CERARL for Shower Rooms

Please read this installation manual before conducting installation.

*If the structural frame (of the building) is sensitive to outside air, condensation marks may occur at the adhesive locations. Dew condensation marks are removed through ventilation.

When applying the product on existing groundwork

Tile surfaces (only in cases when there is no floating or peeling present and when the unevenness is less than 5 mm [rough estimate]) (Checking method: Refer to B below and C to the right.

When applying the product on existing groundwork

***The installation method is the same for brand new bathrooms.**

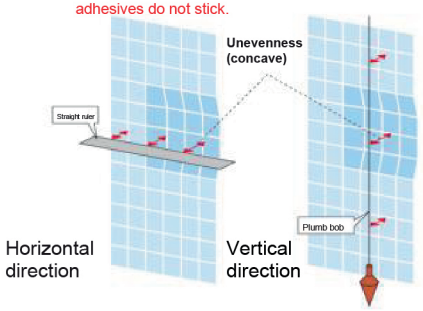
- Special hardwood plywood (t 12 mm or more) [Not possible with softwood plywood]
- Calcium silicate plates (t 8 mm or more; specific gravity of 1.0)
- Mortar Surface (Water content of 4.5% or less)

*Apply the dedicated primer to the entire surface.

Unsuitable groundwork (some examples)

- ALC ● Concrete blocks ● RC surfaces ● Unit baths
- Water-resistant gypsum boards

*Installation over sheet waterproofing and liquid-applied membrane waterproofing. The product cannot be installed on groundwork characterized by weak surface/structural strength and weak water resistance. It also cannot be applied to groundwork wherein adhesives do not stick.



A Check the tile surfaces
Clean the tile surfaces thoroughly.

B Unevenness in the tile surfaces
As shown below, measure the horizontal and vertical unevenness of the wall surface using a straight ruler, a downward swing, a laser level, or another such tool.
*The maximum unevenness allowed in installation with the current groundwork is less than 5 mm (rough estimation). Prepare groundwork if the thickness exceeds 5 mm.

How to check and handle the state of groundwork

C Floating of surface tiles

Old tiled wall surfaces present a high risk of floating and peeling. As such, check for the floating of tiles by conducting a percussion test (which involves hitting the tile surface with a hammer to make judgements concerning abnormal sounds based on the sounds produced) as shown on the left. The following methods are recommended in repairing floating or peeled off tiles.

Filling of epoxy resin mortar

For relatively minor tile peeling, fill the peeling area with epoxy resin mortar that is used for filling and repairing.

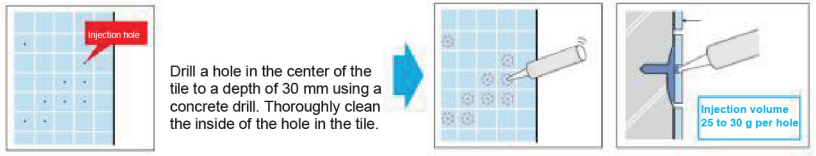
Filling mortar or pouring mortar onto the whole surface

A wide range of applications are possible, from relatively minor tile peeling to the repair of hanging tiles. Please note that poor adhesion between the building's structural frame (concrete/block) and the mortar may result in peeling.

Adhesive strength: 1.0 N/mm² or more

Resin injection fixation by means of pinning

As shown in the figure below, inject epoxy resin or another such agent into the floating tile to prevent the floating part from peeling and falling off.



Drill a hole in the center of the tile to a depth of 30 mm using a concrete drill. Thoroughly clean the inside of the hole in the tile.

Fill the hole with Epoxy Resin using a grease gun, starting from the deepest part of the hole. Fill until it reaches the same level as the tile surface. After the resin has hardened, perform a percussion test again to check the state of filling.

Groundwork preparation

To prepare the groundwork, conduct adjustments of any unevenness using mortar of good adhesive strength on tiles and can be thinly applied. Or, use a calcium silicate plate (specific gravity 1.0 and a thickness of 6 mm or more) or lauan plywood (of a thickness of 12 mm or more).

* Mortar: Water content of 4.5% or less / Adhesive strength of 1.0 N/mm² / Level trowel finish
* Calcium silicate board and special hardwood plywood: Be sure to secure the screws to the building.

*Apply primer beforehand to the entire surface of the substrate material portion prepared with cast mortar, calcium silicate board and lauan plywood.

Safety measures

Perform the following when using a solvent-based primer or another such agent.
(1) Exercise sufficient caution with respect to ventilation.
(2) Exercise sufficient caution with respect to fire and ventilation.
(3) Avoid contact with the skin. If necessary, also wear a gas mask designed for organic gas (or an air supply mask), protective gloves, protective glasses, an apron, and so on.

Processing tools

Please use the following tools for processing and ensure that a new blade is used to avoid chipping.

■Cutting Dustproof circular saw (chip saw, diamond saw)

Using cutting tools during installation
Blade specifications consist of the **"outer diameter"**, the **"blade thickness"** and the **"number of blades"**. Ensure that the **"outer diameter"** and the **"blade thickness"** are suitable for your handy saw. Also ensure that the tool used has the highest **"number of blades"** as possible.

CERARL	
Outer diameter	Number of blades
100φ	60P
125φ	80P
165φ	72P

*Use machining tools that are equipped with dust collectors.

■Drilling holes
Drill (when the diameter is 12 φ or less), a flexible drill (when the diameter is over 12 φ), a hole saw, a jig saw.

■Finishing Sandpaper, file

*If the structural frame (of the building) is sensitive to outside air, condensation marks may occur at the adhesive locations. Dew condensation marks are removed through ventilation.

Installation procedure

Curing (2 days)

1 Material checks → 2 Primer treatment → 3 Allocation → 4 Cutting and processing → 5 Adjustment of unevenness by applying double tacking tape → 6 Affixing of waterproof tape → 7 Application of dedicated adhesive → 8 Affixing → 9 Sealing → 10 Removing curing film

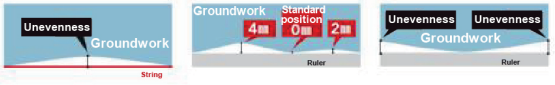
The following is the installation procedure for tile surfaces and mortar surfaces (less than 5 mm of unevenness). Refer to the section of the installation manual titled "For Shower room Walls and Ceilings" for details. Prepare new groundwork using calcium silicate board or special hardwood plywood. Refer to the section of the installation manual titled "Smooth Groundwork for Shower room Walls and Ceilings" if the unevenness is less than 1 mm.

1 Groundwork treatment

- Clean the installation surface. First wash it using a cleaner and then wash it with water. After that, wipe it down with a dry cloth.
- Measure the unevenness of the tile surface by referring to the measurement method provided on the left and in the figure shown below. Measure vertically, horizontally and diagonally.

▪When the groundwork is concave
Stretch out the string and measure the gaps.

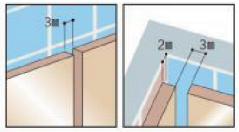
▪When the groundwork is convex
Use a horizontal ruler to measure the gaps.



2 Primer treatment

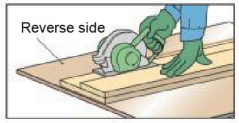
- *Apply primer beforehand to the entire surface of the substrate material portion prepared with cast mortar, plywood, and calcium silicate board.

3 Allocation

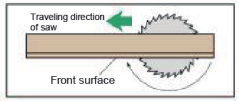


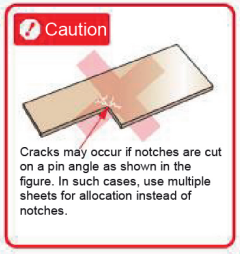
- When using a calcium silicate plate for the groundwork, make sure that the joints of the substrate material and the joints of the finishing material do not overlap.
- **It is not possible to install the panels without leaving gaps between them.** Ensure at least **3** mm of space for joints.
- Secure some clearance also when performing installation using joiners.

4 Cutting and processing

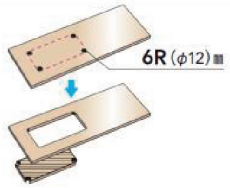


- Using the cutting board, make sure that the cutting tool goes in from the **front surface** and out from the reverse surface. Protective film is attached to the surface.
- Be sure to use a blade with a diameter of 12 φ or more and make holes and cutouts going from the front surface to the corner.



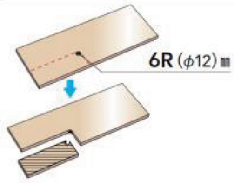


Drilling



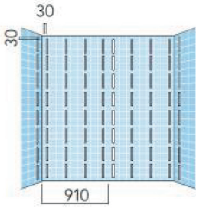
❶ Drill holes in the four corners.
❷ Cut with a saw.
❸ Chamfer the cut face.

Notches



❶ Drill holes in the corners.
❷ Cut with a saw.
❸ Chamfer the cut face.

5 Adjustment of unevenness by applying the double tacking tape

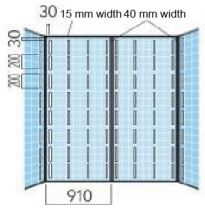


Unit (mm)

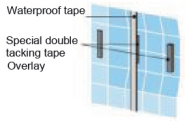
- Ensure **30 mm** of space to apply the adhesive to the end of the attached tile surfaces and then attach the double tacking tape.
- Apply the double tacking tape so each strip is spaced equally in the width direction.
- Adjust unevenness by layering the double tacking tape **1** mm-thick and **3** mm-thick tapes.

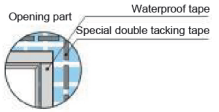
Example: 4mm unevenness: 3mm-thick tape + 1mm-thick tape

6 Affixing of waterproof tape



- The biggest difference between the methods of installation used for shower rooms and those used for general construction method is the combined usage of waterproof tape. Waterproof tape provides protection against water entering from the surface as a result of broken joints.
- The uneven (concave) part is adjusted with double tacking tape. Surround any **openings** (such as pipes) with waterproof tape.

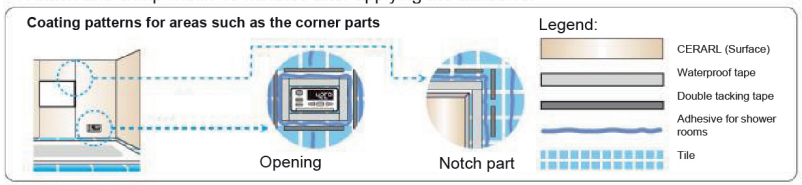




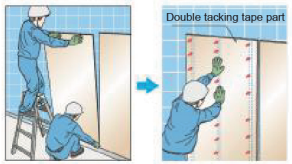
7 Application of dedicated adhesive

The application pattern shown in the figure is a representation of the construction method deployed for shower rooms. This product is not designed to be installed anywhere other than shower rooms.

- Apply the adhesive so that the height ends up being 3 mm or more than the thickness of the double tacking tape.
- Be sure to apply adhesive to the outer circumference of the product. The end part may float if it is not applied to the outer circumference or if the amount applied is small.
- Be sure to apply adhesive to the area around the notch, where appliances are to be attached, and so on. Cracks will occur more easily if the application amount is small.
- The standard application amount is 4 units of the special adhesive (AICA Eco-Eco Bond SE-8) for a 3x8-size attached tile surface area. Peeling may result if the amount applied is small. (In cases where no unevenness exists.)
- Attach and crimp within 10 minutes after applying the adhesive.



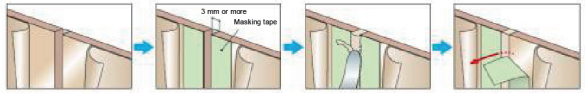
8 Affixing



- Take care to ensure that **floating** does not occur in the center and then attach the finishing material.
- **Firmly press down the double tacking tape.**

* The adhesive part may become torn apart if pressed.
* When using an installation-use suction cup, exercise caution as the surface of the product may be subject to coloration due to the rubber component of the suction cup.

9 Sealing

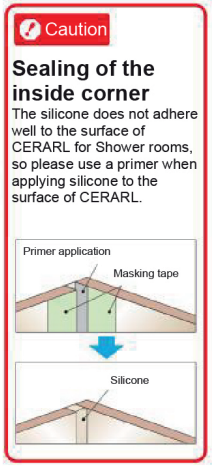


Remove the protective film on the surface, but only for portions where the masking tape is to be applied.

Attach some masking tape and inject the silicone firmly into the back.

Scrape off any excess silicone with a spatula or another such instrument.

Slowly peel the masking tape inward.



10 Removing curing film

- After curing for 2 days or more, remove the protective film from the surface.

Completion

[Precautions Concerning Installation]

- Put some fine sandpaper on a splint and perform light chamfering of the cut surface.
- In cases involving sealing gaps between panels, also perform light chamfering of surfaces which have not been cut.