

# Tile Wizards Tile Care & Maintenance

## Glazed Ceramic Tile

Ceramic tiles are made out by using mixtures of clay, powders as well as earthen elements and water while simultaneously shaping them in the right form. Once the ceramic has been shaped in the form of a tile, it's then thrown in a fire pit and exposed to extremely high temperatures. The oven is known as kiln. However, the majority of the tiles are going to be covered with glaze, which is a solution that's discussed below. Ceramic tiles could be dense or they could be lightweight and are usually going to be particularly strong and tough.

### General Information

It's worth noting that this is one of the most commonly preferred flooring solutions when it comes to furnishing wet rooms such as bathrooms and rest rooms. Furthermore, due to its nature it's also pretty convenient for outside facilities like swimming pools, for instance. However, what you need to understand is that these are regular ceramic tiles which are finished with a glaze coating. This is basically a liquid colored glass which is applied and firmly baked to the surface of the bisque throughout the usage of immensely high temperature. This glass liquid is what's going to comprise the overall finished appeal of the glazed ceramic tile.

Interestingly enough, the fact that the tile is finished with this coating ensures a wide range of different benefits which are otherwise unknown. Glazed ceramic tiles are known to be:

- Scratch resistant
- Stain resistant
- Fire and slip resistant
- Incredibly easy to clean

This is why they are generally the overly preferred solution for a wide range of rooms. You shouldn't be overly dependent on some of the aforementioned benefits. Even though they are highly promoted to be scratch resistant, this is going to be dependent on the quality of the glaze which is variable from one manufacturer to another.

### Maintenance

Whether it's glazed ceramic or porcelain, tile needs to be properly maintained in order to prevent harmful factors like build-up of soil, residue, soap detergents and others. However, the good news is that they require minimal maintenance as they could be cleared with warm water of a pH neutral liquid.

### Removal of Floor Finishes, Waxes and Sealers

If you need to get a topical sealer or a wax for floorings removed from your tiles, you have to use Adhesive Remover and a Tile Sealer. You should avoid using products on Natural Stone

## Glazed Porcelain Tiles

The thing that you have to thoroughly understand about porcelain is that it's just another type of ceramic material. It's made by heating the mixture of different substances in the same way as the ceramic tiles. Glazed porcelain tiles are made by covering the tile with heated glass texture which adds to its strength and gives it a better appeal and polished look.

### General Information

Now, not all of the porcelain tiles are made the same. With this in mind, understanding the nature of the different types and how they are manufactured is absolutely crucial when it comes to choosing the right type of tiles for your ongoing project. A glazed porcelain tile would be one which is firmly covered with a colored glass liquid which is also known as glaze. This provides the tile with an overly sturdy appearance which seems polished and finished. However, keep in mind that glazed tiles are not really full body porcelains and that's one of the most common misconceptions. Unglazed porcelain tiles are by far the only full body ones. This means that they are entirely comprised of natural clays and do not include any other substances.

There are different reasons for which you might want to prefer this particular option. They are stylish, they are polished and are easier to maintain. However, you might want to avoid using them in some commercial establishments because they might introduce a slippery surface.

### Maintenance

Maintaining glazed porcelain tiles is practically seamless. You have to make sure to use the right type of cleaners in order to ensure that you do not damage the covering glaze. This is usually labeled on the front of the detergent so finding the right one should not be any issue.

Out of sheer precautions for your surroundings it is highly preferable that you take advantage of dry cleaning or steam cleaning methods which do not involve the usage of detergents. Keep in mind that a glazed porcelain surface is really easy to clean off regardless of the pollutant so it really shouldn't be a significant burden.

## Polished Porcelain Tiles

As far as the specifications of polished porcelain tiles go, they are usually made out of the same material as their glazed counterparts. However, the main difference is within their strength and stability. Polished porcelain is much more fragile than the glazed one because it lacks the additional protection secured by the melted glass on top of it.

### General Information

Now, the first thing that you need to take into consideration when talking about polished porcelain tiles is that they have nothing to do with their glazed counter parts. Even though in some particular situations they might actually look exactly the same, there are significant differences that have to be pointed out.

Most of all, a polished porcelain tile is a regular, full-body tile made out of natural clays which is simply polished on the surface. This is what may create the illusion that it's a glazed one. Of course, this is all provided that the glazed tile doesn't introduce any ornament. Polished porcelain tiles are perfect for a wide range of different spaces both indoor and outdoor. Common examples would be balconies, patio walk-through, bathrooms and, interestingly enough, even wall decorations. That's right – polished porcelain tiles are incredibly appealing and that's the main reason for which they are usually preferred for a wide range of decorating undertakings.

However, you also have to keep in mind that the polished porcelain tile is usually cheaper than the glazed one, mainly because the latter manages to simulate natural appeals perfectly. This is thanks to the advancement of modern technologies and their implementation on creating the perfectly styled glaze.

### Maintenance Tips

The truth is that porcelain requires little to no maintenance at all and the efforts are practically non-existent. You have to rinse up the dirty area with warm in. water in order to make sure that it's shiny once again. The surface might require some additional protection and the activities might include:

- Haze of grout removal
- Usage of acid based products
- Usage of maintenance based cleaning products
- Taking care of construction chemicals as well as dirt.

## Unglazed/Matte Porcelain Tiles

Unglazed or matte porcelain tiles are usually heated up to a maximum of 2,600 degrees Fahrenheit and their strength is generally enhanced because they are usually a lot thicker. The substance that they are made out of is usually the same as any other porcelain tile as it's a generic type of ceramic.

### General Information

The first thing that you need to know is that unglazed porcelain tiles could also mean that they are polished, which would provide you with pretty much the same visual effects. With this in mind, we are going to focus on the unglazed and unpolished porcelain tiles and talk about their specifics.

As you may already guess, they are a lot rougher than their glazed and polished counterparts. This is why the majority of people would prefer to implement them as an outdoor solution or as indoor decorative implementation. Furthermore, it's also worth noting that unglazed solutions are a lot thicker and firmer as well as denser than their glazed opposites and that's why they are also appropriate for walkways with heavy foot traffic.

They are also known for their natural beauty and their scratch-resistant surface. Once again, this is also why they are usually used outside. However, you should also be aware of the fact that because of their firmer and rougher surface they are also rather harder to maintain. You wouldn't be able to clean them up as easily as glazed tiles and that's a bit disappointing. It's also worth noting that they can come in different shapes and forms – whole tiles and mosaic renditions.

### Maintenance

We highly recommend the usage of grout release prior to actually grouting the products in order to ensure the efficacy of the removal of different types of spots.

## Mosaic

### General cleaning

Mosaic tile should be properly maintained in order to make sure that there is no buildup of soap detergents, dirt, grease and more. However, they require minimal maintenance and you can rinse the dirt with clear water and dry it up immediately afterwards.

### Pre-Grout Sealing

It's highly recommended to go for a non-sanded grout when it comes to Natural Stone installations because narrow grout joints are generally overly preferred.

## Natural Stone

Unlike porcelain and ceramic tiles, those made out of natural stones are not, per say, created by people. They are merely already existing stones which are taken and shaped so that they fit the form of a tile. With this in mind, different natural stone tiles have different technicalities based on the type of rock they are carved out of. In any case, these are amongst the strongest appliances known to us thanks to their natural sturdiness.

### General Information

As the name suggests, this is an entirely natural flooring or decorating option. Natural stone is perfect for a wide range of different appliances.

Now, starting off with its specifications, it's worth noting that there is a wide range of different types of stones which might be used for decorative or flooring purposes. In any case, this is amongst the most firm and resistant surface which is definitely going to survive for a long time coming.

Due to its rather rough surface, the main designation for natural stone would be in the outdoor furnishing segment. They are used to define walkways in gardens and patios as well as to create local roadways for your garage, for instance. However, beyond that there are certain decorative appliances which are particularly interesting.

Natural stone is used as a major attention grabbing element in a wide range of contemporary homes. Usually designer homes are going to have at least one wall decorated with natural stone tiles in order to make it pop out from the rest. It's an incredibly convenient and versatile solution which is definitely worth mentioning.

However, you would also have to consider that natural stone is generally incapable of properly retaining heat. This means that you wherever you implement it, you can expect the space to be a bit cooler. That's why it's used in a lot of outdoor kitchens – to promote easier cooling of the space.

### Maintenance

If you want to ensure that your Natural Stone products are properly taken care of you would need to come up with a proper maintenance plan. Furthermore, you need to understand that it needs different products than usual. Many of the accepted cleaners could actually cause damage to dull stones.

### Stone Cleaners

You have to only use specifically designated products. These particular cleaners have no acids in them and have concentrated neutral pH which isn't going to affect the existing wax-type coating. Before that just make sure that the surface is properly dampened with clear water.

Once the stone is properly cleaned, you can regularly apply a wax-type spray-buff on the floor finish in order to make sure that the stone is polished.

### Heavy-Duty Stone Cleaning

You are going to have to use heavy-duty yet non-hazardous stone cleaner in order to remove the dirt, grime and other type of pollutants. Apply the solution once it's properly mixed with water. Mop it up in order to make sure it's dry and change it every 100 square feet to ensure that you aren't re-introducing dirty water.

## **Stone Mosaic**

### **Routine Care**

Natural Stone products are usually porous by nature and a lot of the accepted cleaners are going to be damaging and harmful for this surface. That's why you want to be rather careful when picking up the cleaning material.

### **Stone Cleaners**

You have to use stone cleaners which are specifically designated to have this usage. You have to have the surface dampened with clear water.

### **Stain Removal**

Use stone poultice but keep in mind that it might actually dull the shine and you would have to use a marble polisher.

### **Restoration**

You can use the marble polish if the flooring finish has gone dull due to the fact that you've used stone poultice.

### **Sealing**

When it comes to sealing you have to understand that natural look sealers can actually be water-based or solvent-based. They are usually good for both outdoor and indoor applications. The best way to make sure the solution is usable on your particular surface would be to properly test it on loose particles.

### **Finishing**

When it comes to finishing, you need to make sure that you apply the solution only to polished Natural stone products. This particular product is really going to enhance the overall shine of your flooring.

## Unglazed Tiles

There are different types of unglazed tiles available on the market. You can pick up the ones which are most appropriate for you based on a variety of different factors such as budget and personal preferences. With this in mind, it's worth noting that the cheapest solution out there would be the unglazed ceramic tile. This is a regular ceramic tile which hasn't been covered in the colored glassed liquid in the high-temperature process. As a result, the surface is rather rough but it's appropriate for a variety of different spaces.

Furthermore, we have the unglazed porcelain tiles which were detailed in one of the previous sections.

As a general rule of thumb, unglazed tiles are a lot denser, thicker and firmer than their glazed counterparts. That's why they are usually used where you have heavy foot traffic. This is one of their main benefits. Of course, they are also usable as decorative elements but given the options that contemporary glazing technologies provide, people would strongly prefer the alternative.

Both glazed and unglazed tiles are overly preferred for a variety of commercial establishments such as restaurants, for instance, because they are easier to maintain and a lot more convenient than other flooring solutions. Tiles are definitely amongst the most overly preferred hard flooring solutions and they bring in tons of advantages.

### Maintenance

When it comes to maintenance, you would have to take into consideration the fact that the surface is significantly rougher. That's why the cleaning is going to be a bit harder and it's going to require more effort on your behalf. We strongly recommend using appropriate detergents of the right consistency. Make sure that you do not damage the grout because this is capable of ruining the entire appeal.

## Grout Maintenance

### Impregnating Sealer

The majority of the installations would use cementations grouts. The grout has to be properly sealed with after the installation with an impregnating sealer which doesn't have silicone as the latter is going to shorten the life. Keep in mind that only the grout has to be sealed and not the wall tiles or the glazed floor. This should be done about 72 hours after the maintenance.

### Maintenance

Neither the sealing nor using a 100% Epoxy Grout is going to ensure that the surface is properly protected from buildup. With this in mind, you have to get the latter removed regularly and use professional grade detergents when needed.

### Grout Color restoration

You can use a "grout stain" which is an epoxy-based product that is specifically designated to penetrate the grout and seal the surface. It's going to deliver a great color.

### Clean up after the grout

You are going to experience grout haze which is going to be left behind after the process. You can use Sulfuric Acid which could be purchased in powder form. This way you can mix it up with water in order to accommodate it for different strengths.

## Technical specifications: GB/T4100.1-2006

No.	Test item	Unit	GB/T4100.1-2006	Test result	Result
1.	Length tolerance	Mm	Length	600±1.0 599.7~600.0	Passed
2.	Side straight	%	± 0.2	-0.04~ +0.05	Passed
3.	Right angle	%	± 0.2	-0.05~ +0.04	Passed
4.	Surface Flatness	(%)	Center curvature	± 0.2 -0.04~+0.04	Passed
5.	Surface quality	----	A minimum of 95% of the tiles shall be free from visible defects that would impair the appearance of a major area of tiles.	No visible defects	Passed
6.	Water absorption	%	Mean value E≤ 0.5 Single value≤ 0.6	0.08 0.06~0.10	Passed
7.	Breaking pressure	N	When the thickness is ≥ 7.5mm, the average shall be ≥ 1300	1764.6	Passed
8.	Modulus of rupture	MPa	Mean value≥ 35 Single value≥ 32	37.2 36.6~38.0	Passed
9.	Luster degree	---	≥ 55	70-73	Passed
10.	Abrasion resistance	Mm <sup>3</sup>	≤ 175	131	Passed
11.	Resistance to frost	----	No crack or peeling.	No	Passed
12.	Household Chemical Reagent	----	Not lower than UB level	UA level	Passed
13.	Resistance to Chemical of swimming pool	----	Not lower than UB level	UA level	Passed

Remark:

For more information of our products please kindly visit our website or contact us by email.

# ISO 9001

NO	Test Item	Technical Requirements	Test Results	Decision
1	Length	±0.5	+0.02~+0.1	Qualified
2	Wide	±0.5	-0.02~+0.01	Qualified
3	Thickness (%)	±10	-0.8~+3.2	Qualified
4	Side straight (%)	±0.2	-0.03~+0.03	Qualified
5	Surface flatness (%)	±0.3	-0.01~+0.06	Qualified
6	Right angle (%)	±0.3	-0.04~+0.05	Qualified
7	Center of curvature (%)	-0.20~+0.40	-0.07~+0.17	Qualified
8	Edge curvature (%)	-0.20,+0.40	-0.03~+0.09	Qualified
9	Water absorption (%)	Average maximum $10 < E < 20$	$6 < E < 10$	Qualified
10	Breaking pressure(N)	Thickness $\geq 7.5$ mm, $\geq 600$	1206	Qualified
11	Modulus of rupture(Mpa)	Average $\geq 15$ single $\geq 12$	Average:23	Qualified
12	Surface quality	at least 95% tiles no defect from 0.8 away uprightly	No visible defects	Qualified

# UNI EN 14411\_GRPUPPO B III GL

TECHNICAL FEATURES	REGULATION	INTERNATIONAL STANDARD	AVERAGE VALUE
LENGHT AND WIDTH	UNI EN ISO	10545-2	± 0,50%
THICKNESS	UNI EN ISO	10545-2	± 10%
STRAIGHTNESS	UNI EN ISO	10545-2	± 0,3%
RECTANGULARITY	UNI EN ISO	10545-2	± 0,5%
WARPAGE	UNI EN ISO	10545-2	± 0,5% - 0,3%
			± 0,5% - 0,3%
			± 0,5%
WATER ABSORBITION	UNI EN ISO	10545-3	> 10%
BREAKING STRENGHT	UNI EN ISO	10545-4	> 15 N/mm <sup>2</sup>
BREAKING FORCE IN N	UNI EN ISO	10545-4	200 N
THERMAL SHOCK RESISTANCE	UNI EN ISO	10545-9	MPD
CRAZING RESISTANCE	UNI EN ISO	10545-11	RICHIESTA
FROST RESISTANCE	UNI EN ISO	10545-12	-
CHEMICAL RESISTANCE	UNI EN ISO	10545-13	CLASSE GB min
STAIN RESISTANCE	UNI EN ISO	10545-14	CLASSE 3 min

## Slip and Durability Tests (AS/NZS 4586 – 2004)

Test Type	Results	Test Type (AS/NZS 4586 – 2004)	BPN*	Class
Compressive Strength (min)	60 mpa (8,702 psi)	Smooth Tile: Wet Slip	36	X
Flexural Strength	60 mpa (8,702 psi)	Textured Tile: Wet Slip	62	V
Terrazzo Tile: Wet Slip			59	V