

USER MANUAL



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MarmoSole WATERPROOF BOARDS

This document has been prepared for the needs of users and is a collection of information for the correct selection, storage and installation of the product.

The guide applies to MarmoSole waterproof wall panels belonging to

the latest generation of SPC (Stone Plastic Composite) wallcoverings, for indoor domestic or commercial use. The **MarmoSole** boards core, made of over 70% natural marble, is finished with a decorative layer covered with highquality UV varnishes. Thanks to the technologies used, the product has very high performance and quality parameters, which are presented in these instructions for use.

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Water resistance [ISO 24336] - the product is suitable for indoor use in dry and humid conditions, such as bathroom, laundry room, kitchen or vestibule.

According to the definition, waterproof is the term for a material that is fully water-resistant (water-resistant, seepage-resistant). MarmoSole tiles manufactured in the SPC - Stone Plastic Composite technology are fully waterproof, therefore they can be successfully used in the kitchen, bathroom or laundry room.

Dimensional stability [ISO 23999] - the product does not change its dimensions under the influence of temperature and humidity changes, so it can be used in sunny and shaded places as well as in dry and humid places.

By definition, dimensional stability is the ability to retain its original dimensions when exposed to heat under certain conditions. MarmoSole tiles guarantee a dimensional stability of 0.25% in the length and 0.25% in the width (according to ISO 23999 - Flexible floor coverings - Determination of dimensional stability and curl after exposure to heat). The tests were carried out for the maximum temperature value of + 80°C.

Confirmation: EPH Certification Body - Test Certificate No. ST-19-06-11-02.

Fire resistance [EN 13501-1] - the panels meet the requirements of class C-s2, do, so they are flame-retardant and emit moderate smoke.

European requirements apply the Euro class system, dividing building materials in terms of reaction to fire into classes: AI, A2, B, C, D, E, F, along with additional criteria, consideringsmoke emission. On this basis, the risk of flashover, i.e. fire spreading explosively, can be assessed. The obtained class C defines the product as flame-retardant, symbol **s2** - with average smoke emission, and **do** - no flaming droplets. The classification was carried out in accordance with EN 13501-1 Fire classification of construction products and building elements

- Part I: Classification based on reaction to fire tests, and tests in accordance with EN 13823 - Reaction to fire tests - Part I: Determination of fire performance by radiant plate and EN ISO 11925-2 Reaction to fire tests - Ignitability of products exposed to direct flame

<u>Confirmation</u>: Certification Body of Sychta Laboratorium - Test Certificate No. SL / Z-472 /EN13501 / 717/2020.



Light fastness [ISO 105-B02: 2014] - due to its parameters, the product can be used in highlysunny areas. The test is performed by controlled exposure to sunlight or artificial light generated by a xenon lamp

Resistance is assessed on two scales:

- SkGrayscale with a range of 1-5, where I is the weakest and 5 is the highest fastness to light. This is due to the difference in shade between the irradiated product and the untested product. In the normative classification, the requirement is to meet the condition> 4.
- SBlue wool scale: lightfastness is awarded between 1-8. 1 very poor, and 8 excellent light fastness. Class 6 defines very good resistance to light, up to 100 years of normal use.

Confirmation: EPH Certification Body - Test Certificate No. ST-19-06-11-04.

Stain resistance [EN 438-2: 2019] - the top layer of MarmoSole floors meets the stain resistance requirements, incl. coffee, tea, alcoholic beverages or juices, cleaning agents used inkitchen, laundry, and care products used in the bathroom.

The test confirms the resistance to permanent staining. The samples are treated with many substances causing stains, to which the panels may be exposed in everyday use. Duration and contact conditions are specified for each substance. At the end of the specified exposure time, the substances are removed and the samples are evaluated for permanent traces on the surface. Forfood such as coffee, tea or milk, the test lasts 16 hours. For other substances, such as alcoholic beverages, hand cream, and chemical products such as acetic acid (30%), bleach, hair dyes, etc., an exposure time of 10 minutes is provided. Tests were performed in accordance with EN 438-2 High Pressure Decorative Laminates (HPL) - Thermosetting Resin Plates (commonly referred to as laminates) - Part 2: Determination of properties, obtaining the highest grade 5 (on a scale of 1-5), indicating no visible discoloration at the end of the test.

Confirmation: EPH Certification Body - Test Certificate No. ST-19-06-11-02.



TECHNICAL DATASHEET

DIMENSIONS		
thickne	ess 4 mm · tmax − tr	min = 0,50 mm</td
dimensions	length 2800 mm	
	width 1230 mm	
SURFACE	,	
Reaction to fire	EN 13501-1	C-s2,do
PU adhesion / Cross cut test [0-5]	EN ISO 2409	0
Scratch resistance - value	EN 438-2	5.5 N
Scratch resistance - class		4
Micro scratch resistance, procedure A	EN 16094	A2
Abrasion resistance	EN 15468	4000 Cycles
Chemical resistance gr.1+2	EN 438-2	grade 5
Chemical resistance gr.3		grade 5
Large ball - impact test	EN 438-2	1800 mm
Hamberger test	Internal	40 N
MECHANICAL PROPERTI	IES	
Dimensional stability		= 0,25 %</td
- length Dimensional stability - width	ISO 23999 -	= 0,25 %</td
Residual indentation	ISO 24343-1	0,00 mm
Thermal resistance	EN 12667	$0.008 (m^2 \cdot K)/W$
Humidity exposure	Internal	No visual change or failure
AGEING		
Cl.	т. 1	OV
Changing temperatures test Light fastness (blue wool scale	Internal EN 13329	OK ≥ 4
6)	,,,,,	
EMISSION		
TUV PROFICERT LEVEL	Internal	Premium
AgBB		
A+		
Belgian VOC regulation		
MI1 Finnish classification		
Austrian Eco Label uz 56		

The data sheet is updated regularly to meet new technological standards.

This version replaces all previous versions as well as those which are undated. This version takes effect upon creation. Version 01/20



MarmoSole TILES COLLECTION

COLLECTION	FORMAT	PRODUCT TYPES
STONE	2800 x 1230 x 4mm	13
FOREST	2800 x 1230 x 4mm	4
METAL	2800 x 1230 x 4mm	4
COLOUR	2800 x 1230 x 4mm	4

STONE

moore cement stormy quarry whistler grey italian cream



natural marble (3 designs)



exotic experience (3 designs)



classical marble (3 designs)







emperor silk

oriental ceramic

angel marble (3 designs)



basque marble (3 designs)



shark marble (3 designs)





leonardo marble (3 designs)



METAL





FOREST

wooden ship

classic oak

<u>x</u>



<u>django</u>

aged copper (3 designs)



fishbone oak



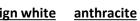




COLOR

indi shadow

<u>design white</u>



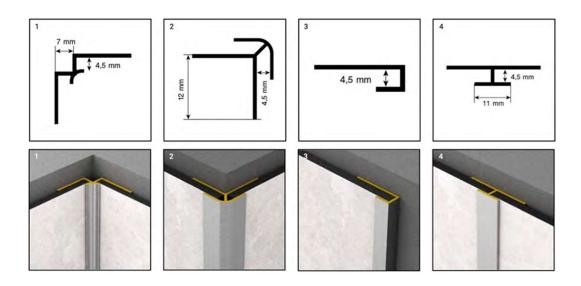
shady white



MarmoSole - RECOMMENDED ACCESSORIES

Aluminium profiles

Anodized aluminium profiles for an aesthetic finish and durable protection of MarmoSole tiles. They have increased corrosion resistance, so they will also work well in wet rooms. Available in four variants: internal corner [1], external corner [2], end profile C [3], connecting profile T [4]. Available in length of 2,800 mm, in four basic colours: inox, platinum, black, white.



Adhesive and sealant

Single-component, low-modulus, permanently elastic and water-resistant PU assembly adhesive and sealant with a neutral curing system. Ready to use, has very good adhesion to most materials and substrates used in construction. Available in 290ml cartridges and 600ml foil packs.





Water-resistant sealing

Insulation and sealing tape to be used with MarmoSole panels. This gives a quick and smooth sealing possible in wet areas, especially in places where there is direct contact with water (showers). The tape is 120 mm wide and available in rolls of 10 or 50m. The CL51 mass is applied in 2 thin layers with brush and is available in 10 kg buckets. If necessary, we have ready-made handy inside and outside corner solutions.



Double-sided foam tape

The double-sided tape allows you to immediately hold the installed **MarmoSole** tiles boards to the surface until the adhesive binds, and to maintain the appropriate thickness of the adhesive path after pressing the boards to the surface.



Cleaning detergent

MarmoSole tiles cleaning and maintenance agent that removes dirt and limescale. It does not damage the surface, does not leave a grey film and greasy residue. Note: do not use any corrosive agents for cleaning, which can damage the surface of the boards.





MarmoSole TILES INSTALLATION

MarmoSole boards are intended for installation inside buildings. The product is intended for finishing wall surfaces, both in dry and wet rooms. Correct assembly and maintenance will ensure long-term useof MarmoSole tiles.

The manufacturer is not liable for any damages related to incorrect installation or poor assembly conditions.

WASTE STORAGE	Order 10% more than the mounting surface to account for cuts andscrap.
ACCLIMATION	48H
REQUIRED INSTALLATION CONDITIONS	15°C - 30°C [59°F - 86°F]
DEFINITION OF WATERPROOF	The structural integrity of MarmoSole will not be damaged when in contact with moisture / water.

farmoSole INSTALLATION OF TILES IN DRY AREAS

1. ACLIMATIZATION

Prior to installation, the MarmoSole tiles must be acclimated to room temperature at the installation site. The room where the hob is to be installed must be between 15 ° C - 30 ° C [59 ° F - 86 ° F].

MarmoSole tiles should be stored horizontally, on an even surface, under controlled environmental conditions.





2. INSTALLATION TOOLS / RECOMMENDED ACCESORIES

- Circular saw with guide bar
- Cutting disc discs with a sufficiently large number of teeth are recommended, e.g. Ø 165mm (56 teeth) and Ø350mm (108 teeth)
- Universal knife
- Ruler, tape measure, pencil
- Distance crosses, clips for levelling tiles
- Glue float, cartridge squeezer
- Broom or vacuum cleaner
- Optional: table saw, hole saw, jigsaw, assembly gripper







3. SUBSTRATE PREPARATION

3.1 SUBSTRATE REQUIREMENTS



WOOD (PLYWOOD, OSB)

- Wooden substrates must be firmly attached to the base structure; MarmoSole tiles should not be mounted to an unstable, poorly attached base
- The substrate must be load-bearing, dry, clean and degreased
- The substrate must be stable, free from cracks, bends and unevenness



CONCRETE, BRICK

•All loose and unstable elements must be removed from the base

•Any convexities of the substrate must be removed by grinding; the cavities can be filled with a suitable putty and then primed

•The substrate must be hardened and seasoned according to with recommendations



CERAMIC TILES, TERAZZO, STONE

•The existing substrate must be firmly attached to the substructure; do not mount MarmoSole tiles to unstable, badly attached tiles

•The surface of the tiles must be thoroughly cleaned and degreased before applying theadhesive

3.2. GROUND LEVELING

The substrate must be levelled within max. 2mm by 1m in length [0.08 "by 40"]. No unevenness, deflection and faults.





3.3 CLEANING THE SUBSTRATE

Clean the wall of dirt and dust and degrease it if you install it on a non-absorbent surface. The surface must be even

and stable.

3.4. SURFACE DIMENSIONS

Before starting the installation, measure the lengths of the walls on which the MarmoSole tiles willbe installed. A carefully planned layout of the boards prevents very narrow elements and allowskeeping the proportions.



4. FORMATING MarmoSole TILES

Format the boards with a circular saw with a guide. For cutting, we recommend using discs with a sufficiently large number of teeth, e.g. $Ø_{165}$ mm (56 teeth) and $Ø_{350}$ mm (108 teeth). Remember to cut the board with the decorative surface facing up. If there are electrical sockets or other installationcomponents on the wall surface, cut holes in the board before its installation. Depending on the shape, theholes can be cut with a hole saw or a jigsaw.





5. CLEANING OF BOARD SURFACE

The cut boards must be cleaned. The bottom surface of the boards, on which the glue is to be applied, must be free of dust, dry and degreased to ensure proper adhesion of the glue.



6. APPLICATION OF ADHESIVE FROM TUBE / CARTRIDGE / FOIL PACKAGE

A. BONDING THE MOUNTING TAPES

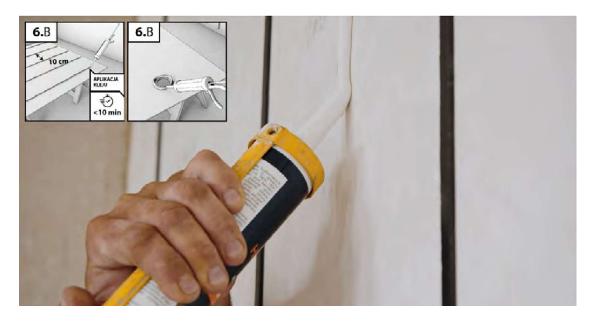
Glue the double-sided mounting tape vertically to the surface of the substrate. It will ensure even distribution of the glue and facilitate installation and hold the boards until it sets. The tape should be applied at even, approx. 20-45 cm intervals (depending on the wall surface).





B. APPLICATION OF ADHESIVE

Apply the mounting adhesive to the bottom side of the panel or the wall surface. If you are using glue in a cartridge or foil-packet, apply it in vertical stripes at 10 cm intervals. Do not apply the glue in spots. Apply glue under the outline of each cut-out hole. The glued surfaces should be joined within 10 minutes of application of the adhesive



7. ADHESIVE APPLICATION WITH A TROWEL

Apply the mounting adhesive to the bottom side of the panel or the wall surface. Apply the glue to the entire surface of the glued board. Do not apply the glue in spots. The glue is applied with a trowel (C1) 4x4x4 mm. The glued surfaces should be joined within 40 minutes from the application of the adhesive

8. ADHERING OF PANELS TO THE SURFACE

After applying the glue, put the board against the wall and press it down. For optimal strength, press the elements to be glued so that there is a ventilation gap of 2-3 mm between them. This distance will ensure that the adhesive joint is able to permanently transmit the deformation.







9. BOARD LEVELING

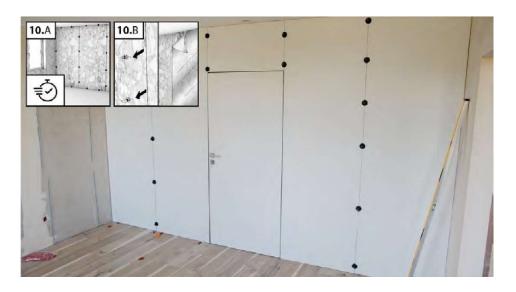
After gluing the first board, place the levelling clips - they will allow for the expansion of the expansion gap between the boards (2-3mm) and will facilitate the levelling of the surface. After sticking the next board, level the adjacent surfaces. Do not remove the levelling clips until the adhesive has set. Continue with the assembly of the next boards.



10. REMOVAL OF THE CLIPS AND PROTECTIVE FILM

The curing speed of the adhesive depends on the ambient temperature and air humidity (24-48 h). As the temperature and humidity level increase, the polymerization process is faster. Provide effective ventilation until fully cured.

After completing the work and setting the glue, remove the levelling clips and then remove the protective film from the surface of the boards.





11. FILLING OUT THE JOINT

Expansion joints should be filled with a flexible joint (epoxy, silicone) or with dedicated finishing profiles (see page 7). Before applying the grout, protect the surfaces along the expansion joint with painter's tape - this will facilitate the grouting process and protect the surfaces from dirt.

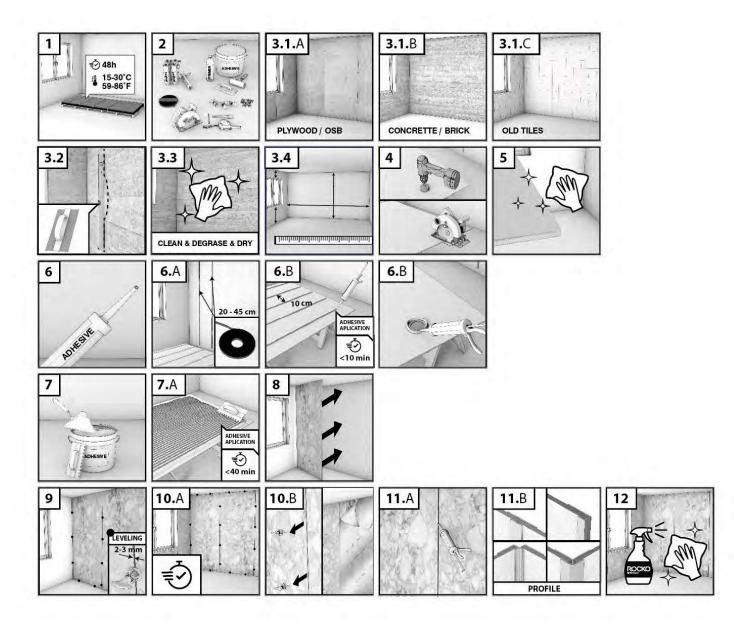
The profiles should be installed during the assembly of the panels. For mounting the profiles, use thesame glue that you use for gluing the boards. During installation, fill the internal surfaces of the profiles with silicone to seal the profile-board connection.



12. CLEANING THE PANELS AFTER ASSEMBLY

The MarmoSole surface can be used immediately after installation. Remove dust and dirt with MarmoSole tiles cleaning fluid. Wipe the boards with a damp, not too fluffy cloth (preferably microfiber). Do not use wire or nylon sponges which can damage the surface

<u>Steps survey for application of MarmoSole in dry rooms</u>:



MarmoSole INSTALLATION OF TILES IN HUMID ROOMS

1. ACCLIMATIZATION

Before installation, the MarmoSole tiles must be acclimated to room temperature at the installation site. The room where the hob is to be installed must be between 15 ° C - 30 ° C [59 ° F - 86 ° F]

MarmoSole tiles should be stored horizontally, on an even surface, under controlled environmental conditions.



2. INSTALLATION TOOLS / RECOMMENDED ACCESORIES

- Circular saw with guide bar
- Cutting disc discs with a sufficiently large number of teeth are recommended, e.g. Ø 165mm (56teeth) and Ø350mm (108 teeth)
- Universal knife
- Ruler, tape measure, pencil
- Distance crosses, clips for levelling tiles
- Glue float, cartridge squeezer
- Broom or vacuum cleaner
- Optional: table saw, hole saw, jigsaw, assembly gripper







3. SUBSTRATE PREPARATION

3.1 SUBSTRATE REQUIREMENTS



WOOD (PLYWOOD, OSB)

•Wooden substrates must be firmly attached to the base structure; MarmoSole tiles should not be mounted to unstable, poorly attached base

•The substrate must be load-bearing, dry, clean and degreased

•The substrate must be stable, free from cracks, bends and unevenness



CONCRETE, BRICK

•All loose and unstable elements must be removed from the base

•Any convexities of the substrate must be removed by grinding; the cavities can be filled with a suitable putty and then primed

•The substrate must be hardened and seasoned according to with recommendations



CERAMIC TILES, TERAZZO, STONE

•The existing substrate must be firmly attached to the substructure; do not mount **MarmoSole** tiles to unstable, badly attached tiles

•The surface of the tiles must be thoroughly cleaned and degreased before applying theglue.

3.2. GROUND LEVELING

The substrate must be levelled within max. 2mm by 1m in length [0.08 "by 40"]. No unevenness, deflection, and faults.





3.3. IMPLEMENTATION OF WATERPROOFING

Waterproofing, also known as waterproofing, anti-moisture, and water-repellent insulation, protects the elements of rooms against the destructive effects of water.

The walls in the cabins should be insulated to a minimum height of 2.5 m, in the rest of the bathroom it is recommended to cover wet areas. In the case of some materials, such as wood-based panels, they should be completely covered with insulation, regardless of their place of application.

Waterproofing can be done with a liquid foil or a sealing mat.



WATERPROOFING WITH LIQUID FILM

Apply the liquid foil to the surface with a roller or brush. Two layers should be applied, the second application should be made after approx. Drying of the first layer. One layer dries about 3 hours at 23 ° C. The panels can be installed after the liquid foil is completely dry, i.e. after approx. 24 hours.



WATERPROOFING WITH SEALING MAT

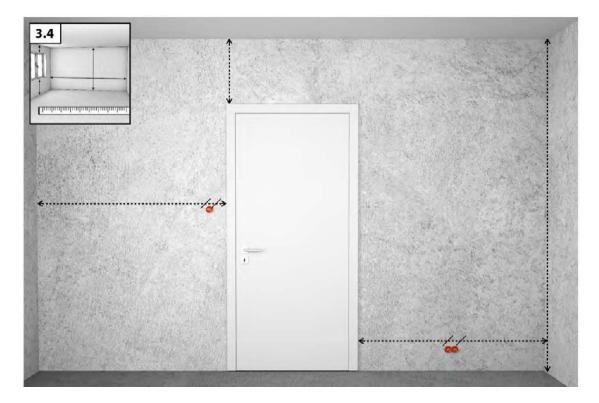
- We start the work with applying a highly flexible C2 class adhesive to the substrate
- apply a sealing mat on the freshly applied layer of mortar, then press and smooth from the centre of the mat to its edge so that there are no air voids under the mat. Sealing matstrips should overlap 5 cm
- WARNING: the sealing mat must not be left as the final layer for more than 2 months
- corners and expansion joints should be sealed with a sealing tape, after shaping it slightly. Pasting should be performed with the use of a polymer glue-sealant
- Seal internal and external corners by gluing in ready internal and external corner fittings
- after the adhesive materials have cured and cured in accordance with the manufacturer's recommendations, you can proceed to the next stages of MarmoSole panels assembly





3.4. SURFACE DIMENSIONS

Before starting the installation, measure the lengths of the walls on which the MarmoSole tiles willbe installed. A carefully planned layout of the boards prevents very narrow elements and allows keeping the proportions.



4. FORMATING MarmoSole TILES

Format the boards with a circular saw with a guide. For cutting, we recommend using discs with a sufficiently large number of teeth, e.g. Ø165 mm (56 teeth) and Ø350 mm (108 teeth). Remember to cut the board with the decorative surface facing up. If there are electrical sockets or other installationcomponents on the wall surface, cut holes in the board before its installation. Depending on the shape, theholes can be cut with a hole saw or a jigsaw.





5. CLEANING OF BOARD SURFACE

The cut boards must be cleaned. The bottom surface of the boards, on which the glue is to be applied, must be free of dust, dry and degreased to ensure proper adhesion of the glue.



6. APPLICATION OF ADHESIVE FROM TUBE / CARTRIDGE / FOIL PACKAGE

A. BONDING THE MOUNTING TAPES

Glue the double-sided mounting tape vertically to the surface of the substrate. It will ensure even distribution of the glue and facilitate installation and hold the boards until it sets. The tape should be applied at even, approx. 20-45 cm intervals (depending on the wall surface).





B. APPLICATION OF ADHESIVE

Apply the mounting adhesive to the bottom side of the panel or the wall surface. If you are using glue in a cartridge or foil-packet, apply it in vertical stripes at 10 cm intervals. Do not apply the glue in spots. Apply glue under the outline of each cut-out hole. The glued surfaces should be joined within 10 minutes of application of the adhesive



7. ADHESIVE APPLICATION WITH A TROWEL

Apply the mounting adhesive to the bottom side of the panel or the wall surface. Apply the glue to the entire surface of the glued board. Do not apply the glue in spots. The glue is applied with a trowel (CI) 4x4x4 mm.

The glued surfaces should be joined within 40 minutes from the application of the adhesive

8. ADHERING OF PANELS TO THE SURFACE

After applying the glue, put the board against the wall and press it down. For optimal strength, press the elements to be glued so that there is a ventilation gap of 2-3 mm between them. This distance will ensure that the adhesive joint is able to permanently transmit the deformation.



9. BOARD LEVELING

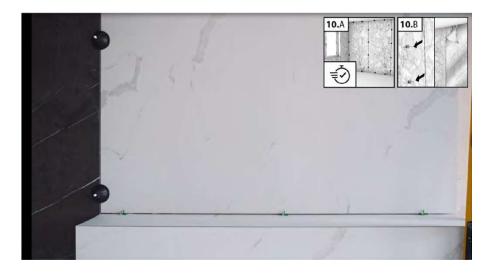
After gluing the first board, place the levelling clips - they will allow for the expansion of the expansion gap between the boards (2-3mm) and will facilitate the levelling of the surface. After sticking the next board, level the adjacent surfaces. Do not remove the levelling clips until the adhesive has set. Continue with the assembly of the next boards.



10. REMOVAL OF THE CLIPS AND PROTECTIVE FILM

The curing speed of the adhesive depends on the ambient temperature and air humidity (24-48 h). As the temperature and humidity level increase, the polymerization process is faster. Provide effective ventilation until fully cured.

After completing the work and setting the glue, remove the levelling clips and then remove the protective film from the surface of the boards.





11. FILLING OUT THE DILATATION

Expansion joints should be filled with a flexible dilatation (epoxy, silicone) or with dedicated finishing profiles (see page 7). Before applying the grout, protect the surfaces along the expansion joint with painter's tape - this will facilitate the grouting process and protect the surfaces from dirt.

The profiles should be installed during the assembly of the panels. For mounting the profiles, use thesame glue that you use for gluing the boards. During installation, fill the internal surfaces of the profiles with silicone to seal the profile-board connection.



12. CLEANING THE PANELS AFTER ASSEMBLY

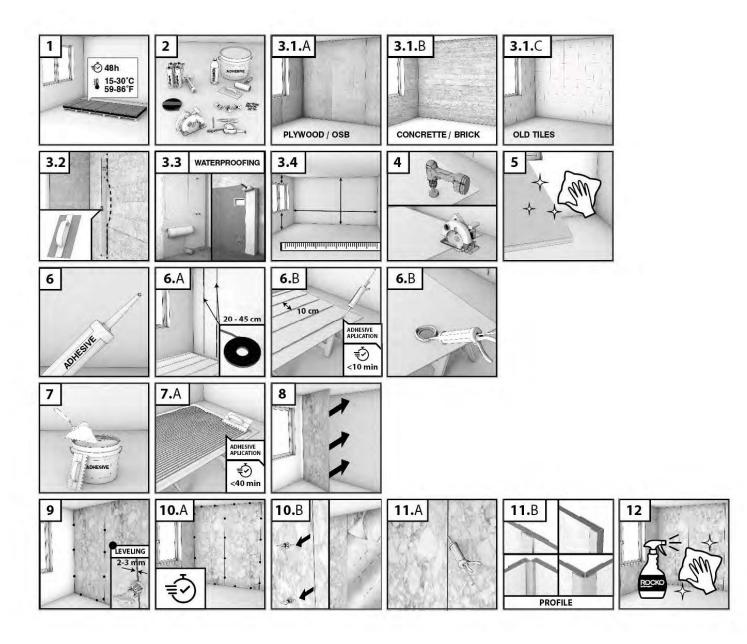
The MarmoSole tiles surface can be used immediately after installation. Remove dust and dirt with MarmoSole cleaning fluid. Wipe the boards with a damp, not too fluffy cloth (preferably microfiber).

Warning: Do not use wire or nylon sponges which may damage the surface.





Steps survey for application of MarmoSole in wet rooms:





MarmoSole USE AND CARE

The MarmoSole tiles surface can be used immediately after installation. Remove dust and dirt with MarmoSole cleaning fluid. Wipe the boards with a damp, not too fluffy cloth (preferably microfiber). Do not use wire or nylon sponges which can damage the surface.

Use only MarmoSole care and cleaning agents, as other aggressive cleaning agents can damage the surface. Do not use soap-based detergents, waxes, or rinse aid as they can stick to the surface and leave unsightly streaks difficult to remove. Do not use abrasive cleaners or bleaches as they may scratch or dull the surface of the boards.



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