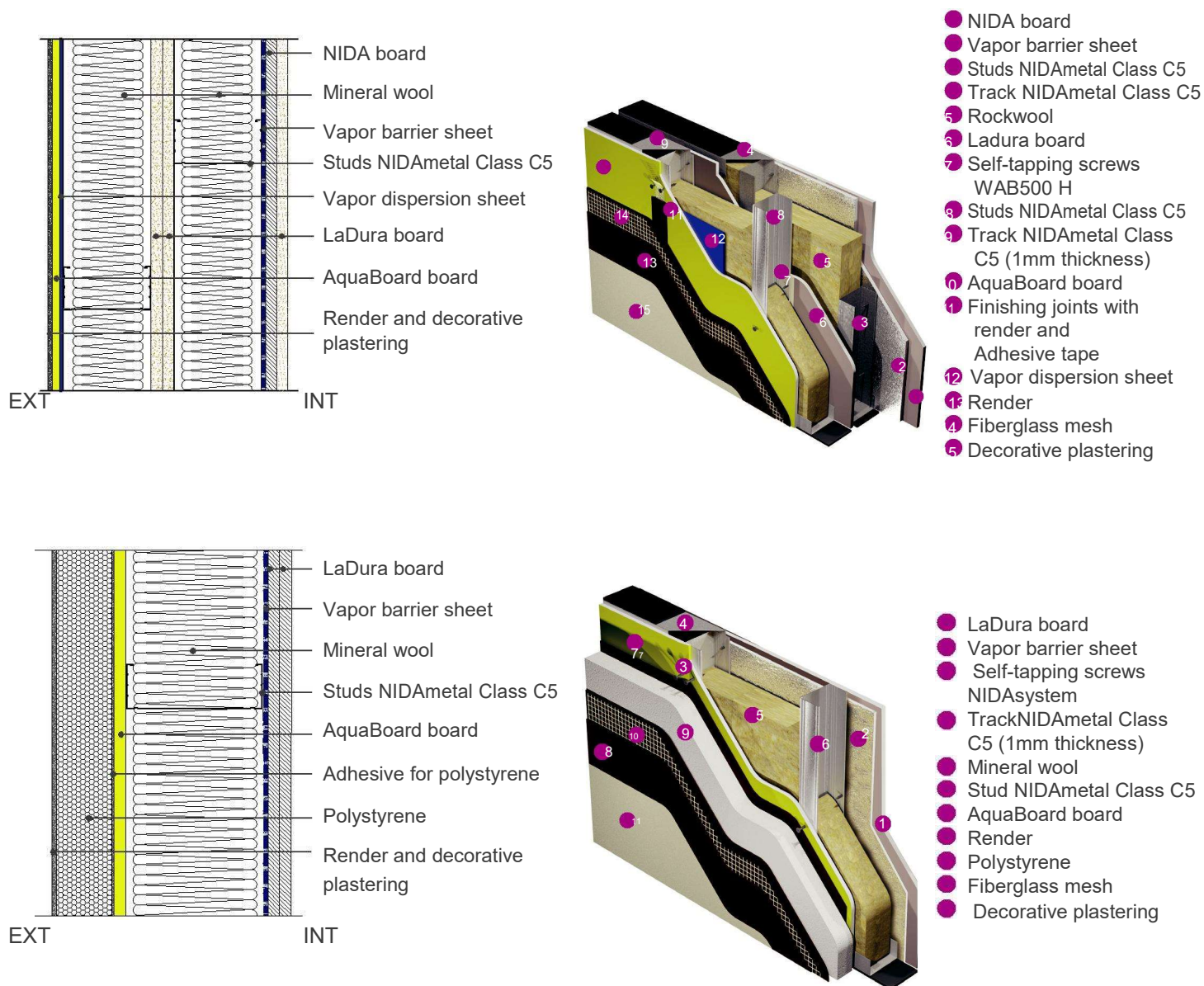
**Note:**

Please see the technical data sheets of the primer and plastering manufacturers and observe their application specifications!



## OUTDOOR APPLICATIONS – CONSTRUCTION SYSTEMS

### Exterior walls



AquaBoard plasterboards should be installed on NIDAmetal Class C5 structure which is specially treated for humidity resistance. The maximum distance between the axes of the metal profiles needs to be equal to 600 mm. For detailed information please contact Siniat Technical Assistance Department by e-mail at: [siniat@siniat.com](mailto:siniat@siniat.com).

#### Note!

For a correct sizing of the metal support structure, please call an engineering company!

## INFORMATION ON OUTDOOR INSTALLATION

### Installation

Installation instructions for outdoor applications exposed to humidity and atmospheric agents.

- AquaBoard is extremely easy to process and cut, using a regular cutter.
- Automated equipment is not required so the board can be cut on the scaffolding and/or forklift, subject to meeting the safety requirements.
- To avoid humidity at the wall base, place AquaBoard boards at a distance of minimum 1 cm from the exterior floor and protect with the AquaBoard aluminum base profile. If the base of the exterior wall must end in direct contact with the ground, space the AquaBoard system at least 20 cm from the ground.
- As the boards have a high dimensional stability, they can be installed side by side without leaving spaces between the joints.
- Screw the board on the metal structure with a maximum distance between axes of 300 mm using WAB500 screws.
- Ensure a maximum total thickness of render and decorative plastering of 5 mm (first and second layer).
- Make sure to position the antialkaline mesh in the center or at the external half of the render.
- If it is necessary to seal systems which do not provide the application of render and decorative plastering, use a silicone sealant suitable for sealing all vertical and horizontal joints after installing the tiles.
- While waiting for the surface finishing, it is not necessary to use a breathable material in order to temporarily protect the board against exposure to atmospheric agents.
- In case of exposure to load or strong wind, please see the table below:

Board resistance to wind load/suction		
Profiles – spacing between axes [mm]	Screws – spacing between axes [mm]	Maximum wind load [N/m <sup>2</sup> ]
600	200	2250
600	300	1500
400	200	3370
400	300	2250

### Sheathing

- For fixing the insulating panels on the boards, it is recommended to use adhesives corresponding to ETAG004 guide. The insulating panels must be staggered.
  - Secondary mechanical fixings are not required, but the reinforcement of insulating panels may be necessary depending on the door or window openings.
  - Any additional mechanical fixing shall be anchored on the metal structure through the board.
- Recommendations for AquaBoard finishing coats\*:
- Baunit Uniprimer/Ceresit CT16 primer or similar
  - Baunit Klebespachtel/Ceresit CT85 render or similar
  - Baunit Granotop/Ceresit CT60, decorative plastering or similar.

## AQUABOARD TECHNICAL DATA SHEET

AquaBoard board guarantees an exceptional level of technical performance to meet the most demanding technical and commercial challenges faced by the construction industry at the moment. The excellent technical characteristics of the board are illustrated in the following table.

	Description	Performance
General information	Density according to EN 520	860 kg/m <sup>3</sup>
	Weight	10.8 kg/m <sup>2</sup>
	Thickness	12.5 mm
	Width	1200 mm
	Length	2600 mm
	Edge type	conical (BA)
	Packaging	40 boards/pallet
	SAP code	105084
Static resistance	Longitudinal flexural strength as per EN 520 and EN 310	7 N/mm <sup>2</sup>
	Transverse flexural strength as per EN 520 and EN 310	3 N/mm <sup>2</sup>
	Longitudinal modulus of elasticity as per EN 789	3220 MPa
	Transverse modulus of elasticity as per EN 789	2950 MPa
	Impact resistance (at 20°C / 65% RH) as per EN 1128	13.4 mm/mm
	Compression strength	10 MPa
Fire resistance	Fire reaction class as per EN 13501-1	A2-s1,d0
Thermal	Thermal conductivity as per EN 12664	0.25 W/mK
	Thermal resistance	0.06 m <sup>2</sup> K/W
Permeability	Vapor permeability as per EN ISO 12572	0.69 MNs/g
Resistance to humidity	Vapor resistance factor $\mu$ as per EN ISO 12572	11
	Water absorption (2 hours of immersion) as per EN 520	< 3%
	Surface water absorption (2 hours Cobb test) as per EN 520	< 100 g/m <sup>2</sup>
	Dimensional variation (20°C/30°C-65%RH) in the longitudinal direction as per EN 318	0.10 mm/m
	Dimensional variation (20°C/65%-90%RH) in the longitudinal direction as per EN 318	0.15 mm/m
	Dimensional variation (20°C/30°C-65%RH) in the transversal direction as per EN 318	0.13 mm/m
	Dimensional variation (20°C/65%-90%RH) in the transversal direction as per EN 318	0.11 mm/m
	Water absorption class	H1
Resistance to mold	Mold and fungi resistance as per ASTM D 3273	10/10
Wear resistance	Resistance reduction in the longitudinal direction as per EN 12967	0.98
	Resistance reduction in the transversal direction as per EN 12967	0.91
	Freezing test -20°C	No modifications or cracks



## SYSTEM COMPONENTS

System components:		SAP code	Packaging	
AquaBoard board 12.5x1200x2600		105084	40 boards/pallet	
Self-tapping screw WAB500 H AF 212 x 41		4043056	500pcs./box	
Self-drilling screw WAB500 H 221 x 25		4043058	1000pcs./box	
Profile NIDAmetal Class C5 UD 28, (0.6 mm thickness; L=4000mm)		4044802	16pcs./bundle 288pcs./pallet	
Profile NIDAmetal Class C5 CD 60, (0.6 mm thickness; L=4000mm)		4044048	12pcs./bundle 180pcs./pallet	
Profile NIDAmetal Class C5 CW (0.6 mm thickness; L=4000mm)		N/A	CW50	8pcs./ bundle 128pcs./pallet
			CW75	8pcs./ bundle 96pcs./pallet
			CW100	8pcs./ bundle 80pcs./pallet
Profile NIDAmetal Class C5 UW (0.6 mm thickness; L=4000mm)		N/A	UW50	8pcs./ bundle 160pcs./pallet
			UW75	8pcs./ bundle 120pcs./pallet
			UW100	8pcs./ bundle 80pcs./pallet
Fiberglass felt tape (for indoor use)		4042666	25 m/roll	
Readymix PregyWab paste (for indoor use)		91732	25 kg/bucket	
Mono-adhesive sealing tape		4042661	30 mm	30m/roll
		4042662	45 mm	
		4042664	70 mm	
		4042665	95 mm	

## SYSTEM COMPONENTS

System components:	SAP code	Size		
Profiles NIDA metal UA(2mm) 	4042751	3000	CW50	50pcs. /package
	4042753	4000		
	4042754	3000	CW75	
	4042756	4000		
	4042747	3000		
		4000	CW100	
Cross connection bracket CD60 Class C5 	4042750			
	4044803			100pcs. /box
Section connector Class C5 	4044804			100pcs. /box
NONIUS hanger upper part 	4044807 (39cm)			50pcs. /box
NONIUS hanger bottom part for CD60-135mm Class C5 	4044806			100pcs. /box
NONIUS clips - self-adhesive Class C5 	4044808			100pcs./box
Bracket Class C5 	4044805			100pcs./box

### NOTE:

The information provided in the table is indicative and may be subject to further change.

For additional details you can contact us by phone: +4 031 224 01 00 or by e-mail: [siniat@siniat.com](mailto:siniat@siniat.com)

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