# INSTALLATION AND MAINTENANCE GUIDE

## IMPORTANT

These instructions are a general guide for installing Quintessenza Ceramiche products.
Problems in a ceramic surface are hardly ever due to the ceramic product; they are usually due to a poor laying process, so please read and understand these instructions and check there is any problem related to defective tiles **before beginning to install our products**. We will not accept claims regarding installation costs on installed material.

## I. Receiving the tiles

Open all boxes and check tiles before laying them.
If you are installing field tiles and special pieces or decors tiles, make sure that the colour shades of all products are compatible, bearing in mind that there might be slight shade differences that will not affect the final result.

## II. Installation

### 1. Surface installation

This is the surface that you will apply the bonding material on.
The surface must be completely **clean** before starting the laying of the tiles.
Eliminate all remaining plaster, grease, wax, globs of mortar, organic substances and dust.
Any residue that is not eliminated will create weak bonding points that may generate future problems.
It is also necessary that the surface is perfectly **dry** (less than 3%), **vertical and flat**.
We also recommend you make sure there is no risk of rising damp in the laying surface.
The surface also has to have a good **cohesion**.
Finally, it is essential that the surface is stable, because surface shrinking, expansion or warping would be disastrous for the tiles.
Water-sensitive substrates (wood and chipboard, plaster and precast gypsum, etc.) may require a waterproofing primer.
If you are installing intermediate layers (insulation or waterproofing), check instructions for these products before starting tiling.

### 2. Selecting bonding materials

Check the table on page 164 to choose the best bonding material, according to the kind of surface you are tiling.
Anyway, it is always a good idea to ask to the manufacturer or distributor of the bonding material for the most suitable material to be used.

### 3. Tiling

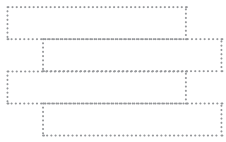
#### *3.1 Before you start*

Do not hurry, do things slowly and safely, and arrange all materials and tools before starting the job.
If this is the first time you have laid ceramic tiles, or you have limited experience, we recommend that you start tiling in a "hidden spot" (a part of the surface that will be covered by furniture, for example), as test area.
Basically, the tools you need are: meter, rule, level, carpenter's square, pails to prepare materials, notched trowel, rigid rubber plate, rubber hammer, rubber trowel, rigid sponges, cutter (manual or electric). And for your safety, at least: gloves, security glasses and steel toe boots.
All products and tools must be used according to the manufacturer's instructions.
During installation, the best weather conditions are:

- Temperature between 5 and 30 ºC.
- Avoid rain or high humidity.
- Avoid risk of frost.
- Do not wet the surface until 48 hours after tiling.
- The temperature of the water used to prepare bonding materials is important, check the manufacturer's recommendations.

Do not use the thick-layer installation method; always install tiles following the thin-layer technique (3-5 mm thickness of bonding material layer).
In addition, for tiles that have a side of more than 30 cm long, it is highly recommended to use the double-bonding method (apply adhesive also to the back of the pieces), so the back of the tiles is completely covered by the bonding material.
Do not submerge the tiles in water before installation.
**The laying joints must be at least 2 mm wide.**
For locked layings of 25 cm-long tiles, displacement between tiles must be 1/3 maximum. Do not lay tiles with the joint the middle of their length.

**OK**



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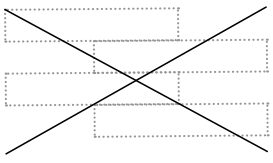

#### *3.2 General planning and inspection*

Usually actual measurements are quite different from dimensions shown in plans (sometimes even by several cm), so once the surface is completely clean check again all measurements, including gaps (windows, doors, etc.), and set the intermediate movement and expansion joints, if necessary.
These joints are essential in big surfaces greater than 8 m long (or 10 m2).
We also recommend the setting of perimeter joints in surfaces greater than 10 m2, specially for unstable surfaces (plasterboards, wood, metal, etc.). Anyway, floor tiles must be at least 5 mm away from the walls or any other element that might reduce settling movements.

#### *3.3 Adhesive preparation*

Prepare the fixing material, always following the manufacturer's instructions, using an electric low speed mixer, until you get a **homogeneous and lump-free paste, without bubbles.**
The adhesive manufacturer will inform you about the quantity you will need per square meter.
Do not mix all the adhesive you will need at once; bear in mind that, once mixed, adhesives have a limited lifespan. Prepare only the quantity you can use during that lifespan.

A) CEMENT ADHESIVES (TYPE C)

- Always drop powder adhesive onto water (previously prepared in the mixing pail), and not water onto powder.
- If you notice hard lumps in the powder, do not use that sack of adhesive. It means that it was hydrated and might have lost its adhesive properties. For this same reason, do not keep adhesives for a long time once opened.
- Once the mix is done, **do not add more water, in any case and under any circumstances.**
- After mixing, wait for the resting time of the adhesive (set by manufacturer) before using it. After this time has passed, lightly stir the adhesive again.

B) REACTIVE RESINS (TYPE R)

- They usually consist of two separate ingredients. Mix them by pouring the lesser component (hardener) onto the large component (resin, previously prepared in the mixing pail).
- They usually do not require resting time

#### *3.4 Laying the tiles*

Apply the adhesive on the laying surface, using the straight side of the notched trowel, in a small area, for no more than 4 or 5 tiles, according to the open time of the adhesive (maximum time during which the adhesive can be used, from the moment it is applied).
Next, "comb" this adhesive, using the notched side of the trowel. The manufacturer of the adhesive must inform you about the most suitable kind of notched trowel to use. Usually a U6 (V6 for type D adhesives) is correct.
Comb the adhesive always creating straight lines, perpendicular to one side of the tiles.
This combing is important to get a uniform thickness of the adhesive layer, and to get a maximum contact of the back of the tiles with the adhesive.
If the back of the tiles is not completely covered by adhesive, this may cause problems in the future (tiles that fall off, grouting material that falls off, tiles that break when hit or drilled, etc.).
Now it is time to lay the tile. Make sure that you do it before the open time of the adhesive finishes (if not, the back of the tiles may not be completely covered by adhesive).
Do not trust the open time given by the manufacturer, because it might change depending on the real atmospheric conditions you are working on. Check it from time to time, pulling up the last tile you have just laid to see if its back is really 100% covered by the adhesive.
**Check every tile before laying it, to make sure it does not have any defect.**
The best way to lay tiles is the so-called **Tarver Method:**

- For wall installation apply adhesive also on the back of the tile, in the case of double-bonding, with the straight side of the notched trowel.
- Lay the tile more or less in its position, **leaving at least a 2 mm wide joint**. You can use tile cross spacers.

Once the tile is in its position, check that it is in the same plane than the others, with no low or high corners. If necessary, use a clean rigid rubber plate, and hit it with a rubber hammer.
Do any necessary correction of the position of the tiles during the adjust time of the adhesive.
Never force a tile if it is hard to move, the only thing you will get is a poor adhesion of the tile, so it will easily fall off in the future.
Clean the excess of adhesive that accumulates in the spaces of the joints before it hardens, and also the adhesive on the glazed side of the tiles.
It is also important to remove the cross spacers before the bonding material hardens.

### *3.5 Metallic Colors*

The special metallic glaze of these tiles is particularly acid-sensitive therefore we recommend before grouting to apply a sealer on the tiles (e.g. Fila MP90) and to wait 1 or 2 days for setting up the possible "crackle effect".
We do NOT recommend the installation of these tiles in showers, saunas or in any areas where water is expected to accumulate.
As a general rule, before and after grouting, never use abrasive sponges, scrubbers, blades or sharp objects that could scratch the surface of the tiles. **Anti-limescale products should not be used for ordinary maintenance.** We recommend using a natural cleaner such as Fila Cleaner. Complaints due to lack of care or fixing mistakes will not be accepted.

## 4. Selecting grouting materials (laying joints)

The kind of grouting material to use depends on the final use of the ceramic surface, and on the width of the joints. It is a good idea to ask the grouting material manufacturer about the more suitable product.
The most commonly used grouting materials are type GC2, but it depends on the type of adhesive you used to lay the tiles:

- If you used C1 adhesive (wall only), use CG1 grouting material.
- If you used C2 adhesive, use CG2 grouting material.
- If you used cement deformable adhesive (C1 or C2), or type D adhesive, use deformable grouting materials (CG S1 or S2).
- For R adhesives, use RG grouting material.

We recommend using waterproof, anti-mildew grouting materials, especially for wet areas (showers, baths, etc.). Joints will be much easier to clean and maintain. A grouting material (i.e.Fugalite Kerakoll Epoxy) which is impermeable should be used, and the areas where water is expected to accumulate (the border of the shower or bath, and the corners between walls) must be sealed with a continuous grout of silicone that is suitable for wet areas. If you do not use an epoxy grout, once the grout is dry, seal the grout joints with a penetrating or grout sealer equivalent to Fila Fugaproof.
White grouting materials are usually used, but you can also use coloured grouts, matching the colour of the tiles or contrasting colour. We recommend spending some time trying different options; you will see how this substantially changes the final look of the ceramic surface.
In any case, do not ever use materials coloured with black smoke (micronized coal), as they are very difficult to clean.

## 5. Grouting (laying joints)

### *5.1 Before you start*

The grouting operation deserves as much care and skill as the laying of the tiles. The durability and aesthetic quality of the ceramic surface largely depends on this operation.
So, again, do not hurry, do things slowly and safely, and arrange all materials and tools before starting the job.
If this is the first time you have laid ceramic tiles, or you have limited experience, we recommend that you start grouting in a "hidden spot" of the surface.
Use all products and tools according to the manufacturer's instructions.
Check that joints are empty and clean of bonding material, that they are dry (specially for RG materials), and that they have a uniform depth, equal to the thickness of the tiles. Wait for the time indicated by the manufacturer of the adhesive you used before starting grouting.
In order to get a uniform colour of all grouts once the job is done, try to use all the grouting material from the same production lot (it must all have the same lot code and date of production).

### *5.2 Grouting material preparation*

For CG materials, use exactly the amount of water indicated by the manufacturer, and, as you did when preparing the adhesive, pour powder on water (not water on powder).
For RG materials pour liquid (minor ingredient) on paste (major ingredient).
Mix using an electric low speed mixer, until you get a homogeneous colour and texture.
As you did when preparing adhesive, do not prepare all the quantity of grouting material you will need at once (these materials also have a lifespan).
For CG materials, wait as indicated by the manufacturer once the mix is done before using it.

### *5.3 Grouting*

Most manufacturers will show you on their web page how to apply grouting materials. We will describe the most common method.
Using a hard rubber trowel, distribute the material along the surface, always diagonally with respect to the joints. This way you will fill the joints with the grouting material uniformly, avoiding the edge of the trowel to get in the joints, and cleaning the tiles at the same time.
Sometimes RG materials are quite hard, so you might need steel spatulas or even an extruder. Use the appropriate tool to curve the surface of the joints. For narrow joints this is not necessary, you will get it when cleaning the joints before they harden.

### *5.4 Cleaning and finishing*

A) CG MATERIALS
Once all joints are filled, clean them with water. **Wait for the time indicated by the manufacturer before cleaning the joints.**
Use a wet but well drained rigid sponge (it is better if it is attached to a trowel), rubbing the surface in circles. Clean the sponge with water and drain it as many times as necessary, and change the cleaning water when it starts to be turbid. It is very important that the sponge is always well drained, to avoid different shades of the grout and future efflorescences. You may need to do a second cleaning of the joints. If the first cleaning was done efficiently, this second cleaning can be done using just a dry cloth or suede.
B) RG MATERIALS
Cleaning is quite more difficult for these materials, so make sure that you understand the instructions given by the manufacturer before starting.Usually, these materials must be emulsified using water and special sponges, rubbing circles on the surface. Clean sponges very often.

## 6. Cutting and drilling

There is a wide range of tools to make all cuts and drilling you will need to install the tiles. In general, it is advisable to lay the cut pieces in the position where the cut is less visible.
The manual cutter is useful for most cuts, but does not guarantee high accuracy. Drilling for water intakes or drains should be done with electric drills, without striker, equipped with diamond-tipped drill bits, properly cooled by water. For square holes manual cutter can also be used (installing a special tungsten carbide punch), but is always easier to use an electric cutter. For special pieces (mouldings, torellos, etc.) use always an electric cutter.

# III. Cleaning and maintenance

## 1. Cleaning after finishing laying works

When laying and grouting are finished, the ceramic surface may have a cement film on it.
If tiles have been laid on the floor, they will probably have a lot of dust over, so the first thing you should do is to carefully sweep all the surface.
In most cases (but not on metallic glazes), using a diluted acid solution (vinegar, for example) is enough to remove cement. There are also specific commercial products i.e. FILA /DETERDEK for cleaning and removing cementitious deposits or FILACR10 for cleaning epoxy grout residues, but they should be used with caution as they usually have higher acid concentrations.
There are also specific commercial products i.e. FILA /DETERDEK for cleaning and removing cementitious deposits or FILACR10 for cleaning epoxy grout residues, but they should be used with caution as they usually have higher acid concentrations.
As a general rule, take always into account the following cautions:

- **Never use an acid product on recently installed tiles**.
- **Take special care with galvanized products** (gold, silver, bronze, etc.) as they are much less resistant to acids and aggressive cleaning products (see point 3.5.Metallic colors of the Installation Guide)
- **Carefully read and observe the instructions and recommendations given by the manufacturers of cleaning products**.
- Before using a cleaning agent, **test its effect on the ceramic tiles and grouts**.
- **Protect the surfaces where there are no ceramic tiles**, they may be affected by the cleaning product.
- **Never use scrubbers or abrasive sponges.**
- It is important to **always use clean water**. Change cleaning water every 15 m2 approximately.

**To remove the protective wax** in the glazed surface of tiles, **use only warm water and a damp cloth**. Do not use scrubbers, blades or sharp objects that could scratch the surface.
If you used a porous grouting material, non waterproof, you may want to protect it with a **grout sealer**, specially if grouts are white of have a light colour.

## 2. Daily maintenance

It is very easy to maintain our tiles. Just **clean them usually with warm water or a dilute solution of a common detergent**.
Never use scrubbers, blades, sharp objects or abrasive sponges. It is important to always use clean water. Change the cleaning water every 25 $m^2$ approximately.If green or dark stains appear, it is usually due to humidity and fungus. Clean the tiles and grouts with bleach, and try to eliminate the source of humidity.

## 3. Extraordinary cleaning of stains and encrustations

In most cases, the use of household products is enough to eliminate the most common types of stains.
However, sometimes some products that have strong colourings may spill or come into contact by chance with the ceramic surface, producing spots or encrustations that can not be removed by normal cleaning operations.
In those cases, special cleaning agents and procedures must be used. The choice must be made with caution, taking into account the nature of the stain.
Before using a special cleaning agent, **test its effect on the ceramic tiles and grouts**, specially in the case of strong cleaning products (high concentrations) or solid detergents with abrasive particles.
**Carefully read and observe the instructions and recommendations given by the manufacturers of cleaning products.**
It is important to **always use clean water.** We recommend changing the cleaning water every 15 m2 approximately.
**Protect the surfaces where there are no ceramic tiles,** because the cleaning agents may damage certain materials such as wood, metals, etc.