

COTTO italia

COTTO 

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As a leader in tile industry, COTTO has journeyed across the globe in pursuit of truly exceptional surfaces. The search has brought us to Italy, a place where great craftsmen have been producing clay tiles for centuries. By travelling door to door, we have developed relationship with three selected unique Italian manufacturers. When our collaboration kicks off, that is the beginning of COTTO ITALIA, a global name that will bring drama and enchantment to any space through tile decorations.

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**COTTO**italia



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# BORN IN ITALY

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For centuries, artists and designers from over the world have traveled to Italy to study works of the great Italian masters in the Renaissance and Baroque periods. Until now, Italian designs are still internationally appreciated and recognised as the top position in global design industry. Verve and creativity married with knowledge of techniques and materials are the key ingredients of a new world leading approach. Therefore, the phrase 'Born in Italy' does not only mean style, but it also represents a productive model combining flair typical of culture with the work ethics that have always characterised Italian manufacturing tradition. If places are meant to serve particular function, Italy is definitely destined to become the capital of design world. Based on its traditional and expressive culture, Italy is rich with endless sources and inspiration for supreme designs. Decades after decades, Italian design houses have built unique characters for contemporary Italian design and have become the trendsetters for the industry in the global arena.

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From fashion to furniture, from automobile and gadget, Italian is home to world leading brands in various fields. Ceramic and porcelain tiles are not exceptions. With a constant commitment towards aesthetic research and technological innovation, design houses in Italy have achieved product and production excellence and have become more and more competitive in the international market.

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# BUILT TO LAST

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Rome was not built in a day, and it ends up lasting for over millennia. In a much smaller scale, buildings and houses take time to construct, and we all hope they will stand for a very long time. Thus, we turn to the place where things are built to last.

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# PRODUCED BY EXPERIENCED CRAFTSMEN, ITALIAN TILES ARE MADE TO LAST FOR A LIFETIME.

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Though visual appeal and originality are the key elements, they are not sole features of Italian products. Thanks to its durability and low maintenance, ceramic tile has been the prime choice of flooring material in high traffic areas from the ancient Rome to the most modern contemporary building designs. For centuries, Italy has brought sophistication and beauty to the tile industry while focusing special attention on quality to ensure that the product value is parallel with its remarkable tile quality.

As quality is one of the biggest concerns, every step of the Italian tiles production undergoes a rigid quality control process including both automated and human inspection. Every bundle of stone must pass a detailed inspection before it enters production lines. After the end of the works of craftsmen, the experienced staff examines every smallest detail such as cracks, color consistency, product integrity, thickness, surface markings, quality of polishing, to name just a few, to ensure that every single tile meets Italian high quality standard.

Produced by the most advanced production and run by teams of experienced craftsmen, Italian tiles are made to last for a lifetime.

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# I MARMI DI REX

The Rex line of interpretation in porcelain stoneware of the most precious natural materials is enriched with a new collection: I Marmi di Rex, which integrates and completes the project already started with the series I Bianchi, in turn inspired by certain precious marbles. New essences, new colours, open grain mounted together: these are the features of a series of ceramic tiles able to decorate spaces with elegance and personality.

The inspiration comes from materials of European and Asian origins historically worked in the industrial factories. The study on the material and colour has enabled to identify a starting structure to which different colours are applied, to create new aesthetical effects.







Colours: Marble Gray, Marble Brown, Marble Black



# I BIANCHI DI REX

Made of coloured body porcelain stoneware 10 mm thick, with a glossy and natural finish, this series opens a new chapter in the Rex line of products dedicated to natural materials: Having presented tiles inspired by wood, leather and stone, the Rex line now turns its attention to marble. Among the many existing varieties of marble, the most precious and sought-after are the ones that are predominantly white, in Italian bianco.

The line includes 3 shades of white that represent light-coloured marbles and can make any room more exclusive and enveloping.



"I Bianchi di Rex" is available  
in the following sizes 80x80,  
60x120



# ALABASTRI DI REX

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The strong link between Rex and fashion and design trends underpins this interpretation of 1970s luxury, expressed by adorning the home with highly-valued objects and jewel details to embellish it as if it were a human body.

Marble is processed like rich fabrics for expensive clothes, and gemstones designed to create noble trinkets are transformed into elegant walls, to decorate the surroundings with style and originality. Alabaster, naturally luxurious and with its symmetrical geometries, leads us into a fairy-tale labyrinth: its harshness is transformed into warm, ductile, contemporary lightness, following an extraordinary, exclusive path that rekindles the imagination.

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# STYLE AND ORIGINALITY

Shapes, colours and nuances become the starting point to externalise more and more seductive emotions and suggestions, creating incredibly sophisticated, one-off solutions.

A consistent, continual research underpinning the desire to give new life to highly exclusive surfaces. GLI ALABASTRI DI REX enhances the exceptional and infinite attributes of the material, created with cutting-edge production systems that allow the quality of a handmade product to be maintained unaltered.

3 shades with a strong expressive appeal and 1 optical white to illuminate the whole collection – unusual colours that fill the space, taking a starring role.





The colours and the various sizes are clear, communicative elements that help to rediscover an emotional dimension and enhance the importance and the value of any architecture. The delicate colours bring to mind a strong sense of freedom, air, light and open spaces, receptive to the creativity of living in places and cultures that are continually changing. The space adapts itself to our desires and Rex manages to make a timeless material modern, by giving it new life.



# SELECTION OAK

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## SELECTION OAK

Taking its inspiration from oak wood, this has a soft, velvety texture and comes in four colours, selected with high-class precision to remind us of the light atmospheres of the sea and the warm colours of uncontaminated forests, where nature's imperfections turn into a perfect harmony of tones and shades.

Rex has chosen a new style: the surface, strongly reminiscent of the natural world and bringing with it a wealth of delightful features, has been selected to blend into spaces and objects from past times mixed with new suggestions for architecture and furnishings.

Relaxing simplicity and an essential aesthetic quality are able to create a dialogue with the atmospheres of the home and the charms of nature.

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## ROUGH LUX

A new style, with a new informal and instant opulence interpreting spaces, no longer linked to the ostentation of material goods but to giving full value to the spirit.

Unusual, striking combinations, layers of life-experience - both old and modern - and precious elements cohabiting perfectly with recycled items, create an atmosphere that tells a very definite story: a contrasting duality clearly expressing specific identities.

The strongly personal symbols hark back to a dimension of domestic intimacy.

The culture of past times takes a fresh look at the present: everything is connected, and a subtle, authentic thread really takes us back to an allure that is timeless.

This is the angle from which REX views each individual aspect of life, both social and personal, to build an aesthetic appeal tending towards beauty - an essential principle, and intrinsic to the very nature of human beings.







# TAIGA

Moments of light and dynamic poise reminiscent of distant and exotic lands outline a new understanding of the contemporary environment. A synonym of strength and material, Taiga exploits the inherent beauty of irregularity through the use of a chromatic design that evokes the warm colours of woodlands and unspoiled natural settings. Deliberately conceived fairytale imagery becomes the reference style and leitmotif of a luxury that escapes the chains of dogma, revealing a confident choice that relates unique emotions and experiences. The four colours recall the warm hues of the seasons.







BEAUTY OF  
IRREGULARITY





# ARDOISE

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By taking rough, well-worn elements and combining them with luxury fabrics, antiques and artistic items we create an atmosphere that tells a story.

The colours and the various sizes are clear, communicative elements that help to rediscover an emotional dimension and enhance the importance and the value of any architecture. The delicate colours bring to mind a strong sense of freedom, air, light and open spaces, receptive to the creativity of living in places and cultures that are continually changing. The space adapts itself to our desires and Rex manages to make a timeless material modern, by giving it new life.

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Suitable for mixing-and-matching with the previous collections, Selection Oak and Taiga, Ardoise, in Rough Luxe style, represents the authenticity of a material that has recently been rediscovered for use in architecture, to restore historic buildings and furnishings and to embellish interiors.





**FLOOR  
GRES** **WALKS/1.0**

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Quartzite is a metamorphic type of rock made mainly of quartz, roughly worked and which use is much diffused within the building sector and refractory industry. It is an extremely resistant material, often also used for outdoor flooring.

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**UNCONVENTIONAL  
SIMPLICITY**

Floor Gres, thanks to its sophisticated technologies, reinterprets in porcelain stoneware the appearance of quartzite, creating a material that becomes perfect synthesis between nature and technology and combines research value to the quality of the raw materials. The naturalness of the surface and the material with rough effect, combined with the richness of graphics, colours and structures enable Walks/1.0 to be used in different contexts, with significantly aesthetic results: Walks/1.0 is technology and nature, incisively joint.





Aesthetical precision, rigour and formal cleaning distinguish the colour choices that characterise the series, accentuating its unconventional simplicity.

Available in two finishes, soft and natural, it is perfect for interpreting indoor architecture and outdoor spaces that converse with the surrounding setting.

The extremely high physical-mechanical performances of Walks/1.0, realised full-bodied, make it ideal for flooring, wall covering and use on facades. In designing swimming pools and wellness environment, the great resistance to slipping makes this product ideal for use as bathtub edge, even in outdoor environments (especially in light colours that absorb less heat).

Beauty, elegance, freedom of use: Walks/1.0 is a collection destined to last in time.



# **FLOOR GRES** GEOTECH

The inspiration for Geotech comes from Madeira, an island in the Atlantic Ocean off the coast of Africa named after its dense forest covering (madeira means wood in Portuguese, the language of the first colonizers). Madeira belongs to an archipelago of volcanic origin, and one of its features is a special stone that has the appearance of fossil wood – Madeira stone, the source of inspiration for Geotech.

This collection of fine porcelain stoneware tiles was created by putting together the typical patterns of natural stone with new, original combinations of colour. With four available colours and two surface designs, Geotech tiles can meet all the requirements of modern architecture.

The "Canneté" version is particularly innovative, with parallel engraved lines running over the entire surface of the tile, re-interpreting the typical mouldings made on wooden planks for exteriors. This eminently non-slip surface is the ideal solution for gardens, poolsides, terraces and verandas.

The Geotech colour schemes are divided in two families: neutral tones directly inspired by the natural shades of Madeira stone, and pure colours developed by the Style Division and Florim laboratories.







## **FLOOR GRES** INDUSTRIAL/

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The materials research carried out by Floor Gres is enriched by a new interpretation of cement with "Industrial", offering a new style with an industrial accent, inspired by the world of machines filtered through an aesthetic vision. Erstwhile factories become modern metropolitan lofts, perfectly integrated in the surrounding area and given a warm touch by the presence of elements in wood and metal to offer new design inspirations and broaden the decorative possibilities of this Floor Gres range.

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**EFFICIENTLY AND  
CAPTIVATINGLY**



This neutral and linear surface is distinguished for being modern and simple, expressing itself through a mix of colours, sizes and decorations. Industrial presents itself in its purest form, to be used across the board, efficiently and captivatingly, in every architectural project.





# FLOORTECH/1.0

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This collection completes the Floor Gres range for integrated design, giving a new connotation to a natural element – stone – which has always been a constant in products from this technical brand.

The importance of origin, the strength of matter and the creativity of processing are all combined with the atmospheres of a thousand-year-old culture, using the perfect technology to become modern. Floortech/ 1.0 continues in the same vein of sophistication that Floorgres has always pursued, setting itself apart from standard styles, continuously challenging and experimenting. These 5 stones are the symbol of a strong and personal choice, giving life to intuitive projects with colours to create new shapes of living.

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Geometrical and three-dimensional decorations demonstrate a thorough research for spectacular yet well-ordered spaces. The colours appearing on tiles in sizes that are highly versatile guarantee the product's functionality for any solution in application and destination of use.







**SYMBOL OF STRONG  
AND PERSONAL CHOICE**



# STONTECH/1.0

Aware of having to consistently and responsibly handle relations with the natural and environmental resources, Floor Gres has realised Stontech/1.0, a series of 3 colours, realised in fine porcelain stoneware, inspired by the aesthetics of other natural stones and answers a contemporary design need.

Stontech/1.0 is proposed in one superficial finishes: natural ( available in 3 colours )

Versatile and innovative product, Stontech/1.0 offer maximum design freedom both in a public environment with a lot of traffic, and in the internal tiling of private spaces where it can develop refined surfaces.

The large sizes 60x60 makes it ideal for the realisation of ventilated walls.





# MU TIN A DÉCHIRER

"We share curiosity, the desire to question, not to take anything for granted and not to surrender. Déchirer comes from the idea of creating a surface inspired by the opacity and chromatism of concrete but also preserving its identity of ceramics."

"We work for four hands, always taking part into the creative and production process, and also enjoying it." Patricia Urquiola



A highly innovative collection, not only for the patterns and textures, but also for the production system. Thanks to the CONTINUA technology, large slabs of the latest generation unglazed homogeneous porcelain stoneware are produced. Press-finished with 12 mm thickness, the tiles are perfectly rectified, single-work size and modular. The colours and decorations, based on rich and pleasing ceramic effects, are simply obtained by the distribution of quality porcelain stoneware mixtures. The technical features are far superior to the limits required by international standards for tiles destined to heavy traffic areas. Déchirer is available in a 5 colours palette - Bianco, Nero, Grigio, Ecrù and Piombo in the textures Decor and Neutral

# MUTINA AZULEJ

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Azulej, the new tiles collection which Patricia Urquiola has designed for Mutina, reminds of the ancient handcrafted majolica, made of hydraulic cement. This tradition - revised with a contemporary look - is serially realized in 20x20 cm. It is a strong review of the patchwork composition: an innovative mix and patch, deliberately random, which combines abstract patterns and subtle, neutral colors, a little used. The colors are fixed on the material in an irregular and natural way. A unique and surprising result, which offers compositional freedom and a distinctive design, which preserves the handmade features and combines them with the performances of a high technology material suitable for floors and walls.

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"With the collection Azulej, we would like to evaluate the memory of the hydraulic cement, experimenting an innovative digital printing technique which enables the production of a high diffusion product. The patterns deliberately combine different aesthetic languages: memories, geometrical schemes, floral design, all developed both in a longitudinal and diagonal direction. The process has exponentially developed, and we have managed only to sketch some possible combinations..and now, it's up to you!"

Patricia Urquiola



MEMORIES, GEOMETRICAL  
SCHEMES, FLORAL DESIGN



LAMINAM®

# OXIDE

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For anyone looking for a tall, dark, and handsome type, thin-panel Laminam porcelain is now available in a new Oxide series of glamorous metallics.

Laminam has created 3mm thick porcelain sheet that recreates the authenticity of steel, mono calibrated and with dimensional stability against abrupt changes of temperature, the very characteristics which metals lack.

Because Laminam's porcelain body is reinforced with fiberglass mesh backing, the durable surface skin can be installed over structurally sound substrates including existing tile, wood, or painted walls.

The Oxide line is available in Laminam standard dimensions: 1m by 1m with a 3.5mm thickness. The thin surface is more lightweight than standard cladding materials, making it easy to install on horizontal or vertical surfaces.

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LAMINAM® **FILO**

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Filo is a thin porcelain tile series by Laminam. With a thickness of 3.5mm, Filo uses 1/3 less clay than standard porcelain tiles. Filo allows for fast renovations with very little downtime because it is large-format and it can be applied over existing substrates, negating the need to remove existing materials. In addition, thin tile equates to less mess while sawing on site, and more efficient transport.

Special attention to surface texture is the hallmark of Filo by Laminam; it comes in three colour schemes recalling metals - with a surprising three-dimensional effect.

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**PRODUCT**  
INFORMATION



**MARBLE GRAY (LUCIDO)**  
24" x 48" (600 X 1,200 mm.)



**MARBLE BROWN (LUCIDO)**  
24" x 48" (600 X 1,200 mm.)



**MARBLE BLACK (LUCIDO)**  
24" x 48" (600 X 1,200 mm.)





**CALACATTA (LUCIDO)**  
24" x 48" (600 X 1,200 mm.)



**PALISSANDRO (LUCIDO)**  
24" x 48" (600 X 1,200 mm.)  
32" x 32" (800 X 800 mm.)



**BIANCO SORRENTO (LUCIDO)**  
24" x 48" (600 X 1,200 mm.)





**MADREPERLA (LUCIDO)**  
32" x 32" (800 X 800 mm.)  
24" x 48" (600 X 1,200 mm.)





**CREAM OAK (SOFT)**  
6" x 48" (150 X 1,200 mm.)  
8" x 48" (200 X 1,200 mm.)



**BROWN OAK (SOFT)**  
6" x 48" (150 X 1,200 mm.)  
8" x 48" (200 X 1,200 mm.)



**GRAY OAK (SOFT)**  
6" x 48" (150 X 1,200 mm.)  
8" x 48" (200 X 1,200 mm.)



**AMBER OAK (SOFT)**  
6" x 48" (150 X 1,200 mm.)  
8" x 48" (200 X 1,200 mm.)





**HOST**  
6" x 36" (150 X 900 mm.)



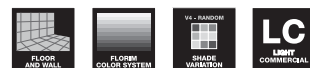
**SOMMER**  
6" x 36" (150 X 900 mm.)



**VAR**  
6" x 36" (150 X 900 mm.)



**VINTER**  
6" x 36" (150 X 900 mm.)







**IVOIRE**  
8" x 32" (200 X 800 mm.)  
32" x 32" (800 X 800 mm.)



**IVOIRE (MURETTO 3D)**  
12" x 12" (300 X 300 mm.)



**GRIS**  
8" x 32" (200 X 800 mm.)  
32" x 32" (800 X 800 mm.)



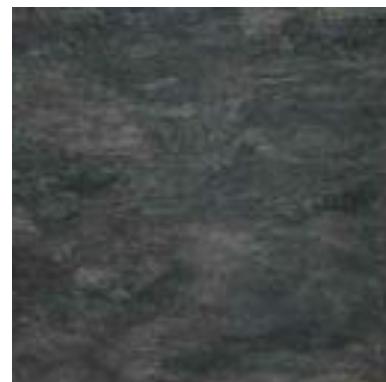
**GRIS (MURETTO 3D)**  
12" x 12" (300 X 300 mm.)



**PLOMBE**  
8" x 32" (200 X 800 mm.)  
32" x 32" (800 X 800 mm.)



**PLOMBE (MURETTO 3D)**  
12" x 12" (300 X 300 mm.)



**NOIR**  
8" x 32" (200 X 800 mm.)  
32" x 32" (800 X 800 mm.)



**NOIR (MURETTO 3D)**  
12" x 12" (300 X 300 mm.)





**WHITE**  
(NATURAL)  
12" x 24" (300 X 600 mm.)  
(SOFT)  
16" x 32" (400 X 800 mm.)



**BEIGE**  
(NATURAL)  
12" x 24" (300 X 600 mm.)  
(SOFT)  
16" x 32" (400 X 800 mm.)



**GRAY**  
(NATURAL)  
12" x 24" (300 X 600 mm.)  
(SOFT)  
16" x 32" (400 X 800 mm.)



**BLACK**  
(NATURAL)  
12" x 24" (300 X 600 mm.)  
(SOFT)  
16" x 32" (400 X 800 mm.)





**GEOWHITE (NATURAL)**  
16" x 32" (400 X 800 mm.)  
32" x 32" (800 X 800 mm.)



**GEOGRAY (NATURAL)**  
16" x 32" (400 X 800 mm.)  
32" x 32" (800 X 800 mm.)



**GEOBLACK (NATURAL)**  
16" x 32" (400 X 800 mm.)  
32" x 32" (800 X 800 mm.)



**GEOBLUE (NATURAL)**  
16" x 32" (400 X 800 mm.)  
32" x 32" (800 X 800 mm.)



**GEOWHITEE (CANNETE)**  
5" x 32" (130 X 800 mm.)



**GEOGRAY (CANNETE)**  
5" x 32" (130 X 800 mm.)



**GEOBLACK (CANNETE)**  
5" x 32" (130 X 800 mm.)





**STEEL**  
(SOFT)  
8" x 32" (200 X 800 mm.)  
32" x 32" (800 X 800 mm.)  
(NATURAL)  
16" x 32" (400 X 800 mm.)



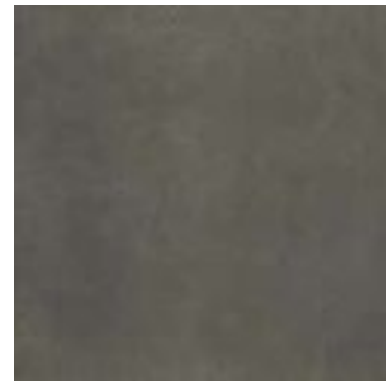
**IVORY**  
(SOFT)  
8" x 32" (200 X 800 mm.)  
32" x 32" (800 X 800 mm.)  
(NATURAL)  
16" x 32" (400 X 800 mm.)



**SAGE**  
(SOFT)  
8" x 32" (200 X 800 mm.)  
32" x 32" (800 X 800 mm.)  
(NATURAL)  
16" x 32" (400 X 800 mm.)



**MOKA**  
(SOFT)  
8" x 32" (200 X 800 mm.)  
32" x 32" (800 X 800 mm.)  
(NATURAL)  
16" x 32" (400 X 800 mm.)



**PLOMB**  
(SOFT)  
8" x 32" (200 X 800 mm.)  
32" x 32" (800 X 800 mm.)  
(NATURAL)  
16" x 32" (400 X 800 mm.)



**SA-PL-ST (LISTELLO 3D)**  
6" x 24" (150 X 600 mm.)

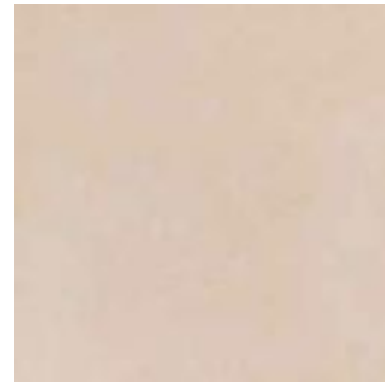


**IV-MO-TA (LISTELLO 3D)**  
6" x 24" (150 X 600 mm.)

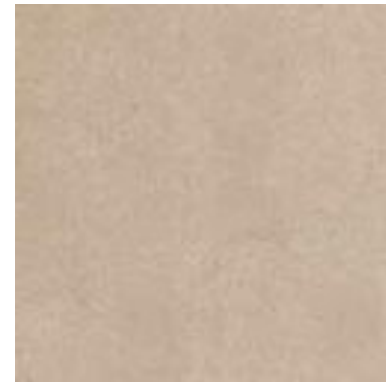




**1.0 (SOFT)**  
16" x 32" (400 X 800 mm.)  
32" x 32" (800 X 800 mm.)



**2.0 (SOFT)**  
16" x 32" (400 X 800 mm.)  
32" x 32" (800 X 800 mm.)



**5.0 (SOFT)**  
16" x 32" (400 X 800 mm.)  
32" x 32" (800 X 800 mm.)



**6.0 (SOFT)**  
16" x 32" (400 X 800 mm.)  
32" x 32" (800 X 800 mm.)



**8.0 (SOFT)**  
16" x 32" (400 X 800 mm.)  
32" x 32" (800 X 800 mm.)



**1.0 (CANNETE)**  
16" x 32" (400 X 800 mm.)



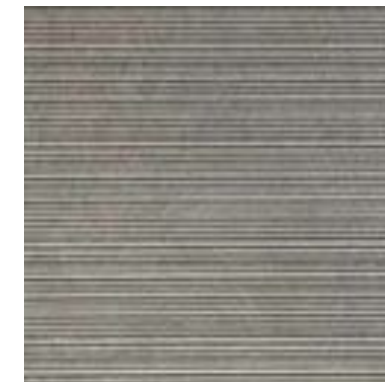
**2.0 (CANNETE)**  
16" x 32" (400 X 800 mm.)



**5.0 (CANNETE)**  
16" x 32" (400 X 800 mm.)



**6.0 (CANNETE)**  
16" x 32" (400 X 800 mm.)



**8.0 (CANNETE)**  
16" x 32" (400 X 800 mm.)



**(LISTELLO MIX 3D)**  
12" x 24" (300 X 600 mm.)  
ALSO AVAILABLE  
IN COLOR: 1.0, 2.0, 5.0, 6.0, 8.0



**WHITE / 2.0 (NATURAL)**  
24" x 24" (600 X 600 mm.)



**BEIGE / 1.0 (NATURAL)**  
24" x 24" (600 X 600 mm.)



**BEIGE / 2.0 (NATURAL)**  
24" x 24" (600 X 600 mm.)

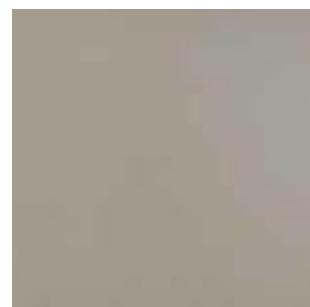




**BIANCO (NEUTRAL)**  
24" x 48" (600 X 1,200 mm.)



**BIANCO (DECOR)**  
24" x 48" (600 X 1,200 mm.)



**GRIGIO (DECOR)**  
24" x 48" (600 X 1,200 mm.)



**GRIGIO (DECOR)**  
24" x 48" (600 X 1,200 mm.)



**ECRÙ (DECOR)**  
24" x 48" (600 X 1,200 mm.)



**ECRÙ (DECOR)**  
24" x 48" (600 X 1,200 mm.)



**PIOMBO (NEUTRAL)**  
24" x 48" (600 X 1,200 mm.)



**PIOMBO (DECOR)**  
24" x 48" (600 X 1,200 mm.)



**NERO (NEUTRAL)**  
24" x 48" (600 X 1,200 mm.)



**NERO (DECOR)**  
24" x 48" (600 X 1,200 mm.)

P.66-67  
THICKNESS 12 mm.





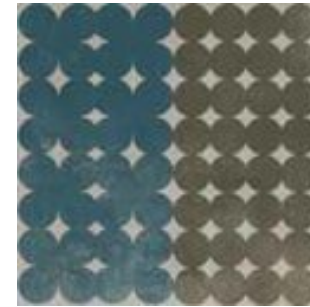
TREVÓ



FLORES



RENDA



TREVÓ



FLORES



RENDA



ESTRELA



PRATA



CUBO



ESTRELA



PRATA



CUBO



TRAMA



GIRA



DIAGONAL



TRAMA



GIRA



DIAGONAL

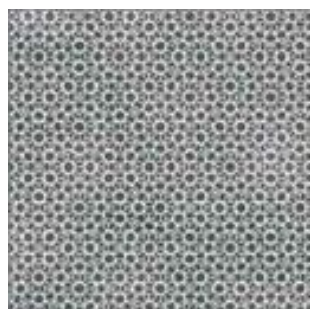




TREVO



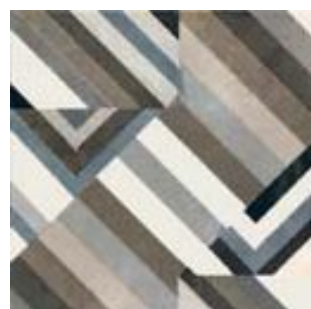
FLORES



RENDA



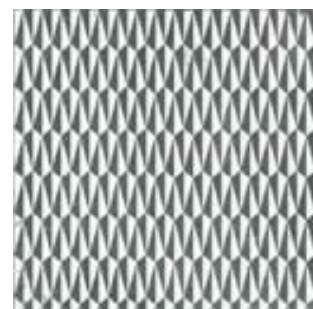
ESTRELA



PRATA



CUBO



TRAMA



GIRA



DIAGONAL



COMBINATION  
BIANCO



COMBINATION  
NERO



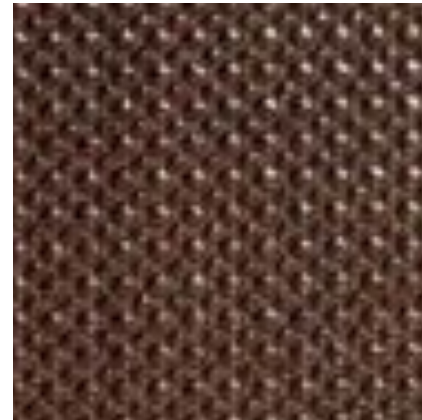
COMBINATION  
GRIGIO



**ARGENTO**  
40" x 40" (1,000 X 1,000 mm.)  
40" x 120" (1,000 X 3,000 mm.)



**ORO**  
40" x 40" (1,000 X 1,000 mm.)  
40" x 120" (1,000 X 3,000 mm.)



**BRONZO**  
40" x 40" (1,000 X 1,000 mm.)  
40" x 120" (1,000 X 3,000 mm.)



**MORO**  
40" x 40" (1,000 X 1,000 mm.)  
40" x 120" (1,000 X 3,000 mm.)





# I MARMI DI REX

## TECHNICAL CHARACTERISTICS

COLOURED BODY PORCELAIN STONEWARE

Specification Reference: E.N. 14411, Appendix G, Bunch B1a, GL			
	LENGTH AND WIDTH: ADMITTED DEVIATION, IN %, OF THE AVERAGE SIZE OF EACH TILE FROM THE PRODUCTION DIMENSIONS	ISO 10545-2	±0.6%
	LENGTH AND WIDTH: ADMITTED DEVIATION, IN %, OF THE AVERAGE SIZE OF EACH TILE FROM THE AVERAGE OF 10 SAMPLE PIECES		±0.15%
	THICKNESS		±5%
	EDGE STRAIGHTNESS		±0.1%
	SQUARENESS		±0.2%
	FLATNESS		±0.35%
	SURFACE QUALITY		CONFORMING
	% WATER ABSORPTION	ISO 10545-3	< 0.1%
	BREAKAGE RESISTANCE IN N	ISO 10545-4	spessore ≥ 7,5 mm >1700
	N/mm² FLEXURAL STRENGTH TEST		> 40
	ABRASION RESISTANCE	ISO 10545-7	GRAY CLASS: Ix BROWN CLASS: IV BLACK CLASS: II
	THERMAL SHOCKS RESISTANT	ISO 10545-9	RESISTANT
	FROST RESISTANCE	ISO 10545-12	RESISTANT
	RESISTANCE TO LOW CONCENTRATIONS OF ACIDS AND ALKALIS	ISO 10545-13	GLA naturale / matte
	RESISTANCE TO DOMESTIC CHEMICAL PRODUCTS AND ADDITIVES FOR SWIMMING POOLS	ISO 10545-13	GA naturale / matte
	RESISTANCE TO STAINING	ISO 10545-14	4
	FRICION COEFFICIENT (SLIPPERINESS)	DIN 51130 ASTM C1028	R9 naturale / matte DRYWET > 0.6 naturale / matte
	GLAZE CRAZING RESISTANCE	ISO 10545-11	RESISTANT

FOR OPTIMAL INSTALLATION RESULTS, FLORIM RECOMMENDS MAINTAINING A JOINT OF 2 MM 1/12" FOR SINGLE FORMAT INSTALLATIONS AND 3 MM 1/8" TO COMBINE MIXED FORMATS



# ALABASTRI DI REX

## TECHNICAL CHARACTERISTICS

COLOURED BODY PORCELAIN STONEWARE

Specification Reference: E.N. 14411, Appendix G, Bunch B1a, GL			
	LENGTH AND WIDTH: ADMITTED DEVIATION, IN %, OF THE AVERAGE SIZE OF EACH TILE FROM THE PRODUCTION DIMENSIONS	ISO 10545-2	±0.6%
	LENGTH AND WIDTH: ADMITTED DEVIATION, IN %, OF THE AVERAGE SIZE OF EACH TILE FROM THE AVERAGE OF 10 SAMPLE PIECES		±0.15%
	THICKNESS		±5%
	EDGE STRAIGHTNESS		±0.1%
	SQUARENESS		±0.2%
	FLATNESS		±0.35%
	SURFACE QUALITY		CONFORMING
	% WATER ABSORPTION	ISO 10545-3	< 0.1%
	BREAKAGE RESISTANCE IN N	ISO 10545-4	spessore ≥ 7,5 mm >1700
	N/mm² FLEXURAL STRENGTH TEST		> 40
	ABRASION RESISTANCE	ISO 10545-7	CLASS IV
	THERMAL SHOCKS RESISTANT	ISO 10545-9	RESISTANT
	FROST RESISTANCE	ISO 10545-12	RESISTANT
	RESISTANCE TO LOW CONCENTRATIONS OF ACIDS AND ALKALIS	ISO 10545-13	GLA naturale / matte
	RESISTANCE TO DOMESTIC CHEMICAL PRODUCTS AND ADDITIVES FOR SWIMMING POOLS	ISO 10545-13	GA naturale / matte
	FRICION COEFFICIENT (SLIPPERINESS)	DIN 51130 ASTM C1028	R9 naturale / matte DRYWET > 0.6 naturale / matte
	RESISTANCE TO STAINING	ISO 10545-14	4
	GLAZE CRAZING RESISTANCE	ISO 10545-11	RESISTANT

FOR OPTIMAL INSTALLATION RESULTS, FLORIM RECOMMENDS MAINTAINING A JOINT OF 2 MM 1/12" FOR SINGLE FORMAT INSTALLATIONS AND 3 MM 1/8" TO COMBINE MIXED FORMATS  
THE TEST RESULTS REFER ONLY TO FIRST CLASS ITEMS AND THEY DO NOT REGARD THE TRIM PIECES



# I BIANCHI DI REX

## TECHNICAL CHARACTERISTICS

GLAZED PORCELAIN STONEWARE

Specification Reference: E.N. 14411, Appendix G, Bunch B1a, GL			
	LENGTH AND WIDTH: ADMITTED DEVIATION, IN %, OF THE AVERAGE SIZE OF EACH TILE FROM THE PRODUCTION DIMENSIONS	ISO 10545-2	±0.6%
	LENGTH AND WIDTH: ADMITTED DEVIATION, IN %, OF THE AVERAGE SIZE OF EACH TILE FROM THE AVERAGE OF 10 SAMPLE PIECES		±0.15%
	THICKNESS		±5%
	EDGE STRAIGHTNESS		±0.1%
	SQUARENESS		±0.2%
	FLATNESS		±0.35%
	SURFACE QUALITY		CONFORMING
	% WATER ABSORPTION	ISO 10545-3	< 0.1%
	BREAKAGE RESISTANCE IN N	ISO 10545-4	spessore ≥ 7,5 mm >1700
	N/mm² FLEXURAL STRENGTH TEST		> 40
	ABRASION RESISTANCE	ISO 10545-7	CLASS IV
	THERMAL SHOCKS RESISTANT	ISO 10545-9	RESISTANT
	FROST RESISTANCE	ISO 10545-12	RESISTANT
	RESISTANCE TO LOW CONCENTRATIONS OF ACIDS AND ALKALIS	ISO 10545-13	GLA naturale / matte
	RESISTANCE TO DOMESTIC CHEMICAL PRODUCTS AND ADDITIVES FOR SWIMMING POOLS	ISO 10545-13	GA naturale / matte
	RESISTANCE TO STAINING	ISO 10545-14	4
	FRICION COEFFICIENT (SLIPPERINESS)	DIN 51130 ASTM C1028	R9 naturale / matte DRYWET > 0.6 naturale / matte
	GLAZE CRAZING RESISTANCE	ISO 10545-11	RESISTANT

FOR OPTIMAL INSTALLATION RESULTS, FLORIM RECOMMENDS MAINTAINING A JOINT OF 2 MM 1/12" FOR SINGLE FORMAT INSTALLATIONS AND 3 MM 1/8" TO COMBINE MIXED FORMATS



# SELECTION OAK

## TECHNICAL CHARACTERISTICS

FINE PORCELAIN STONEWARE

Specification Reference: E.N. 14411, Appendix G, Bunch B1a, UGL			
	LENGTH AND WIDTH: ADMITTED DEVIATION, IN %, OF THE AVERAGE SIZE OF EACH TILE FROM THE PRODUCTION DIMENSIONS	ISO 10545-2	±0.6%
	LENGTH AND WIDTH: ADMITTED DEVIATION, IN %, OF THE AVERAGE SIZE OF EACH TILE FROM THE AVERAGE OF 10 SAMPLE PIECES		±0.15%
	THICKNESS		±5%
	EDGE STRAIGHTNESS		±0.1%
	SQUARENESS		±0.2%
	FLATNESS		±0.35%
	SURFACE QUALITY		CONFORMING
	% WATER ABSORPTION	ISO 10545-3	< 0.1%
	BREAKAGE RESISTANCE IN N	ISO 10545-4	> 1700
	N/mm² FLEXURAL STRENGTH TEST		> 40
	ABRASION RESISTANCE	ISO 10545-7	< 175 mm <sup>3</sup>
	THERMAL SHOCKS RESISTANT	ISO 10545-9	RESISTANT
	FROST RESISTANCE	ISO 10545-12	RESISTANT
	RESISTANCE TO LOW CONCENTRATIONS OF ACIDS AND ALKALIS	ISO 10545-13	CLASS ULA
	RESISTANCE TO DOMESTIC CHEMICAL PRODUCTS AND ADDITIVES FOR SWIMMING POOLS	ISO 10545-13	CLASS UA
	RESISTANCE TO STAINING	ISO 10545-14	CLASS 4
	FRICION COEFFICIENT (SLIPPERINESS)	DIN 51130	R9 naturale R11 strutturato
		DIN 51097	Classe C strutturato
		ASTM C 1028	DRY > 0.6 WET > 0.6

FOR OPTIMAL INSTALLATION RESULTS, FLORIM RECOMMENDS MAINTAINING A JOINT OF 2 MM 1/12" FOR SINGLE FORMAT INSTALLATIONS AND 3 MM 1/8" TO COMBINE MIXED FORMATS  
THE TEST RESULTS REFER ONLY TO FIRST CLASS ITEMS AND THEY DO NOT REGARD THE TRIM PIECES



# TAIGA

FINE PORCELAIN STONEWARE

## TECHNICAL CHARACTERISTICS

Specification Reference: E.N. 14411, Appendix G, Bunch B1a, UGL				
TEST METHOD	REFERENCE STANDARD	DECLARED VALUE		
		NATURALE/MATT	SOFT	
	LENGTH AND WIDTH: ADMITTED DEVIATION, IN %, OF THE AVERAGE SIZE OF EACH TILE FROM THE PRODUCTION DIMENSIONS	ISO 10545-2	±0.6%	
	LENGTH AND WIDTH: ADMITTED DEVIATION, IN %, OF THE AVERAGE SIZE OF EACH TILE FROM THE AVERAGE OF 10 SAMPLE PIECES		±0.5% ±0.15% (squared)	
	THICKNESS		±5%	
	EDGE STRAIGHTNESS		±0.5% ±0.10% (squared)	
	SQUARENESS		±0.6% ±0.20% (squared)	
	FLATNESS		±0.35%	
	SURFACE QUALITY		CONFORMING	
	% WATER ABSORPTION	ISO 10545-3	< 0.1%	
	BREAKAGE RESISTANCE IN N	ISO 10545-4	> 1700	
	N/mm <sup>2</sup> FLEXURAL STRENGTH TEST		> 40	
	ABRASION RESISTANCE	ISO 10545-6	< 150 mm <sup>3</sup>	
	THERMAL SHOCKS RESISTANT	ISO 10545-9	RESISTANT	
	FROST RESISTANCE	ISO 10545-12	RESISTANT	
	RESISTANCE TO LOW CONCENTRATIONS OF ACIDS AND ALKALIS	ISO 10545-13	CLASS	U/A
	RESISTANCE TO DOMESTIC CHEMICAL PRODUCTS AND ADDITIVES FOR SWIMMING POOLS	ISO 10545-13	CLASS	U/A
	RESISTANCE TO STAINING	ISO 10545-14	CLASS	4
	RESISTANCE TO DOMESTIC CHEMICAL PRODUCTS AND ADDITIVES FOR SWIMMING POOLS	ISO 10545-14	CLASS	4
	FRICTION COEFFICIENT (SLIPPERINESS)	DIN 51130	R9 naturale R11 grip	
		DIN 51097	Class C grip	
		ASTM C 1028	DRY > 0.6 WET > 0.6	

FOR OPTIMAL INSTALLATION RESULTS, FLOORIM RECOMMENDS MAINTAINING A JOINT OF 2 MM - 1/12" FOR SINGLE FORMAT INSTALLATIONS AND 3 MM - 1/8" TO COMBINE MIXED FORMATS. THE TEST RESULTS REFER ONLY TO FIRST CLASS ITEMS AND THEY DO NOT REGARD THE TRIM PIECES.



# ARDOISE

FINE PORCELAIN STONEWARE

Specification Reference: E.N. 14411, Appendix G, Bunch B1a, UGL				
TEST METHOD	REFERENCE STANDARD	DECLARED VALUE		
		NATURALE/MATT	CANNETE	
	LENGTH AND WIDTH: ADMITTED DEVIATION, IN %, OF THE AVERAGE SIZE OF EACH TILE FROM THE PRODUCTION DIMENSIONS	ISO 10545-2	±0.6%	
	LENGTH AND WIDTH: ADMITTED DEVIATION, IN %, OF THE AVERAGE SIZE OF EACH TILE FROM THE AVERAGE OF 10 SAMPLE PIECES		±0.5% ±0.15% (squared)	
	THICKNESS		±5%	
	EDGE STRAIGHTNESS		±0.5% ±0.10% (squared)	
	SQUARENESS		±0.6% ±0.20% (squared)	
	FLATNESS		±0.35%	
	SURFACE QUALITY		CONFORMING	
	% WATER ABSORPTION	ISO 10545-3	< 0.1%	
	BREAKAGE RESISTANCE IN N	ISO 10545-4	> 1700	
	N/mm <sup>2</sup> FLEXURAL STRENGTH TEST		> 40	
	ABRASION RESISTANCE	ISO 10545-6	< 150 mm <sup>3</sup>	
	THERMAL SHOCKS RESISTANT	ISO 10545-9	RESISTANT	
	FROST RESISTANCE	ISO 10545-12	RESISTANT	
	RESISTANCE TO LOW CONCENTRATIONS OF ACIDS AND ALKALIS	ISO 10545-13	CLASS	U/A
	RESISTANCE TO DOMESTIC CHEMICAL PRODUCTS AND ADDITIVES FOR SWIMMING POOLS	ISO 10545-13	CLASS	U/A
	RESISTANCE TO STAINING	ISO 10545-14	CLASS	4
	RESISTANCE TO DOMESTIC CHEMICAL PRODUCTS AND ADDITIVES FOR SWIMMING POOLS	ISO 10545-14	CLASS	4
	FRICTION COEFFICIENT (SLIPPERINESS)	DIN 51130	R10 naturale R11 grip	
		DIN 51097	Class B grip	
		ASTM C 1028	DRY > 0.6 WET > 0.6	

FOR OPTIMAL INSTALLATION RESULTS, FLOORIM RECOMMENDS MAINTAINING A JOINT OF 2 MM - 1/12" FOR SINGLE FORMAT INSTALLATIONS AND 3 MM - 1/8" TO COMBINE MIXED FORMATS. THE TEST RESULTS REFER ONLY TO FIRST CLASS ITEMS AND THEY DO NOT REGARD THE TRIM PIECES.



# WALKS / 1.0

FINE PORCELAIN STONEWARE

## TECHNICAL CHARACTERISTICS

TEST METHOD	REFERENCE STANDARD	DECLARED VALUE		
		NATURALE/MATT	SOFT	
	DIMENSIONAL CHARACTERISTICS	ISO 10545-2	CONFORMING	
	% WATER ABSORPTION	ISO 10545-3	E < 0.5%	E < 0.1%
	BREAKAGE RESISTANCE IN N (SP, > = 7,5 MM.)	ISO 10545-4	1300 MIN.	> 1700
	N/mm <sup>2</sup> FLEXURAL STRENGTH TEST		35 MIN	> 40
	RESISTANCE TO DEEP ABRASION OF UNGLAZED TILES	ISO 10545-6	< 175 mm <sup>3</sup>	< 150
	THERMAL SHOCKS RESISTANT	ISO 10545-9	REQUIRED	RESISTANT
	FROST RESISTANCE	ISO 10545-12	REQUIRED	RESISTANT
	RESISTANCE TO HIGH CONCENTRATIONS OF ACIDS AND ALKALI	ISO 10545-13	SEE MANUFACTURER'S DECLARATION	U/A
	RESISTANCE TO LOW CONCENTRATIONS OF ACIDS AND ALKALI		U/A	
	RESISTANCE TO DOMESTIC CHEMICALS AND ADDITIVES FOR SWIMMING POOLS		UB MIN	U/A
	RESISTANCE TO STAINING	ISO 10545-14	-	4
	RESISTANCE TO DOMESTIC CHEMICALS AND ADDITIVES FOR SWIMMING POOLS	ISO 10545-14	-	4
	FRICTION COEFFICIENT (SLIPPERINESS)	DIN 51130	-	R11
		DIN 51097	-	CL C
		ASTM C1028	-	> 0.6 dry and wet

FOR OPTIMAL INSTALLATION RESULTS, FLOOR GRES RECOMMENDS MAINTAINING A JOINT OF 2 MM - 1/12" FOR SINGLE FORMAT INSTALLATIONS AND 3 MM - 1/8" TO COMBINE MIXED FORMATS.

N.B. The test results refer only to first class items and they do not regard the trim pieces.

MATERIAL PURPOSELY MADE WITH VARIATION IN TERMS OF COLOUR AND STRUCTURE. ENVISAGE MIXED INSTALLATION TAKING TILES FROM SEVERAL BOXES AT THE SAME TIME.



# GEOTECH

FINE PORCELAIN STONEWARE

## TECHNICAL CHARACTERISTICS

TEST METHOD	REFERENCE STANDARD	DECLARED VALUE		
		NATURALE/MATT	CANNETE	
	DIMENSIONAL CHARACTERISTICS	ISO 10545-2	CONFORMING	
	% WATER ABSORPTION	ISO 10545-3	E < = 0.5%	E < = 0.1%
	BREAKAGE RESISTANCE IN N (SP, > = 7,5 MM.)	ISO 10545-4	1300 MIN.	> 1700
	N/mm <sup>2</sup> FLEXURAL STRENGTH TEST		35 MIN	> 45
	RESISTANCE TO DEEP ABRASION OF UNGLAZED TILES	ISO 10545-6	< 175 mm <sup>3</sup>	< 150
	THERMAL SHOCKS RESISTANT	ISO 10545-9	-	RESISTANT
	FROST RESISTANCE	ISO 10545-12	REQUIRED	RESISTANT
	RESISTANCE TO HIGH CONCENTRATIONS OF ACIDS AND ALKALI	ISO 10545-13	SEE MANUFACTURER'S DECLARATION	U/A
	RESISTANCE TO LOW CONCENTRATIONS OF ACIDS AND ALKALI		U/A	
	RESISTANCE TO DOMESTIC CHEMICALS AND ADDITIVES FOR SWIMMING POOLS		UB MIN	U/A
	FRICTION COEFFICIENT (SLIPPERINESS)	DIN 51130	-	R11
		DIN 51097	-	CL A + B + C
		ASTM C1028	-	> 0.6 dry and wet

FOR OPTIMAL INSTALLATION RESULTS, FLOOR GRES RECOMMENDS MAINTAINING A JOINT OF 2 MM - 1/12" FOR SINGLE FORMAT INSTALLATIONS AND 3 MM - 1/8" TO COMBINE MIXED FORMATS.

N.B. The test results refer only to first class items and they do not regard the trim pieces.



# INDUSTRIAL/

SQUARED

## TECHNICAL CHARACTERISTICS

FINE PORCELAIN STONWARE

	Specification Reference: E.N. 14411, Appendix G, Bunch B1a, UGL	TEST METHOD	REFERENCE STANDARD	DECLARED VALUE
	DIMENSIONAL CHARACTERISTICS	ISO 10545-2	CONFORMING	CONFORMING
	% WATER ABSORPTION	ISO 10545-3	< 0,5%	< 0,1%
	BREAKAGE RESISTANCE IN N (SP. > = 7,5 MM.)	ISO 10545-4	sp. >7,5 mm 1300 MIN. sp. <7,5 mm 700 MIN.	> 1700 > 700
	N/mm <sup>2</sup> FLEXURAL STRENGTH TEST		35 MIN.	> 35
	RESISTANCE TO DEEP ABRASION OF UNGLAZED TILES	ISO 10545-6	< 175 mm <sup>3</sup>	< 150 mm <sup>3</sup>
	THERMAL SHOCKS RESISTANT	ISO 10545-9	-	RESISTANT
	FROST RESISTANCE	ISO 10545-12	REQUIRED	RESISTANT
	RESISTANCE TO HIGH CONCENTRATIONS OF ACIDS AND ALKALI	ISO 10545-13	SEE MANUFACTURER'S DECLARATION.	UHA
	RESISTANCE TO LOW CONCENTRATIONS OF ACIDS AND ALKALI			ULA
	RESISTANCE TO DOMESTIC CHEMICALS AND ADDITIVES FOR SWIMMING POOLS			MIN B
	RESISTANCE TO STAINING	ISO 10545-14	-	4
	FRICTION COEFFICIENT (SLIPPERINESS)	DIN 51130	-	R9 SOFT R10 NATURALE
		DIN 51097	-	CLASS A+B (NATURALE)
		ASTM C1028	-	>0,6 dry and wet (NATURALE)

FOR OPTIMAL INSTALLATION RESULTS, FLOOR GRES RECOMMENDS MAINTAINING A JOINT OF 2 MM - 1/12" FOR SINGLE FORMAT INSTALLATIONS AND 3 MM - 1/8" TO COMBINE MIXED FORMATS. THE DATA IN THE TECHNICAL TABLE DOES NOT APPLY TO SIZE 120x300 CM.

N.B.

The test results refer only to first class items and they do not regard the trim pieces.



# STONTECH/1.0

FINE PORCELAIN STONWARE

## TECHNICAL CHARACTERISTICS

	Specification Reference: E.N. 14411, Appendix G, Bunch B1a,	TEST METHOD	REFERENCE STANDARD	DECLARED VALUE
			S>410	NATURALEMATT
	DIMENSIONAL CHARACTERISTICS	ISO 10545-2		CONFORMING
	% WATER ABSORPTION	ISO 10545-3	E < = 0,5%	E < = 0,1%
	BREAKAGE RESISTANCE IN N (SP. > = 7,5 MM.)	ISO 10545-4	1300 MIN.	1700
	N/mm <sup>2</sup> FLEXURAL STRENGTH TEST		35 MIN	> 45
	RESISTANCE TO DEEP ABRASION OF UNGLAZED TILES	ISO 10545-6	< 175 mm <sup>3</sup>	< 150
	THERMAL SHOCKS RESISTANT	ISO 10545-9	REQUIRED	RESISTANT
	FROST RESISTANCE	ISO 10545-12	REQUIRED	RESISTANT
	RESISTANCE TO HIGH CONCENTRATIONS OF ACIDS AND ALKALI	ISO 10545-13	SEE MANUFACTURER'S DECLARATION.	UHA
	RESISTANCE TO LOW CONCENTRATIONS OF ACIDS AND ALKALI			ULA
	RESISTANCE TO DOMESTIC CHEMICALS AND ADDITIVES FOR SWIMMING POOLS			UB MIN
	FRICTION COEFFICIENT (SLIPPERINESS)	DIN 51130	-	R9
		BCR	-	> 0,4
		DPR 503 DEL 24/07/96	-	> 0,4
		ASTM C1028	-	> 0,6

FOR OPTIMAL INSTALLATION RESULTS, FLOOR GRES RECOMMENDS MAINTAINING A JOINT OF 2 MM - 1/12" FOR SINGLE FORMAT INSTALLATIONS AND 3 MM - 1/8" TO COMBINE MIXED FORMATS.

N.B.

The test results refer only to first class items and they do not regard the trim pieces.



# FLOORTECH/1.0

SQUARED

## TECHNICAL CHARACTERISTICS

FINE PORCELAIN STONWARE

	Specification Reference: E.N. 14411, Appendix G, Bunch B1a, UGL	TEST METHOD	REFERENCE STANDARD	DECLARED VALUE
	DIMENSIONAL CHARACTERISTICS	ISO 10545-2		CONFORMING
	% WATER ABSORPTION	ISO 10545-3	< 0,5%	< 0,10%
	BREAKAGE RESISTANCE IN N (SP. > = 7,5 MM.)	ISO 10545-4	1300 MIN.	> 1700
	N/mm <sup>2</sup> FLEXURAL STRENGTH TEST		35 MIN	> 40
	RESISTANCE TO DEEP ABRASION OF UNGLAZED TILES	ISO 10545-6	< 175 mm <sup>3</sup>	< 150 mm <sup>3</sup>
	THERMAL SHOCKS RESISTANT	ISO 10545-9	-	RESISTANT
	FROST RESISTANCE	ISO 10545-12	REQUIRED	RESISTANT
	RESISTANCE TO HIGH CONCENTRATIONS OF ACIDS AND ALKALI	ISO 10545-13	SEE MANUFACTURER'S DECLARATION.	UHA (strutturato/naturale)
	RESISTANCE TO LOW CONCENTRATIONS OF ACIDS AND ALKALI			ULA (strutturato/naturale)
	RESISTANCE TO DOMESTIC CHEMICALS AND ADDITIVES FOR SWIMMING POOLS			MIN B
	RESISTANCE TO STAINING	ISO 10545-14	-	4
	FRICTION COEFFICIENT (SLIPPERINESS)	DIN 51130	-	R9 (SOFT)
		DIN 51097	-	CLASS A+B+C (strutturato)
		ASTM C1028	-	> 0,6 dry and wet

FOR OPTIMAL INSTALLATION RESULTS, FLOOR GRES RECOMMENDS MAINTAINING A JOINT OF 2 MM - 1/12" FOR SINGLE FORMAT INSTALLATIONS AND 3 MM - 1/8" TO COMBINE MIXED FORMATS.

N.B.

The test results refer only to first class items and they do not regard the trim pieces.

# MUTIN A AZULEJ

## TECHNICAL CHARACTERISTICS

standard	features	value required	azulej
ISO 10545/3	water absorption	<0,5%	0,04%
ASTM C373		<0,5%	0,04%
EN 101	surface hardness (scala mohs)	> 5	6
ISO 10545/9	resistance to thermal shock	no visible alteration	resistant
ASTM C484		no samples must show visible defects	unaffected
ISO 10545/12	frost resistance	no visible alteration	resistant
ASTM C1026		unaffected	unaffected
ISO 10545/13	resistance to chemical attacks	no visible alteration	resistant
ASTM C650			unaffected
ISO 10545/4	breaking strength (N)	Sp ≥ 7,5 min 1300	2525,1
DIN 51130 - 04		valori medi 6° ± 10° R9 10° ± 19° R10 19° ± 27° R11 27° ± 35° R12 > 35° R13	R9
ASTM C1028		> 0,60	dry 0,85 wet 0,77

# MUTIN A DÉCHIRER

## TECHNICAL CHARACTERISTICS

standard	features	value required	déchirer
ISO 10545/2	SIZES length and width thickness straightness of edges wedging flatness	± 0,6% ± 5% ± 0,5% ± 0,6% ± 0,5%	± 0,2% ± 3% ± 0,2% ± 0,2% ± 0,3%
ISO 10545/3	water absorption	<0,5%	0,06%
ASTM C373		<0,5%	0,06%
EN 101	surface hardness (scala mohs)	> 5	8
ISO 10545/9	resistance to thermal shock	no visible alteration	resistant
ASTM C484		no samples must show visible defects	unaffected
ISO 10545/12	frost resistance	no visible alteration	resistant
ASTM C1026		unaffected	unaffected
ISO 10545/13	resistance to chemical attacks	no visible alteration	resistant
ASTM C650			unaffected
ISO 10545/4	breaking strength	≥35 N/mm2	61,2 N/mm2
BCRA	anti-slip	> 0,40	dry leather 0,69 wet rub 0,76 dry rub 0,75
DIN 51130 - 04		valori medi 6° ± 10° R9 10° ± 19° R10 19° ± 27° R11 27° ± 35° R12 > 35° R13	neutral R10 decor R10
ASTM C1028		> 0,60	dry neutral 0,76 decor 0,76 wet neutral 0,69 decor 0,69
ISO 10545/14	stains resistance	≥ class 3	5

# LAMINAM FILO

## TECHNICAL CHARACTERISTICS

physical and chemical properties	norm / test method	FILO LAMINAM 3+
size features	ISO 10545-2	max. deviation on the side +/- 0,5 mm
size features	ISO 10545-2	max. deviation on the side +/- 1,0 mm
weight per unit area	Laminam	average value 8,2 kg/m <sup>2</sup>
surface quality	ISO 10545-2	> 95% of tiles with no visible flaws
water absorption	ISO 10545-3	average value 0,1% (< 0,3%)
water absorption	ASTM C373	average value 0,1% (< 0,3%)
breaking strength	ISO 10545-4*	average value 700 N / samples 200x300 mm
modulus of rupture	ISO 10545-4	average value 90 N/mm <sup>2</sup> / samples 40x100 mm
scratch hardness (Mohs)	UNI EN 101	≥ 5
coefficient of linear thermal expansion	ISO 10545-8	6,6 x 10 <sup>-6</sup> /°C
resistance to chemicals	ISO 10545-13	Partial change in appearance surface
resistance to staining	ISO 10545-14	class 5
impact resistance	ISO 10545-5	average value ≥ 0,8
reaction to fire	EN 13501-1	A2 - s1, d0 wall covering A2fl - s1 floor

# LAMINAM OXIDE

## TECHNICAL CHARACTERISTICS

physical and chemical properties	norm / test method	OXIDE LAMINAM 3+
size features	ISO 10545-2	max. deviation on the side +/- 0,5 mm
size features	ISO 10545-2	max. deviation on the side +/- 1,0 mm
weight per unit area	Laminam	average value 8,2 kg/m <sup>2</sup>
surface quality	ISO 10545-2	> 95% of tiles with no visible flaws
water absorption	ISO 10545-3	average value 0,1% (< 0,3%)
water absorption	ASTM C373	average value 0,1% (< 0,3%)
breaking strength	ISO 10545-4*	average value 700 N / samples 200x300 mm
modulus of rupture	ISO 10545-4	average value 90 N/mm <sup>2</sup> / samples 40x100 mm
scratch hardness (Mohs)	UNI EN 101	≥ 6
resistance to deep abrasion	ISO 10545-6	≤ 175 mm <sup>3</sup>
coefficient of linear thermal expansion	ISO 10545-8	6,6 x 10 <sup>-6</sup> /°C
thermal shock resistance	ISO 10545-9	resistant
resistance to chemicals	ISO 10545-13	no visible effect
resistance to staining	ISO 10545-14	class 5
frost resistance	ISO 10545-12	resistant
impact resistance	ISO 10545-5	average value ≥ 0,8
coefficient of friction	ASTM C-1028	μ > 0,6 dry
reaction to fire	EN 13501-1	A2 - s1, d0 wall covering A2 F μ - s1 floor

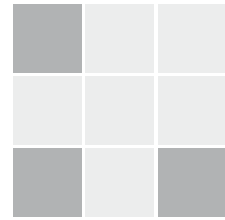
## COLOR VARIATION

### V1 - LOW



The least amount of shade and texture variation, attainable in naturally fired clay products.

### V2 - MODERATE



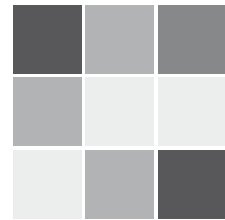
Light to moderate shade and texture variation within each carton.

### V3 - HIGH



High shade texture variation within each carton.

### V4 - RANDOM



Very high shade and texture variation within each carton.

## CLASS OF USE



Indoor public premises with heavy traffic like:  
railway stations, subways, airports, shopping centers, museums, churches, hospitals, banks, public offices, schools, sport centers, hotel halls  
Outdoor public premises with heavy traffic subject to strong static/dynamic loads



Indoor public premises with average traffic like:  
restaurants, bars, offices, shops, laboratories, libraries, conference rooms, hotel corridors.  
Outdoor public premises with average traffic like:  
external staircases, terraces, private gardens.  
Verify the slipping features depending on the environments of destination, in compliance with the laws or Standards in force.

## SYSTEM CERTIFICATION for Floorgres and REX products only



The certification institute is Technischerhungs-Verein (TÜV), chosen for its stringent standards and international recognition.



Florim has voluntarily become a member of the U.S. Green Building Council (USGBC), the most important American association dedicated to environmentally sustainable building design and construction according to precise directives, which must be followed in order to obtain LEED (Leadership in Energy and Environmental Design) certification, a rating system that measures the sustainability of a project. Using Florim products contributes to getting points to achieve LEED certification.



To underline our care for the environment and our pledge to protect it in accordance with the ISO 14021 standards (Environment labels and declarations), Florim affirms its commitment to continual technological innovation of the industrial processes.



For further details and information and to download the CE marks: [www.florim.it](http://www.florim.it)

## PRODUCT SIZES

All product sizes are only indicative figures and may vary from the actual size of the products. Please consult our sales representatives for further information.

# วิธีการติดตั้งกระเบื้องแผ่นใหญ่

## คุณสมบัติของสินค้า

กระเบื้องเคลือบสี (Glazed Porcelain, GP) เฟอร์เซียมต่ำการดูดซึมน้ำ (WA) < 0.5%, Type B Ia – ISO 13006 เป็นกระเบื้องเคลือบสีที่มีความแข็งแรงของกระเบื้องสูง (มี %การดูดซึมน้ำต่ำมาก) เหมาะสำหรับการติดตั้งทุกพื้นที่ ทั้งภายในและภายนอกของอาคาร ในพื้นที่สาธารณะที่มีปริมาณการสัญจรสูงๆ เช่น ห้างสรรพสินค้า ห้องโถงโรงแรม ทางเดินสาธารณะ เป็นต้น นอกจากนี้ยังสามารถใช้แทนหินธรรมชาติในการทำ Countertop และกรุผนังภายนอกอาคารสูงได้อีกด้วย

## ขนาดและน้ำหนักของกระเบื้อง

NO.	ขนาดกระเบื้อง		พื้นที่		น้ำหนัก / แผ่น kg. / piece
	กว้าง (cm.)	ยาว (cm.)	cm <sup>2</sup>	m <sup>2</sup>	
1	40	80	3200	0.32	7.70
2	60	60	3600	0.36	8.60
3	50	100	5000	0.5	12.00
4	80	80	6400	0.64	15.40
5	60	120	7200	0.72	17.30
6	100	100	10000	1.00	24.00
7	80	160	12800	1.28	30.70
8	120	120	14400	1.44	34.60
9	100	200	20000	2.00	48.00
10	100	300	30000	3.00	72.00
11	120	360	43200	4.32	103.70

## คำแนะนำเบื้องต้น

- ควรอ่านคู่มือการติดตั้งให้เข้าใจ และปฏิบัติตามคำแนะนำทุกครั้งเพื่อป้องกันปัญหาที่อาจเกิดขึ้นจากการติดตั้งและใช้งาน
- เนื่องจากกระเบื้องแผ่นใหญ่น้ำหนักมาก ควรใช้อุปกรณ์เสริม เช่น รถโฟล์คลิฟท์ แวนต์ลิฟท์ ตัวจับกระจก เป็นต้น หรือคนอย่างน้อย 2-3 คน ในการลำเลียง ขนส่ง กอเก็บ และขณะทำการติดตั้ง
- ในขณะทำการลำเลียง ขนส่ง กอเก็บ และติดตั้งกระเบื้องเซรามิก ควรสวมใส่อุปกรณ์ป้องกันส่วนบุคคลทุกครั้ง เช่น แวนต์นิรภัย ถุงมือ รองเท้าเซฟตี้ เข็มขัดป้องกันหลัง เป็นต้น เพื่อป้องกันอันตรายที่อาจเกิดขึ้นจากการทำงาน
- เมื่อทางบริษัทส่งสินค้าเข้าไปที่หน้างาน ควรตรวจสอบสินค้าทุกครั้งว่าอยู่ในสภาพสมบูรณ์ ไม่มีการชำรุดเสียหาย
- หากพบว่าสินค้ามีปัญหา แนะนำให้แจ้งกลับมายังบริษัท เพื่อเปลี่ยนสินค้าใหม่ทันทีไม่ควรนำสินค้าที่มีปัญหา มาติดตั้งและใช้งาน

## คำแนะนำในการติดตั้ง

1. การติดตั้งกระเบื้องในพื้นที่เดียวกันควรเป็นเดคเดียวกันทั้งหมด (ดูจากข้อมูลข้างกล่อง)
2. ในกรณีติดตั้งกระเบื้องในพื้นที่ทั่วไป ที่มีความสูงไม่เกิน 3 เมตร แนะนำวิธีติดตั้งแบบปูแห้งแบบแซนวิช (ติดตั้งด้วยกรวยหรือร่องตัวยูขนาด 6 และ 20 มิลลิเมตร) โดยกาวซีเมนต์ที่ใช้ในการติดตั้งต้องมีแรงยึดเกาะอย่างน้อย 1 นิวตัน ต่อ ตารางมิลลิเมตร (Bonding Strength  $\geq 1$  N/m<sup>2</sup>) หรือตามข้อกำหนดของผู้ผลิตกาวซีเมนต์ยี่ห้ออื่นๆ (หากความสูงเกิน 3 เมตร แนะนำให้ใช้ระบบ Cladding System)
3. การยกกระเบื้องเข้ามาติดตั้ง ควรใช้ตัวจับกระจกและคนช่วยยกอย่างน้อย 2 คน และเว้นร่องยาแนวอย่างน้อย 2 มิลลิเมตรในการติดตั้ง
  - สำหรับการติดตั้งกระเบื้องขนาดใหญ่ที่พื้น แนะนำให้ใช้อุปกรณ์ช่วยปรับระดับและร่องยาแนวกระเบื้องขนาดร่องยาแนวอย่างน้อย 2 มิลลิเมตร เพื่อช่วยในการปรับระดับและเว้นร่องยาแนวของกระเบื้องให้ดูสวยงาม
  - ส่วนผนังแนะนำให้ใช้อุปกรณ์ช่วยยึดกระเบื้องเข้ากับผนัง เช่น เหล็กฉากกับตะปู เป็นต้น เพื่อป้องกันอันตรายจากการไหลตัวของกระเบื้องที่อาจจะหลุดหล่นใส่ข้างติดตั้งในระหว่างการดำเนินงานได้ และตัวเว้นร่องยาแนว (Tiles Spacer) ขนาดอย่างน้อย 2 มิลลิเมตร เพื่อช่วยในการเว้นร่องยาแนวของกระเบื้องให้ดูสวยงาม
4. ควรปูกระเบื้องเป็นลายตรง หลีกเลี่ยงลายก้ออิฐ 1:2 และ ปูกระเบื้องโดยหันหัวลูกศร หลังกระเบื้องไปในทิศทางเดียวกัน
5. ในการตัดกระเบื้อง (แก๊งกรีด) ควรใช้เครื่องตัดแทนที่มีความยาวของแก๊งเหมาะสมกับขนาดของกระเบื้อง และเลือกใช้หัวกรีดที่เหมาะสมกับความแข็งและความเรียบของผิวหน้ากระเบื้องตามคำแนะนำของผู้ผลิต เครื่องตัดที่กำหนดไว้
6. กรณีที่ใช้เครื่องตัดชนิดไฟฟ้า ควรเลือกใช้ใบตัดที่เหมาะสมกับความแข็งของเนื้อกระเบื้อง เช่น กระเบื้องกลุ่มแกรนิต และกระเบื้องเคลือบพอร์ซเลน ก็แนะนำให้ใช้ใบตัดสำหรับกระเบื้องเนื้อแข็ง (เนื้อพอร์ซเลน) เป็นต้นตามคำแนะนำของผู้ผลิตเครื่องตัดที่กำหนดไว้
7. กรณีเกิดการบิ่นเนื่องจากการตัดกระเบื้อง ให้ใช้กระดาษทรายน้ำ หรือใบเจียรทั่วไปในการขัดบดแต่งให้สวยงาม

## ข้อห้าม

1. ห้ามทำการตัด หรือเจาะ หรือเจียร กระเบื้องเซรามิกโดยปราศจากอุปกรณ์ป้องกัน
2. ห้ามใช้ค้อนหรือของแข็งตอกหรือทุบในการติดตั้งกระเบื้อง เพราะจะทำให้กระเบื้องแตกเสียหาย

## ข้อควรระวัง

1. ควรเก็บสินค้าไว้ในที่ร่มมีหลังคาบังเป็นพื้นที่แห้ง ไม่เปียกน้ำหรือมีความชื้นสูง
2. ห้ามโยนกระเบื้อง ในขณะลำเลียง ขนส่ง กอเก็บ และขณะทำการติดตั้ง
3. ในขณะทำการติดตั้ง ต้องระวังบริเวณขอบ มุม และเศษกระเบื้องที่แตกหัก เนื่องจากมีความแข็ง และคมอาจทำให้เกิดการบาดเจ็บได้
4. ไม่ควรใช้ของแข็งหรือมีคมขูดขีดบริเวณผิวหน้าของกระเบื้อง เพราะทำให้ผิวหน้าของกระเบื้องเป็นริ้วรอยไม่สวยงาม



# วิธีการติดตั้งกระเบื้องแผ่นใหญ่

## การเตรียมพื้นที่ผิวสำหรับติดตั้ง

- สำหรับพื้นผิวใหม่ (โครงสร้างใหม่) ต้องแข็งแรง เรียบ ได้ระดับ สะอาด แห้ง ควรใช้เวลารอบคอนกรีตตามมาตรฐานก่อนปูกระเบื้อง (อย่างน้อย 7 วัน)
- สำหรับพื้นผิวเดิม หากมีวัสดุผิวเดิม เช่น ซีเมนต์เปลือย กระเบื้องยาง เป็นต้นต้องลอกวัสดุผิวเดิมออกให้หมดทำความสะอาดสิ่งสกปรกต่างๆ เช่น เศษวัสดุ ผงปูน ไขมันหรือคราบมันที่ติดอยู่ตามพื้นผิวออกให้หมดก่อนทำการติดตั้ง
  - พื้นผิวที่ไม่เรียบ หรือชำรุดเป็นแผลกว้างเกิน 5 มม.ขึ้นไป ซ่อมแซมด้วยปูนทรายหรือกาวยาซิเมนต์จากนั้นฉาบแต่งพื้นผิวให้เรียบ ทั้งไว้อย่างน้อย 24 ชม.
  - สำหรับพื้นผิวที่สามารถโถงหรือบิดรูป เช่น ยิปซัมบอร์ด แผ่นไม้อัดซิเมนต์ ควรตีโครงและยึดสกรูทุกๆ 900 ตร.ซม (30x30 ซม.) เสริมความแข็งแรงด้วยการอุดซิลิโคนและติดตั้งสายไฟเบอร์ขนาดกว้าง 10 ซม. ระหว่างรอยต่อของผนัง ก่อนติดตั้งกระเบื้องควรทาน้ำยารองพื้นเพื่อช่วยในการยึดเกาะและป้องกันน้ำจากกาวยาซิเมนต์ (การทาน้ำยารองพื้นให้ปฏิบัติตามคำแนะนำของผู้ผลิต)
  - กรณีปูกระเบื้องกับกระเบื้องเดิม ต้องเช็คสภาพการยึดเกาะของกระเบื้องเดิมกับพื้นผิวหรือกระเบื้องที่ไม่แน่นออกแล้วปูใหม่ก่อนติดตั้งควรทาน้ำยารองพื้นเพื่อช่วยในการยึดเกาะ (การทาน้ำยารองพื้นให้ปฏิบัติตามคำแนะนำของผู้ผลิต)
- สำหรับพื้นที่เปียก เช่น ห้องน้ำ สระว่ายน้ำ หลังจากการซ่อมแซมและทำความสะอาดพื้นที่นั้นๆ เสร็จแล้วต้องมีการทาน้ำยากันซึมให้เรียบร้อยก่อนการติดตั้งกระเบื้อง (การเลือกใช้น้ำยากันซึม และเทคนิคการติดตั้งให้ปฏิบัติตามคำแนะนำของผู้ผลิตรายนั้นๆ)
- สำหรับพื้นที่ในบริเวณอากาศแห้งหรือมีลมพัดแรง รวมทั้งพื้นผิวที่มีรูพรุนมากต้องใช้น้ำพรมลงบนผนังหรือพื้นให้ดูชื้นน้ำจนอึมตัวก่อน แล้วจึงลวกให้ผิวหน้าแห้งหมาดๆ จึงสามารถปูกระเบื้องได้

## การติดตั้งกระเบื้อง

- กำหนดจุดเริ่มต้นในการติดตั้ง โดยคำนึงถึงตำแหน่งของเศษกระเบื้องให้เหมาะสมสวยงาม (ดูตามแบบ)
- เริ่มติดตั้งกระเบื้อง โดยเน้นตรวจสอบระดับความเรียบของผิวหน้า และแนวของร่องยาแนวให้ตรงกับในขณะติดตั้ง
- แนะนำวิธีติดตั้งแบบปูแห้งแบบแซนวิชคือใช้เกรียงหัวร่องตัวยู ขนาด 6 มิลลิเมตร ทากาวยาซิเมนต์ที่หลังกระเบื้อง และใช้เกรียงหัวร่องตัวยู ขนาด 20 มิลลิเมตรทากาวยาซิเมนต์ที่พื้นที่ที่ต้องการติดตั้ง หลังจากนั้นจึงยกกระเบื้องเข้าไปติดที่พื้นที่นั้นๆ (ใช้ตัวจับกระจกและคนช่วยยกอย่างน้อย 2 คนในการทำงาน)
  - สำหรับการติดตั้งกระเบื้องขนาดใหญ่ที่พื้นแนะนำให้ใช้อุปกรณ์ช่วยปรับระดับและร่องยาแนวกระเบื้อง

ขนาดร่องยาแนวอย่างน้อย 2 มิลลิเมตร เพื่อช่วยในการปรับระดับและเว้นร่องยาแนวของกระเบื้องให้ดูสวยงาม

- ส่วนผนังแนะนำให้ใช้อุปกรณ์ช่วยยึดกระเบื้องเข้ากับผนัง เช่น เหล็กฉากกับตะปู เป็นต้น เพื่อป้องกันอันตรายจากการไหลตัวของกระเบื้องที่อาจจะหลุดหล่นใส่ข้างติดตั้งในระหว่างการทำงานได้

และตัวเว้นร่องยาแนว (Tiles Spacer) ขนาดอย่างน้อย 2 มิลลิเมตร เพื่อช่วยในการเว้นร่องยาแนวของกระเบื้องให้ดูสวยงาม

- ใช้ค้อนยางขนาดใหญ่เคาะกระเบื้องให้ทั่วแผ่น เพื่อให้กระเบื้องยึดติดกับผนังได้แน่นมากยิ่งขึ้น

- หมั่นทำความสะอาดผิวหน้าและร่องยาแนวของกระเบื้องในระหว่างการติดตั้ง
- การเก็บเศษควรทำหลังจากปูกระเบื้องบนพื้นที่ส่วนใหญ่เสร็จแล้ว 1 วัน
- ก่อนการยาแนว ต้องทำความสะอาดผิวหน้าและร่องของกระเบื้อง เพื่อยาแนวได้ดียิ่งขึ้น
- ใช้เกรียงยางปาดยาแนวให้เต็มร่องกระเบื้อง และทำความสะอาดเป็นระยะ อย่าปล่อยให้ยาแนวแห้ง เพราะจะทำความสะอาดได้ยาก
- ควรให้กาวยาแนวเซ็ทตัวอย่างน้อย 7 วัน ก่อนทำความสะอาดและเริ่มใช้งาน

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