A GUIDE TO CERAMIC TILES

Used on the floors and walls of our homes, in our kitchens, living rooms and bathrooms or around swimming pools, Italian ceramic tiles are a familiar presence in our day-to-day lives. But how much do we really know about them? If we had to purchase tiles for a new home or a renovation project, would we have all the necessary information to choose the tiles that are most suited to our needs?

We will discover just why tiles are the best investment you can make in your home and what characteristics they have that makes them an extremely adaptable and functional surface covering for all domestic spaces and architectural projects.

CERAMIC TILES

WHAT ARE THEY?
Ceramic tiles are flat sheets made from a mixture of clay, sand and other natural materials formed into the desired shape and size and then fired at a high temperature. They come in various sizes and with thicknesses of between 3 and 20mm. Thanks to advanced production technologies, they are available in almost unlimited variety of sizes, colours, surfaces and decorative effects.

HOW ARE THEY PRODUCED?
Tiles are produced from carefully selected raw materials, which are milled and mixed together to make the different product types, such as porcelain, single firing, double firing, terracotta and clinker. Italian companies use the latest technologies to produce high-quality ceramic tiles with outstanding technical and environmental characteristics. Continuous investments in production process automation ensure the consistently high quality of individual products.

WHERE CAN THEY BE USED?
Tiles can be used as a surface covering on floors, walls and architectural volumes and are ideal for both interiors and exteriors. Any surface in the home, however large or small, can be clad with ceramic tiles to create a tasteful creative installation.

WHAT FUNCTIONS DO THEY PERFORM?
Although highly diverse, Italian tiles essentially perform three different functions:
- **Aesthetic** = they are part of the interior design project along with the other finishing materials
- **Technical** = they are able to withstand the stresses produced by the people who use the spaces without suffering damage or deterioration
- **Functional** = they are hygienic and capable of effectively withstanding foot traffic, frost, fire, and the elements. New developments include antibacterial, photocatalytic and photovoltaic functions, although these are currently limited to a niche market

MANY GOOD REASONS FOR CHOOSING CERAMIC TILES
Ceramic is a durable, compact and inert material, giving it numerous advantages over other floor and wall covering materials.

**TOUGHNESS**
Thanks to its partially vitreous structure and high degree of internal cohesion, ceramic is hard and highly resistant to breakage and abrasion. These characteristics are governed by international standards (EN 14411 ISO 13006), allowing comparisons to be made on the basis of objective values. Refer to the packaging and data sheets for details or contact the retailer for further information.

**IMPERMEABILITY**
Ceramic, especially vitrified ceramic, is a compact and non-porous material making it impermeable and resistant to staining. This means that the tiles are quick and easy to clean, as well as having good frost resistance.

**SAFETY**
Unlike many other materials, ceramic tiles are noncombustible, they do not release fumes or toxic gases in the event of fire and they have a flame-retarding action, thus reducing fire damage.

Ceramic is an inert material with a composition that prevents the release of any substances that are harmful for health. An unlike other surfaces and objects, they do not tap dust, pollen or germs, allowing them to be cleaned effectively so as to minimize health risks.

**WHERE DO TILES WORK AND WHY?**

**01 OUTDOORS**
Safety style versatility comfort decoration sophistication design reliability

Due to ability to withstand frost and thermal shock, ceramic tiles are ideal for use in exteriors, where they deliver wear resistance and durability.

When choosing ceramic tiles for exterior use, check their slip resistance characteristics.

Many ceramic tiles collections include trim pieces for seamless installation of stairs.

**02 IN THE LIVING ROOM**
Ceramic tiles not only have their own distinctive aesthetics, they are also capable of imitating other materials such as concrete, marble, stone and wood and come in an unlimited variety of finishes, colours and effects.

Have you ever thought of using ceramic tiles for your fireplace? Fire resistance and visual appeal are guaranteed.

Ceramic tiles come in an enormous array of tones, allowing you to choose colour combinations according to your personal taste and style.

With options ranging from large format tile sizes to those that look exactly like timber, tiles in living spaces are becoming increasingly popular.

**03 IN THE KITCHEN**
Ceramic tiles are ideal in the kitchen, where they contribute with their versatility and beauty to the day-to-day life of this hub of domestic activity.

Use tiles to protect the walls behind the sink from splashes and stains: they can be cleaned easily by wiping with a sponge.

A ceramic countertop? The latest ceramic sheets are ideal for customised architectural applications.

04 IN THE BATHROOM

Italian ceramic tiles feature the excellence of Italian design and make a significant contribution to all aspects of bathroom interiors, including floors, walls, shelves and the shower enclosure.

Mosaic is a timeless ceramic accent that lends luminosity and dynamism to the walls.

Ceramic tiles are totally non-absorbent and are ideal for use in places where water and steam are present.

05 IN THE BATHROOM

The layer of glaze used on certain types of ceramic tiles can create sophisticated colours and patterns, ideal for a bathroom with a unique, customised design.

Trim pieces, formellas and listellos can be used to further enhance the beauty of the bathroom.

Whether depicting flowers, geometries or textures, ceramic tiles can offer the decorative style of your choice.

06 IN THE BEDROOM

Due to their virtually unlimited aesthetic and colour range, ceramic tiles are ideal for creating a sophisticated and welcoming bedroom environment.

A novel idea: tile the wall around the bed in an original wainscoting style.

Are you considering underfloor heating? Choose ceramic tile – it has excellent heat conductivity, better than that of other materials normally used in the bedroom.

07 ON TERRACES

Ceramic tiles bring the appeal of natural material to external spaces, where they combine resistance to the elements with ease of maintenance.

Use ceramic skirting for a complete finished project.
Choose non-slip materials to ensure complete safety in external areas.

**08 IN SWIMMING POOLS**

Ceramic tiles are ideal as a waterproof pool lining and come in a wide range of special trim pieces for unrivalled poolside performance.

Ceramic tiles can be used on the sides and floor of swimming pools.

Textured finishes with an A+B+C index minimise the risk of slipping even in wet areas.

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**INDOORS OR OUTDOORS?**

Ceramic tile for exterior use must have a number of essential characteristics such as frost resistance, thermal shock resistance and slip resistance. For this reason, it is preferable to choose a tile with a rough textured surface. For interiors there are fewer constraints and designers can choose tiles based on purely aesthetic considerations.

**FLOOR OR WALL?**

The wall tile production process is geared to achieving the highest aesthetic and decorative quality. While floor tiles have a similarly important aesthetic function, they must also be able to withstand continuous stresses.

**CLASSIC OR CONTEMPORARY?**

Essential, romantic, contemporary, minimalistic, elegant or trendy – whatever the style of your home, you are sure to find an Italian ceramic tile that fits the bill. Just go to an authorized showroom to find the perfect style.

**WHAT SIZE?**

Small sizes are preferable for a traditionally styled space, while many designers say that they seamless effect achieved by large-format tiles can make a small room look larger! You can also choose creative compositions by combining different sizes. In any case, it is advisable to order 10% more tiles than the area of the surface to be covered.

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**ITALIAN CERAMIC TILES ULTIMATELY SUSTAINABLE**

Due to ever greater environmental awareness, companies and the public are increasingly adopting sustainable behaviours and lifestyles. In terms of their composition, production process and lifecycle, Italian ceramic tiles are consistent with an eco-sustainable lifestyle. Their green credentials are backed by the prestige and reliability of the Ceramics of Italy label.

**RAW MATERIALS**
Ceramic tiles and other ceramic objects are made from natural raw materials such as clay, quartz, and feldspathic minerals. These raw materials are quarried in such a way as to not harm the ecosystem and landscape, which is remediated in accordance with strict legislation.

**PRODUCTION CYCLE**
The raw materials are subsequently processed in factories using an optimized production cycle. Heat is recovered, electrical energy is self-generated, emissions and the use of water are reduced and virtually all waste is returned to the production cycle. These methods are endorsed by environmental certifications such as EMAS and ISO 14001.

**PRODUCTS**
The resultant products are highly eco-friendly and are covered by the quality certifications such as Ecolabel. Ceramic tiles also contribute to the environmental sustainability of buildings in accordance with LEED parameters.

**DISPOSAL**
At the end of their useful lifetime, ceramic materials can be reused in building work. This reduced the quantities of solid waste released into the environment and avoids tapping natural sources of aggregates and other minerals for use in construction projects.

**ITALY, THE HOME OF CERAMIC INNOVATION**
Since the 1950s, Italy has pioneered all industrial-level product innovation in the ceramic tile sector. It developed single-fired tiles, then porcelain and most recently super thin and large format tiles, its unflagging research efforts leading to successive generations of ever more advanced products. This progress has gone hand in hand with advances in the field of ceramic tile technology, another sector that originated and developed in Italy.

**THE CULTURE OF BEAUTY AND A PASSION FOR CRAFTSMANSHIP**
Italy has a deeply-rooted culture of beauty. It is home to a lion's share of the world's cultural heritage, its language is the language of music and Italian fashion and food is renowned world over. This cultural sensibility is also expressed as a flair for product development and an innate ability to recognize and reproduce beauty, spawning new aesthetic trends in world ceramics. This natural creativity has driven the expertise that has long been the trademark of Italian ceramic production, from old artisanal workshops to modern factories. It is this passion for aesthetics and craftsmanship that has been the force behind the industry's success.

**WORKPLACE SAFETY AND PROTECTION OF THE ENVIRONMENT**
Italy boasts one of the highest standards of workplace safety, environmental awareness and employee welfare in the world. With its modern workplaces and latest-generation technology, the Italian ceramic industry is one of the greenest in the world. It adopts a wide-ranging approach to environmental sustainability, from meticulous selection of raw materials through to product certification. Ceramic tiles bearing the "Ceramics of Italy" mark represent all of this and more.

**QUALITY MARKS**
The Italian ceramic tile industry manufactures products with a high design content that lend unique, distinctive qualities to living spaces. They are produced using modern technologies that ensure attention to the environment and workspace safety and optimise the use of resources in accordance with the highest performance standards. The Italian ceramic industry promotes its products through the Ceramics of Italy mark and the website www.laceramicaitaliana.it
EVERYTHING YOU NEED TO KNOW ABOUT INSTALLATION
Effective installation is crucial for ensuring the durability of ceramic tiling. Proper substrate preparation and the right choice of adhesives and grouts for the type of ceramic tile and specific project conditions (indoor/outdoor, floor/wall, light/heavy traffic, etc.) are critical for achieving a long-lasting installation. It is therefore very important to hire a qualified tiler, and to use products that meet the latest national and international standards.

THE PLACE OF INSTALLATION
The intended location of the installation is a very important aspect, the type and intensity of loads that the tiled surfaces will be subjected to during use must be taken into account when choosing tiles, which must guarantee the necessary durability. The risk of contact with aggressive substances must also be taken into account.

THE SUBSTRATE
The substrate must guarantee the flatness of the tiled surface and must have the necessary mechanical strength to withstand expected loads during the use of the surface, including accidental loads. At the time of installation, the substrate must be clean, flat and adequately set, i.e. dimensionally stable and free from discontinuities and substances liable to inhibit bonding.

WHICH TILES?
Tiles must be chosen with suitable technical characteristics for the place of use and the anticipated traffic over their entire lifetime. The same applies to thickness and sizes.

NARROW JOINTS OR WIDE JOINTS?
Tiles are installed with open or wide joints (the joint width depends on the size of the tile and the specific characteristics of the project) for a number of reasons, most importantly to absorb the stresses that the tiling may be subjected to due to instability of the substrate and dimensional variations caused by temperature changes.

MOSAICS
Mosaic tiles play a key role in ceramic decoration. Available with various sizes of tesserae, they are enhanced by iridescent insets or inclusions of single-coloured or multicoloured materials and precious stones. They come either as mesh-mounted mosaics, which adapt easily to curved walls and columns, or as pre-scored faux mosaic tiles which are unrivalled for their simplicity of installation.

DESIGNING THE JOINTS
The joints between tiles are a fundamental aspect of the tile project because they contribute to both its aesthetic appearance and its technical performance. The choice of joint width and grout is therefore very important. The following are the aspects that must be taken into consideration.

CONTRASTING OR COORDINATING COLOURS?
Grouts come in a range of colours and should be chosen according to the desired level of visibility. The joints can be grouted in subtly coordinating or highly visible contrasting colours.

RECTIFIED OR UNEVEN EDGES?
The choice of tile edge depends on the desired type of joint. Rectified edges allow tiles to be placed side by side with a minimal sized joint to create the effect of a seamless continuous surface, idea for
interiors with a contemporary style (narrow or butt jointed). Tiles with uneven edges require a wider joint (more than 2-3mm) creating a more traditional stylistic effect (open joint).

**GROUT**
Grouts must comply with NZ Build standards and must have suitable characteristics for the project specifications and operating conditions, including exposure to potentially aggressive chemicals. This is essential to protect the joints from dirt, water penetration and bacterial growth.

**POST-INSTALLATION CLEANING**
An acid wash after installation is essential to eliminate site residues such as adhesive, paint and dust. This wash must be carried out after the cement grout has dried out, which takes at least 24-48 hours for quick-setting and quick-drying products. In any case, the group manufacturer’s instructions must be followed.

- Sweet the floor thoroughly and apply the descaling product using a mop
- Leave for a few minutes
- Rub the encrusted areas vigorously using an abrasive sponge
- Use cloths to collect the residues and rinse

When using epoxy grouts, use a specially formulated detergent and follow the manufacturer's instructions for preparation, application and cleaning.

**ROUTINE MAINTENANCE**
Tiles are very quick and easy to clean. Floors and walls can simply be washed using warm water and a normal neutral household cleaner.

**SAFETY AND DURABILITY**
The safety and durability of ceramic tiles makes them ideal for use in high-traffic areas such as shopping centers, airports, museums and other large public buildings.

**CLEANING AND HYGIENE**
With their hygienic qualities, ease of cleaning, impermeability and stain resistance, Italian tiles are ideal for use in buildings such as schools and hospitals (where the antibacterial properties of certain types of Italian tiles are especially appreciated), as well as swimming pools, wellness centers and spas.

**FUNCTIONALITY AND TECHNOLOGY**
Italian ceramic tiles are the ideal material for advanced technical solutions such as:

- **Raised floors** = floors that rest on an adjustable height supporting structure, leaving a technical space below for the utilities. This solution is particularly suitable for offices and other workspaces.
- **Ventilated facades** = systems for cladding buildings that combine aesthetic qualities with heat insulation and protection from the elements. The use of ceramic as an external cladding material improves the energy efficiency of buildings and reduces the heating and cooling costs, increases the building’s value and provides a definitive solution to the problem of façade maintenance.

**STYLE AND AESTHETICS**
Available in almost unlimited colour palette and with an enormous range of decorations, textures, patterns and material effects, Italian ceramic tiles are renowned for their exceptional aesthetic and
design qualities. They are an excellent material for architects and designers, bringing distinctive personality, sophistication, style and quality to any project.