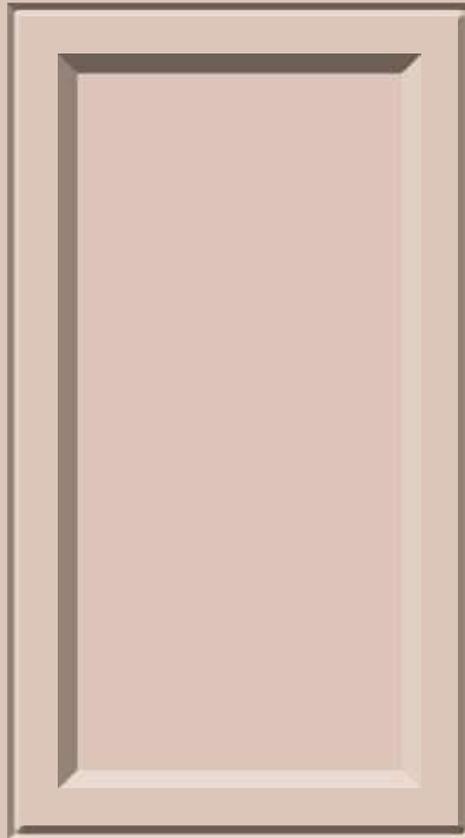



Simpolo[®]
Tiles & Bathware



MARMORICA[™]

THIS IS MARMORICA™

Simpolo introduces **Marmorica**, a selection of refined materials that reinterprets the charm of exclusive marbles with a strong technological vocation.

The collection offers a remarkable variety of designs, divided into suggestive cold and warm shades, sizes, textures, and bricks. Thanks to the availability of 4 types of innovative surface finishes, it is suitable for the most varied architectural contexts, including large public and commercial spaces, like malls, airports and institutions, where traditionally it is more unusual to propose compositions inspired by the timeless allure of marble.

This extreme freedom of use finds a further point of exaltation in the high combinability of the proposals in the range, carefully studied to propose multiple stylistic mixes in response to the most varied tastes.

Thanks to these qualities, Marmorica stands out as a contemporary classic intended for those in search of an advanced point of synthesis between the cult of beauty and excellent performances.



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CONCEPT 02 / COLOURS 04 / SURFACES 08
TEXTURES 10 / BRICKS 12 / AMBIENCES 14 / TECH SPEC 54

12 DESIGNS

SIZES: 598x1198 mm / 798x1598 mm / 1198x1598 mm / 1198x 2398 mm • SURFACES: SHINY / PAPERMATT / STRONG X

SIZES: 598x1198 mm / 1198x2398 mm • SURFACE: SABBIA

SIX COLD COLOURS



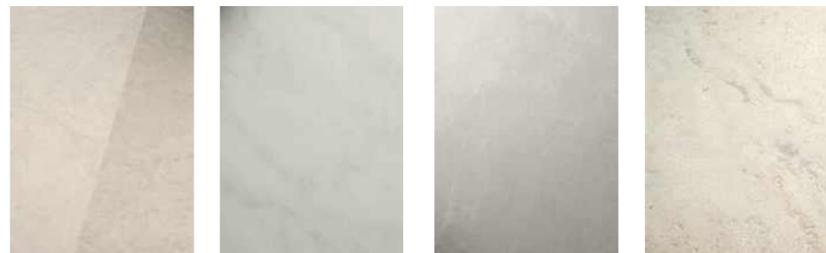
BELVEDERE FOREST BRERA POEM APUAN MARVEL ALPS DREAM ITALIC TREASURE TUSCANY PRIDE

SIX WARM COLOURS



TIVOLI TRAVERTINO PALIO ENCHANT FLORENCE MACAUBAS ROMA EMPIRE COMO CRYSTAL VENICE LAGUNA

4 SURFACES



SHINY PAPERMATT STRONG X SABBIA

	598x1198 mm	798x1598 mm	1198x1598 mm	1198x2398 mm
Shiny	•	•	•	•
Papermatt	•	•	•	•
Strong X	•	•	•	•
Sabbia	•			•

4 TEXTURES

SIZE: 598x1198 mm

ONDE



ONDE TUSCANY PRIDE ONDE ITALIC TREASURE ONDE ALPS DREAM

MATTONI



MATTONI VENICE LAGUNA MATTONI COMO CRYSTAL MATTONI ROMA EMPIRE

REGOLA



REGOLA FLORENCE MACAUBAS REGOLA PALIO ENCHANT REGOLA TIVOLI TRAVERTINE

FLUIDA



FLUIDA APUAN MARVEL FLUIDA BELVEDERE FOREST FLUIDA BRERA BOEM

BRICKS

SIZES: 58x250 mm

POLISHED / MATT



BELVEDERE BRERA ITALIC TUSCANY APUAN ALPS

POLISHED / MATT



TIVOLI PALIO FLORENCE ROMA COMO VENICE

METALLIC GLOSS



PUNTI NERO TELAIO NERO

MATT



BASQUE

METALLIC GLOSS

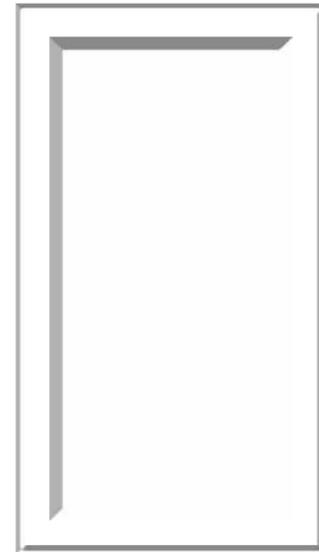


PUNTI BRUNO TELAIO BRUNO

MATT

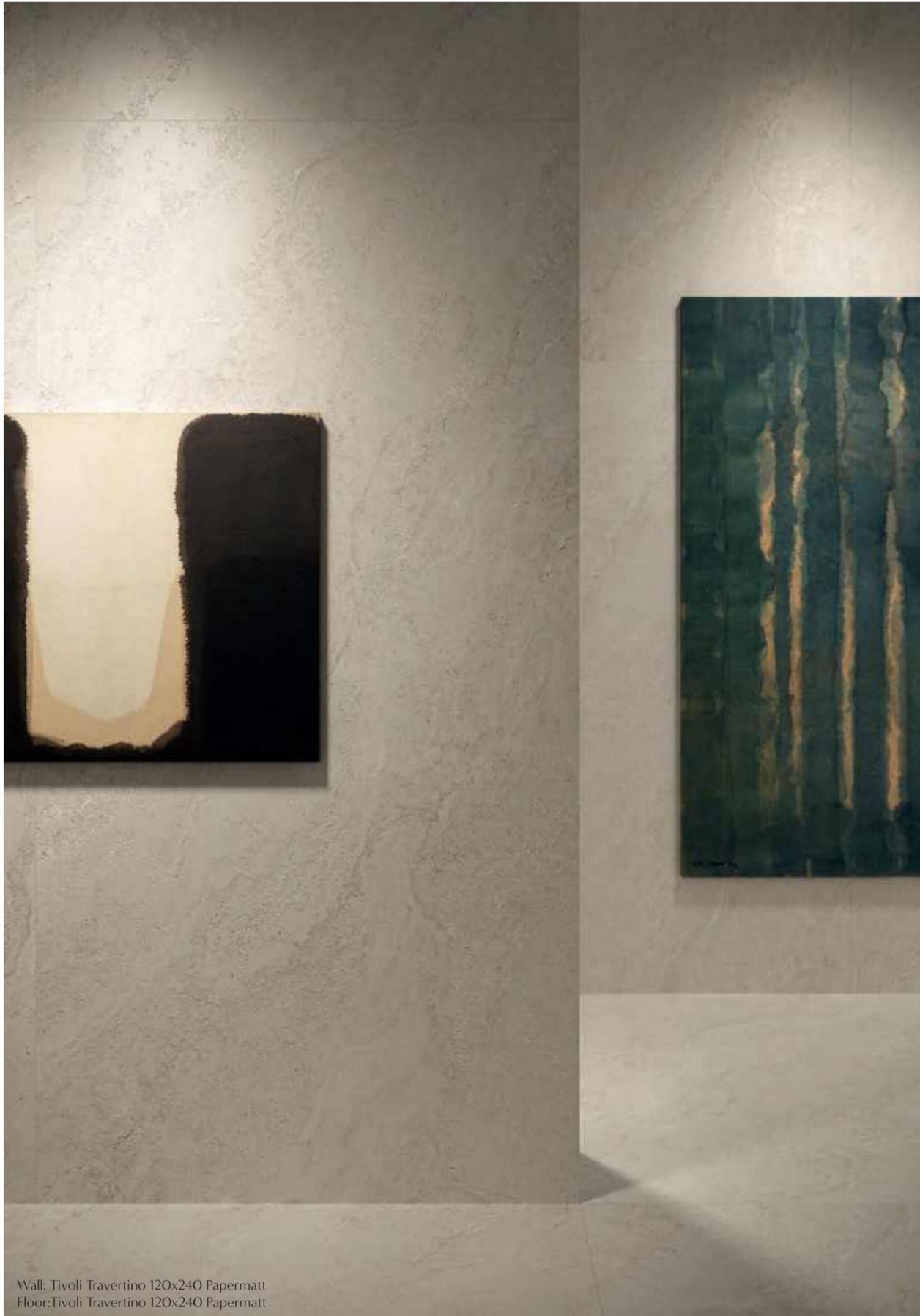


ESTRADA



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Wall: Tivoli Travertino 120x240 Papermatt
Floor: Tivoli Travertino 120x240 Papermatt

MARMORICA™ CONCEPT

Marble has always been synonymous with prestige and exclusive living culture.

Over the centuries, the most important civilizations have made it a privileged material for edifying buildings and monuments as testimonies of their splendor.

This was especially true for the Roman Empire and the other dynasties that succeeded over the centuries in Italy. Drawing on the wealth of natural stones extracted from the country's mountains - starting with the Tuscan ones that have made Italian marble famous worldwide - and continuing with materials of extraordinary beauty imported from other territories, these people shaped a unique lifestyle.

Marmorica takes inspiration from this glorious history, giving life to refined materials that combine luxury and excellence of finishes, completeness, and extreme versatility.

COLD DESIGNS OF MARMORICA™

With six cold shades, Marmorica offers as many design interpretations of essentially elegant marbles. Their simple but still sought after beauty lives again in materials particularly suited to giving the marble look an accent suitable for a wide range of contemporary architectural settings.

SIX COLD COLOURS



BELVEDERE FOREST



BRERA POEM



APIUAN MARVEL



ALPS DREAM



ITALIC TREASURE



TUSCANY PRIDE

MARMORICA™





WARM DESIGNS OF MARMORICA™

Six designs with warm and enveloping shades come to life on as many surfaces that restore their refinement with an innovative aesthetic sensibility. The result is ideal materials for dressing design spaces with a quiet luxury note that translates into satisfying architectural comfort.

SIX WARM COLOURS



TIVOLI TRAVERTINO



PALIO ENCHANT



FLORENCE MACAUBAS



ROMA EMPIRE



COMO CRYSTAL



VENICE LAGUNA



Florence Macaubas
papermatt,

Florence Macaubas
strong x

Florence Macaubas
shiny

Florence Macaubas
sabbia

INNOVATIVE SURFACES



Shiny Surface: glossy surfaces achieve new heights with an extremely shining finish, which enhances the design definition, color vibrancy, and minute details of the marbles.



Papermatt Surface: inspired by the look and feel of the paper, this surface stands out for its smoothness and non-reflective overall effect.



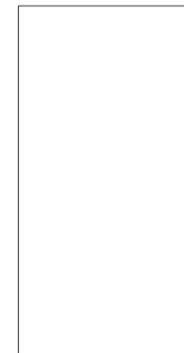
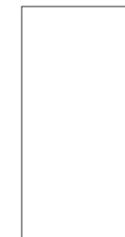
Strong X Surface: a matt non-reflective and extra strong R-10 surface, designed for high-traffic areas like malls, institutions, and airports for its great ease of cleaning and maintenance, and its exceptional anti-slip performances.



Sabbia Surface: by technologically updating the classical treatment of sandblasting (Sabbia is the Italian word for Sand), this surface carefully debosses the selected marble veins and embosses the background, creating a unique texture offering a subtle 3D effect when in light

Marmorica is the result of meticulous research and technological experimentation that expands the applications of the marble look. In particular, thanks to the offer of 4 innovative finishes, the collection's surfaces can be used in a wide choice of contexts, always finding the optimal balance between style, functionality and technical performance.

Among these are also those with high traffic, such as large public and commercial spaces, where traditionally it has been difficult to use surfaces inspired by the timeless beauty of this material.



	598x1198 mm	798x1598 mm	1198x1598 mm	1198x2398 mm
Shiny	•	•	•	•
Papermatt	•	•	•	•
Strong X	•	•	•	•
Sabbia	•			•

TOUCHING TEXTURES

Marmorica's technological vocation is also expressed through the offer of four textures that enrich the expressive potential of the marble look, giving the materials charming tactile and visual effects.

Thanks to these options, the surfaces' details seem to come to life, acquiring a sculptural consistency that is particularly suited to conveying the timeless prestige of this material with a refined contemporary accent.



COLD TEXTURES

	BELVEDERE FOREST	BRERA POEM	APUNA MARVEL	ALPS DREAM	ITALIC TREASURE	TUSCANY PRIDE
Onde				.	.	.
Fluida	.	.	.			

WARM TEXTURES

	TIVOLI TRAVERTINO	PALIO ENCHANT	FLORENCE MACAUBAS	ROMA EMPIRE	COMO CRYSTAL	VENICE LAGUNA
Mattoni				.	.	.
Regola	.	.	.			



BRICKS



The richness of Marmorica expands thanks to the offer of a range of decorative bricks.

These elements, available in all the shades of the collection and 6 additional options inspired by refined dark marbles, increase the design possibilities, allowing you to embellish small portions of walls or other surfaces with refined geometric layouts, in line with the latest trends.

BRICKS

SIZES: 58x250 mm

POLISHED / MATT

Cold colours



BELVEDERE BRERA ITALIC TUSCANY APUAN ALPS

METALLIC GLOSS

MATT



PUNTI NERO TELAIO NERO BASQUE

POLISHED / MATT

Warm colours



TIVOLI PALIO FLORENCE ROMA COMO VENICE

METALLIC GLOSS

MATT



PUNTI BRUNO TELAIO BRUNO ESTRADA



Wall: Venice Laguna 60x120 cm Shiny
Floor: Venice Laguna 60x120 cm Papermatt

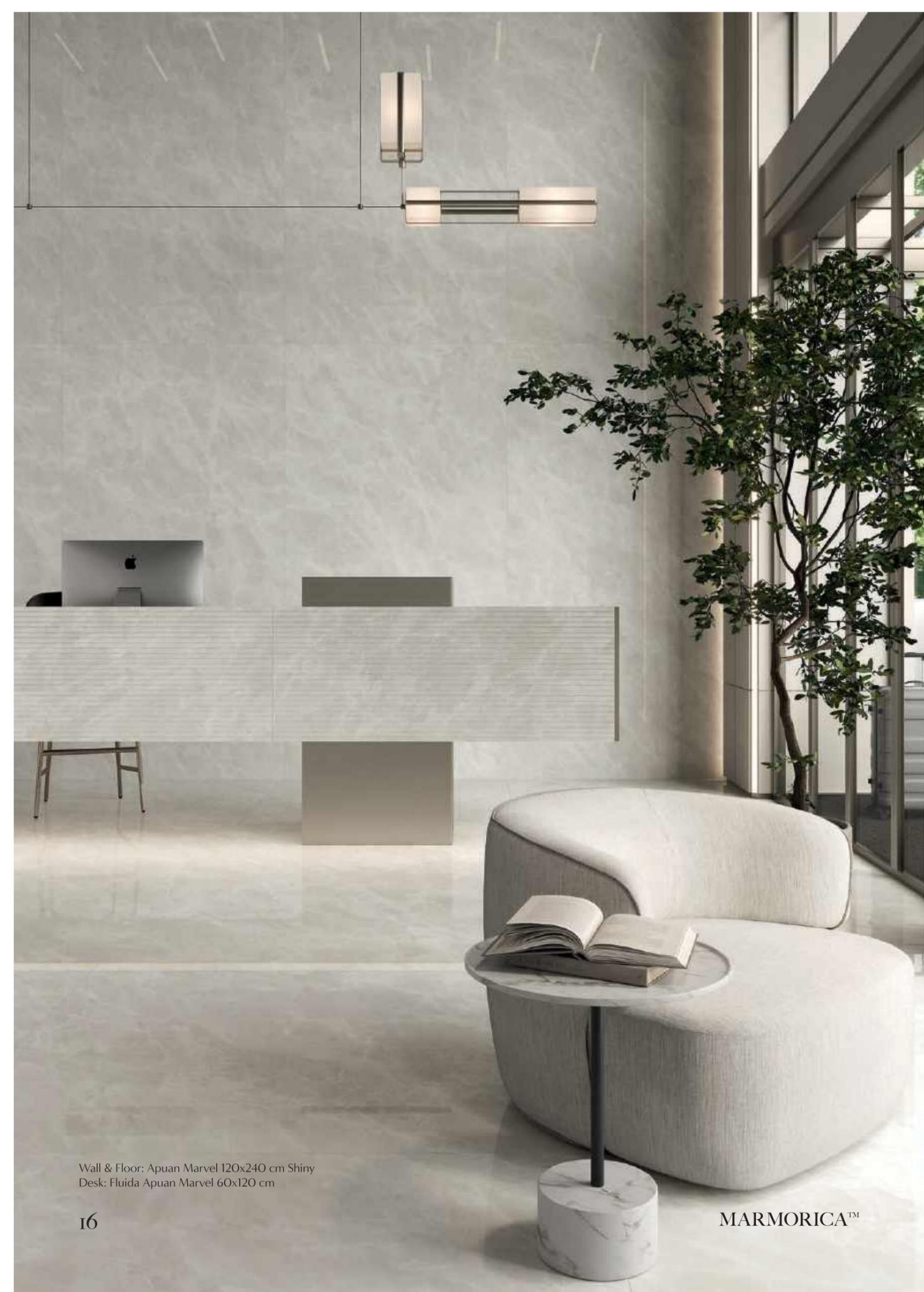
SHINY SURFACE



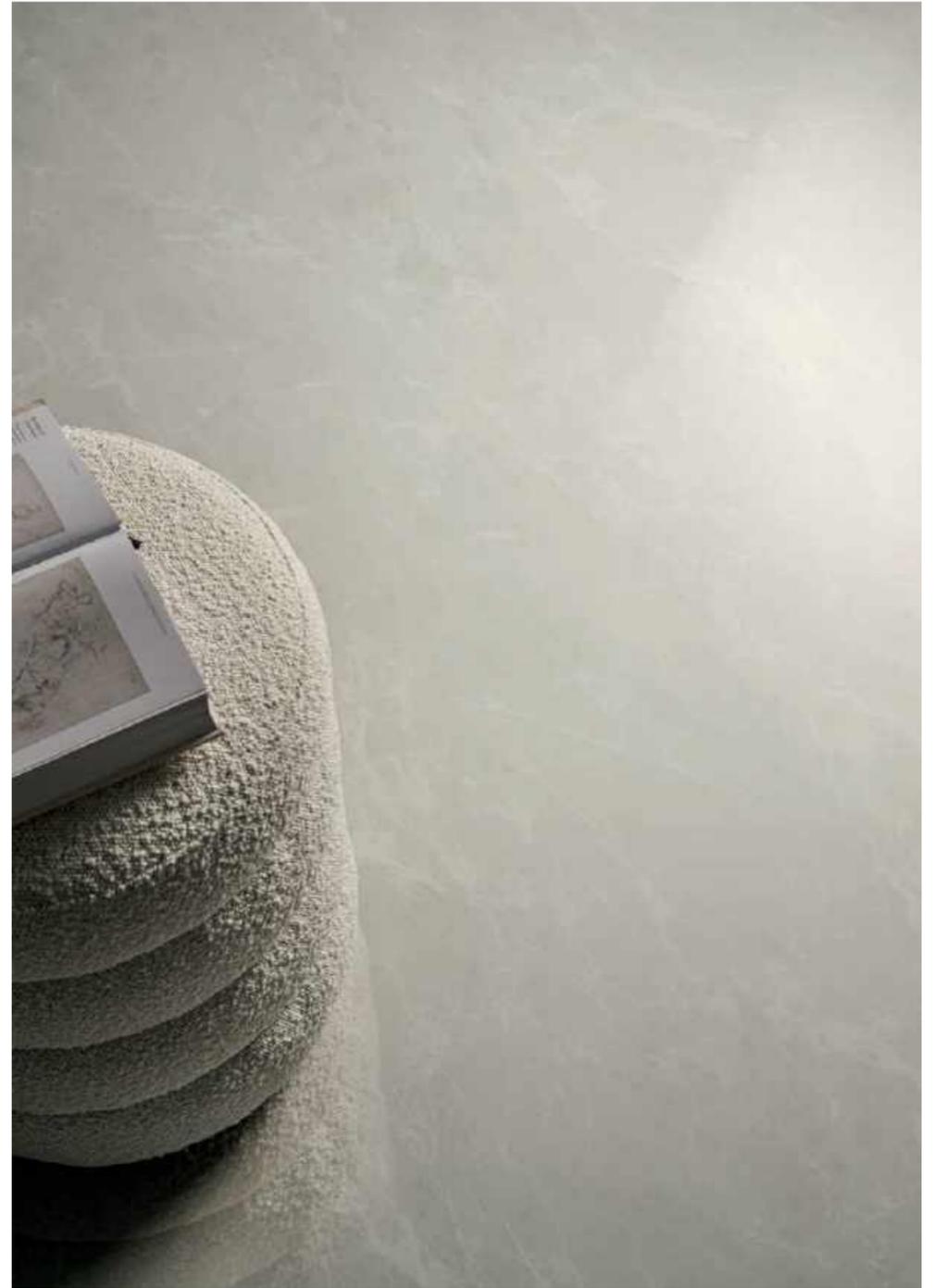
Shiny Surface by Simpolo takes glossy surfaces to new expressive heights, offering an extremely bright finish that enhances design definition, color vibrancy, and minute details of marbles.

The result is a material that amplifies the brightest soul of this prestigious material, increasing its scenic potential.





Wall & Floor: Apuan Marvel 120x240 cm Shiny
Desk: Fluida Apuan Marvel 60x120 cm







Wall: Tuscany Pride 120x240 cm Shiny
Floor: Tuscany Pride 60x120 cm Papermatt





Wall: Regola Tivoli Travertine 60x120 cm
Floor: Tivoli Travertine 60x120 cm Shiny



Wall & Floor: Italic Treasure 60x120 cm Papermatt

PAPERMATT SURFACE



Papermatt Surface by Sempolo is a technological innovation that restores the typical features of marble with the characteristic look and feel of paper.

Thanks to these qualities, the surface stands out for a particularly smooth and non-reflective overall effect, giving the marble look fascinating notes of sobriety.

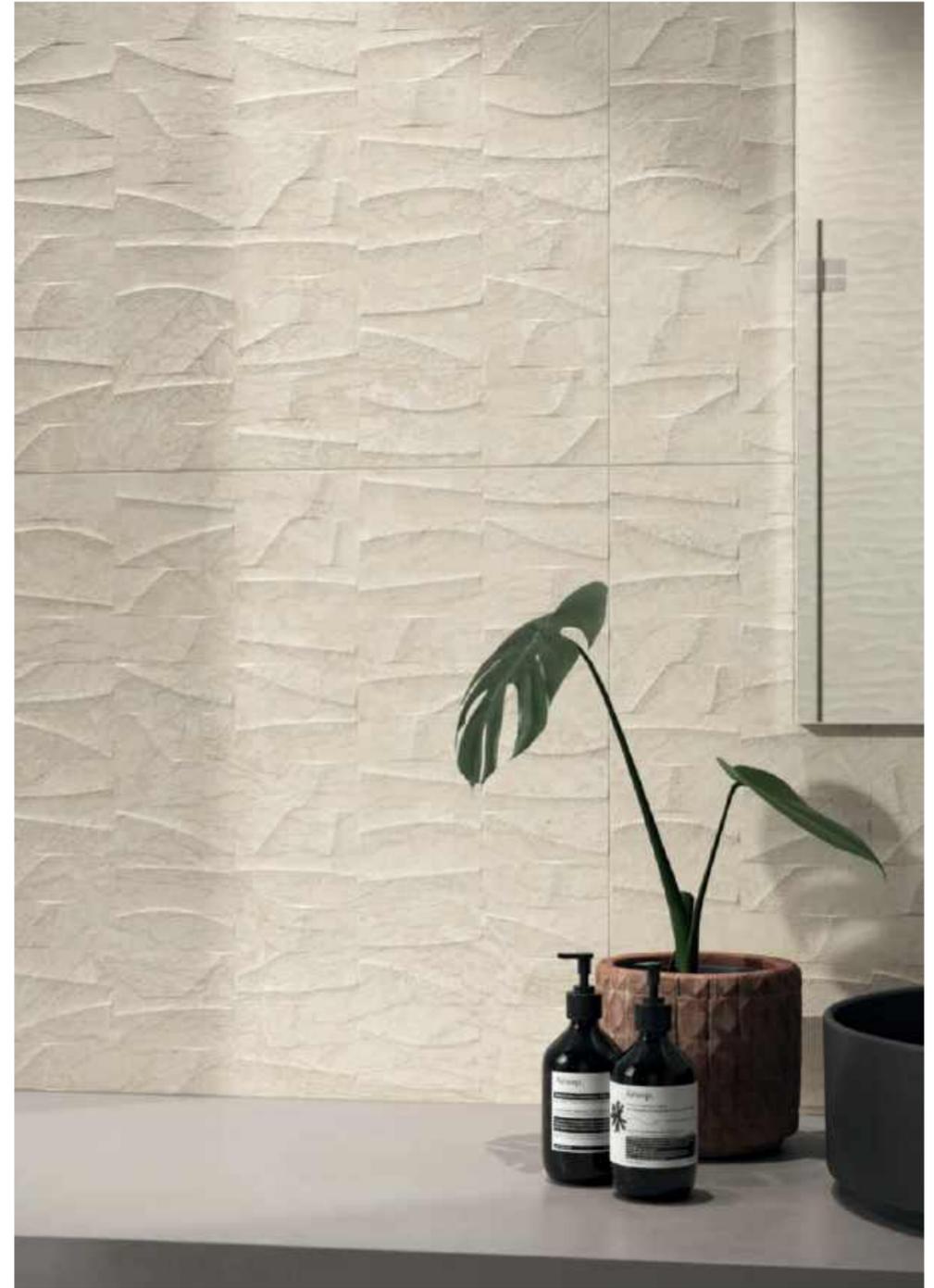






MARMORICA™

Wall : Venice Laguna 60x120 cm Papermatt - Mattoni Venice Laguna 60x120 cm
Floor: Venice Laguna 60x120 cm Papermatt





Floor: Como Crystal 120x240 cm Papermatt



Floor: Belvedere Forest 120x240 cm Papermatt



Wall & Floor: Apuan Marvel 60x120 cm Strong X

STRONG X SURFACE



Strong X Surface by Simpolo is a cutting-edge matt non-reflective and extra strong R-10 surface, specifically designed for high-traffic areas such as malls, institutions, and airports for its great ease of cleaning and maintenance and its exceptional anti-slip performance.

With its creation, the application possibilities of the marble look grow significantly, allowing it to be conveyed even in contexts traditionally unsuitable for projects inspired by its timeless charm.





Floor and Wall: Florence Macaubas 120x240 Papermatt





Wall: Roma Empire 120x240 cm Papermat
 Desk: Mattoni Roma Empire 60x120 cm
 Floor: Roma Empire 60x120 cm Strong X



Wall: Florence Macaubas 60x120 cm Sabbia

SABBIA SURFACE



Sabbia Surface by Simppolo technologically updates the classical artisanal treatment of sandblasting (Sabbia is the Italian word for Sand).

Thanks to these innovative qualities, the surface carefully debosses selected marble veins while embossing the background, giving life to a unique, special texture that offers a subtle 3D effect when in light.





Wal & Floor: Florence Macaubas 120x240 cm Sabbia



Floor: Florence Macaubas 120x240 cm Sabbia



BRICKS



Wall: Venice Laguna 6x25 cm Shiny Brick
Floor: Venice Laguna 60x120 cm Papermatt

Marmorica is enriched by the presence of 18 brick-format decors, available in the 12 designs of the collection and 6 further variants inspired by refined dark marbles.

These additions are specifically suitable for covering portions of walls and other architectural elements, adopting various poses with a charming geometric taste. They also lend themselves to multiple combinations with all the collection's materials, significantly expanding its compositional freedom.





Wall: Italic 6x25 cm Shiny Brick



Wall: Como 6x25 cm Shiny Brick



Wall: Apuan 6x25 cm Brick



Wall: Alps 6x25 cm Brick - Alps Dreams 120x240 Papermatt
Floor: Alps Dreams 120x240 Strong X

6 DESIGNS

SIZES: 598x1198 mm / 798x1598 mm / 1198x1598 mm / 1198x 2398 mm
SURFACES: SHINY / PAPERMATT / STRONG X



6 DESIGNS

SIZES: 598x1198 mm / 1198x2398 mm
SURFACE: SABBIA



4 SURFACES

 SHINY



 PAPERMATT



 STRONG X



 SABBIA



4 TEXTURES

SIZES: 598x1198 mm

ONDE TUSCANY PRIDE



ONDE ITALIC TREASURE



ONDE ALPS DREAM



MATTONI VENICE LAGUNA



MATTONI COMO CRYSTAL



MATTONI ROMA EMPIRE



REGOLA
FLORENCE MACAUBAS



REGOLA
PALIO ENCHANT



REGOLA
TIVOLI TRAVERTINE



FLUIDA
APUAN MARVEL



FLUIDA
BELVEDERE FOREST



FLUIDA
BRERA BOEM



BRICKS

SIZES: 58x250 mm

POLISHED / MATT



METALLIC GLOSS MATT



POLISHED / MATT



METALLIC GLOSS MATT



PACKAGING INFO

SIZE	THICKNESS	PCS. X BOX	COVERAGE AREA BOX	
1198x2398 mm	9 mm	1 pc	30.92 Sq ft	2.87 Sq m
1198x1798 mm	9 mm	2 pcs	46.37 Sq ft	4.31 Sq m
798x1598 mm	8,5 mm	2 pcs	27.45 Sq ft	2.55 Sq m
598x1198 mm	8,5 mm	3 pcs	23.13 Sq ft	2.15 Sq m
58x250 mm	8,5 mm	25 pcs	0.36 Sq ft	3.90 Sq m

NOMINAL SIZE CM	ACTUAL SIZE CM
120x240	1198x2398
120x180	1198x1798
80x160	798x1598
60x120	598x1198
6x25	58x250

CLEANING AND MAINTENANCE

ALL SIMPOLO MATERIALS ARE EASY TO CLEAN AND MAINTAIN. REGULAR CLEANING HIGHLIGHTS THE AESTHETIC FEATURES OF THE MATERIAL AND GIVES THE FLOOR AN EXCEPTIONAL SHINE.

INITIAL CLEANING

The initial cleaning done immediately after the flooring laid is of essential importance for removing all mortar, adhesives and epoxy residues that may be left in the joints. In this initial phase, we recommend that you use an acid product such as DETERDEK, in a 1:5 concentration. Rub energetically to obtain the maximum cleaning. After washing the floor, which is just as important, rinse thoroughly with plenty of water to remove all traces of the detergent used. These steps are recommended for all SIMPOLO collections.

MAINTENANCE AND CARE

Thanks to the characteristics of the production process (high firing temperature, raw materials of great quality, sinterizing process), the surface of SIMPOLO material is waterproof (the water absorption is minimum). Therefore the dirt cannot penetrate but it is necessary to remove it from the surface. For this procedure do not use detergents containing waxes or waxing products, in order to avoid the forming of greasy layers; for choosing the most appropriate detergent refer to the following chapters. After the installation of floors, particularly of those made with polished materials, the surfaces should be adequately protected with particle board or other suitable materials in order to protect them from dirt and on-site processing. This prevents damage caused by subsequent processing.

GENERAL RECOMMENDATIONS

For commercial and heavily used surface areas such as airports, hospitals, supermarkets, and any public spaces with heavy foot traffic which are thus subject to considerable soiling, it is necessary to use automatic cleaning machines with suction of the washing liquids. This allows not only deep cleaning, but also the continuous removal of liquids containing substances that cause soiling, thus preventing the formation of films which are very difficult to remove. Any detergent on the market can be used in the desired concentration for cleaning the high technology sinterized SIMPOLO products, with the exception of HYDROFLUORIC acid (HF) or its compounds, according to UNI-EN 176 standards. In order to keep costs limited and speed up maintenance operations, the concentration of the detergent must always be as low as possible. For raised floors we suggest to choose bright or polished surfaces in large sizes: these materials can be dry cleaned or with the minimum use of liquids. After the floor is laid it is necessary to make a very accurate initial cleaning with proper products.

MATT MATERIALS

For these materials, after completing the steps described in the section "Initial Cleaning", you only need to clean the floor with hot water containing small quantities of an alkaline detergent such as FILA CLEANER in a concentration 1:200. On these types of surface it is not advisable to apply a waterproofing product: the absence of porosity causes the waterproofing agent to deposit on the surface in an uneven way and to have unpleasant aesthetic effects.

INSTALLATION SUGGESTIONS

TRADITIONAL FLOOR LAYING

Laying SIMPOLO SCS requires similar laying conditions to those required for traditional formats. Requires the adhesive to be applied both on the setting bed and on the back of the tile.

SIMPOLO tiles for flooring require the following conditions:

- A flat surface.
- Clean and free from dust, scraps and any lumps of cement.
- The setting bed must be uniform and have already undergone the drying shrinkage process.
- Repair of any cracks.
- Any uneven parts on the surface must be filled with suitable levelling compounds.

INSTRUMENTS REQUIRED

- Cement-based powder adhesive for full spread.
- 3x3mm square toothed trowel and 15mm round toothed trowel.
- Frame with suction cups for handling or double suction cups.
- Non-bounce plastic mallet 170x370mm.
- Levelling system: base clip + wedge + pliers.

Processing stages

BONDING TO THE FLOOR

1. Ensure that the surface to be covered is solid, flat and free from dust and oil/grease.
2. Use the adhesives described above mixed according to the specifications indicated in the technical data sheet of the chosen adhesive.
3. Spread the adhesive onto the surface to be covered with a 15mm round toothed trowel across an area of 5/10cm more than the dimensions of the tile.
4. With the tile in a vertical position on the handling frame, spread the adhesive onto the back of the slab with a 3x3mm square toothed trowel.
5. Using the frame with suction cups, bring the tile into a horizontal position and lay it.
6. To guarantee uniform bonding of the slab, the special 170x370mm non-bounce plastic mallet must be used, topping from the middle towards the edges so as to remove any air pockets between the back of the tile, the adhesive and the surface to be tiled.
7. Using the levelling system.

LEVELLING SYSTEM

The levelling system aims to guarantee perfectly levelled floors simply and quickly, eliminating any unevenness between the tiles. The levelling system is strongly recommended for laying SIMPOLO tiles.

Instruments required

- Base clip.
- Wedge.
- Adjustable pliers for installing floors/wall tiles.

Application of the levelling system positioning the base clip:

- A. After spreading the adhesive, insert the base clip below the SIMPOLO tile on the 4 sides.
- B. Depending on the format of the tile, position one or more supports for each side of the tile.
- C. Position the tile.

Application of the levelling system inserting the wedge:

- A. Insert the wedge in the slot of the support, taking care not to exceed the breaking point.
- B. To make inserting the wedge easier, it is recommended to use the adjustable pliers.
- C. Removing the support
- D. Once the adhesive has dried, the protruding part of the support can be separated from the base clip by topping with your foot in line with the joint.

GENERAL ADVICE FOR GROUTING

Pay attention while choosing joint sealants: check the technical sheets, choose them shade matched and follow carefully the recommended cleaning times, as many new generation coloured sealants contain pigments and additives that can be very strong. For polished/glossy surfaces do not use epoxy grouts or synthetic based flexible mortars (Flexughe) and do not add additives/latexes to the grout, as they make the removal of residues with standard detergents very difficult. However, should you decide to use them, it is recommended to make a previous test off site.



For technical information or to find out more about the Marmorica™ collection, scan the QR Code.

TECHNICAL SPECIFICATION

CHARACTERISTIC	ISO13006:2018 /EN14411 Group Bla	IS 15622:2017 Group Bla	SIMPOLO MEAN VALUE	METHOD OF TESTING
Regulatory Properties:				
Rectified Size				
*Deviation in Length and Width	±0.30 % (±1.00 mm)	±0.10 %	±1.0 mm (±0.20 %)	ISO 10545-2/ IS 13630-1
*Deviation in Thickness	±5.0 % (± 0.50 mm)	±5.0 %	±0.5 mm (±5.0 %)	ISO 10545-2/ IS 13630-1
*Straightness in Side	±0.30 % (± 0.80 mm)	±0.10 %	±0.8 mm(±0.20 %)	ISO 10545-2/ IS 13630-1
*Rectangularity	±0.30 % (±1.50 mm)	±0.10 %	±1.2 mm(±0.20 %)	ISO 10545-2/ IS 13630-1
*Surface Flatness Central Curvature	±0.40 % (± 1.80 mm)	±0.50 %	±1.8 mm(±0.20 %)	ISO 10545-2/ IS 13630-1
*Surface Flatness Edge Curvature	±0.40 % (± 1.80 mm)	±0.50 %	±1.8 mm(±0.20 %)	ISO 10545-2/ IS 13630-1
*Surface Flatness Warpage	±0.40 % (± 1.80 mm)	±0.50 %	±1.8 mm(±0.20 %)	ISO 10545-2/ IS 13630-1
Surface Quality	>95% defects free	>95% defects free	>95% defects free	ISO 10545-2/ IS 13630-1
Small Color Difference (For Plain Colour)	ΔE <1.00	N.A.	ΔE <0.80	ISO 10545-16
Glossiness (Polished)	As per Manufacturer	N.A.	> 90	Gloss Meter 60°
Structural Properties				
Water Absorption	≤0.50 %	≤0.080 %	≤0.080 %	ISO 10545-3/ IS 13630-2
Bulk Density	As per Manufacturer	Min 2.20 g/cc	> 2.28 gm/cc	ISO 10545-3/ IS 13630-2
Massive Mechanical Properties				
Modulus of Rupture	Min. 35.0 N/mm ²	Min. 35.0 N/mm ²	Min. 37.0 N/mm ²	ISO 10545-4/ IS 13630-6
Breaking Strength Thickness ≥7.5 mm	Min 1300.0 N	Min 1300.0 N	Min 1500.0 N	ISO 10545-4/ IS 13630-6
Breaking Strength Thickness <7.5 mm	Min 700.0 N	Min 700.0 N	Min 1000.0 N	ISO 10545-4/ IS 13630-6
Surface Mechanical Properties				
MOH'S Hardness #	As per Manufacturer	Min. 5	Polished Posh, CRV, Matt Evermatt Strong X Sabbia Matt	4 Min 6 Min 7 Min 8 Min 6 Min
Surface Abrasion Resistance #	As per Manufacturer	Min. Class II	Polished Posh, CRV, Matt Evermatt Strong X Sabbia Matt	Class II Min Class III Min Class III Min Class IV Min Class III Min
Thermal Hygrometric Properties				
Moisture Expansion	Max 0.06% (0.6 mm/m)	Max 0.02 mm/m	Max 0.02 mm/m	ISO 10545-10/ IS 13630-3
Thermal Expansion (COE) at 100 °C	As per Manufacturer	Max. 6.0 x 10 ⁻⁶	Max. 6.0 x 10 ⁻⁶	ISO 10545-8/ IS 13630-4
Thermal Shock Resistance	Min 10 Cycle	Min 10 Cycle	Min 10 Cycle	ISO 10545-9/ IS 13630-5
Impact Resistance (COR) #	Min. 0.55	Min 0.55	Min 0.55	ISO 10545-5/ IS 13630-14
Frost Resistance	As per Manufacturer	As per Manufacturer	Frost Proof	ISO 10545-12/ IS 13630-10
Crazing Resistance at 7.5 bar	4 Cycle	4 Cycle	6 Cycle	ISO 10545-11/ IS 13630-9
Chemical Properties				
Resistance to Staining Glazed	Min. Class 3	Min Class 1	Min. Class 4/Min. Class 1	ISO 10545-14/ IS 13630-8
Resistance to Household Chemicals & Swimming Pool Salts Glazed	Min Class GB	Min Class AA	Min Class GB/Min Class AA	ISO 10545-13/ IS 13630-8
Resistance to Low Concentrate Acid and Alkalis Glazed	As per Manufacturer	As per Manufacturer	Min Class GLB***/Min Class A***	ISO-10545-13/ IS 13630-8
Resistance to High Concentrate Acid and Alkalis Glazed	As per Manufacturer	As per Manufacturer	Min Class GHB***/Min Class A***	ISO-10545-13/ IS 13630-7
Safety Properties				
Skid Resistance - (DCOF-Wet pendulum) ##	As per Manufacturer	As per Manufacturer	Polished Posh, CRV, Matt Evermatt Strong X Sabbia Matt	: < 0.2 : > 0.3 : > 0.3 : > 0.4 : > 0.3
Slip Resistance - (Ramp test Value)	As per Manufacturer	As per Manufacturer	Posh, CRV, Matt Strong X R11 Surface	: R9 - R10 : R10 : R11
Lead and Cadmium release	As per Manufacturer	N.A.	Does not yield Pb & Cd	ISO-10545-15

* Whichever is lower
 *** Except Hydrofluoric Acid & it's compound
 # Tiles intended for use on floor
 ## For Floor tiles, as per customer requirement

TECHNICAL DETAIL FOR BIA GROUP

<0.08/0.50% UN-RECTIFIED (TINY TILES)

CHARACTERISTIC	STANDARD AS PER ISO 13006:2018/EN14411 1 Gr.Bla	STANDARD AS PER IS 15622:2017 Gr.Bla	METHOD OF TESTING	MEAN VALUE OF SIMPOLO
Regulatory Properties				
*Un-Rectified (Which is Lower)				
Deviation in Length and Width	±0.60 % (±2.0 mm)	±0.40 %	ISO 10545-2/IS 13630-1	±0.40 %
Deviation in Thickness	±5.0 % (± 0.50 mm)	±5.0 %	ISO 10545-2/IS 13630-1	± 5.0 %
Straightness in Side	±0.50 % (± 1.5 mm)	±0.30 %	ISO 10545-2/IS 13630-1	±0.30 %
Rectangularity	±0.50 % (±2.0 mm)	±0.30 %	ISO 10545-2/IS 13630-1	±0.30 %
Surface Flatness Central Curvature	±0.50 % (± 2.0 mm)	±0.50 %	ISO 10545-2/IS 13630-1	± 0.40 %
Surface Flatness Edge Curvature	±0.50 % (± 2.0 mm)	±0.50 %	ISO 10545-2/IS 13630-1	± 0.40 %
Surface Flatness Warpage	±0.50 % (± 2.0 mm)	±0.50 %	ISO 10545-2/IS 13630-1	± 0.40 %
Surface Quality	>95% defects free	>95% defects free	ISO 10545-2/IS 13630-1	>95% defects free
Small Color Difference (For Plain Colour)	ΔE <1.0	N.A.	ISO 10545-16	ΔE <0.80
Structural Properties				
Water Absorption	Ev≤0.50 % Individual Max: 0.6%	Ev≤0.08 % Individual Max:0.1%	ISO 10545-3/IS 13630-2	Ev≤0.08 % Individual Max: 0.1%
Bulk Density	As per Manufacturer	Min 2.20 gm/cc	ISO 10545-3/IS 13630-2	>2.28 gm/cc
Massive Mechanical Properties				
Modulus of Rupture	Average 35.0 N/mm ² , Individual 32 N/mm ² Min	Average 35.0 N/mm ² , Individual 32 N/mm ² Min	ISO 10545-4/IS 13630-6	Min. 37.0 N/mrn ²
Breaking Strength Thickness ≥7.5 mm	Min 1300.0 N	Min 1300.0 N	ISO 10545-4/IS 13630-6	Min 1500.0 N
Surface Mechanical Properties				
MOH'S Hardness #	As per Manufacturer	Min. 5	BS EN 15771/IS 13630-13	Polished/Glossy 4 Min Posh, CRV, Matt 6 Min Strong X: 8 Min
Surface Abrasion Resistance #	As per Manufacturer	Min. Class II	ISO 10545-7/IS 13630-11	Polished/Glossy: Class II Min Posh, CRV, Matt: Class III Min Strong X: 8 Min
Thermal Hygrometric Properties				
Moisture Expansion	Max 0.06% (0.6 mm/m)	Max. 0.02mm/m	ISO 10545-10/IS 13630-3	Nil
Thermal Expansion(COE) at 100 °C	As per Manufacturer	Max. 6x10 ⁻⁶ k	ISO 10545-8/IS 13630-4	Max. 6.0 x 10 ⁻⁶
Thermal Shock Resistance	Min 10 Cycle	Min 10 Cycle	ISO 10545-9/IS 13630-5	Min 10 Cycle
Impact Resistance(COR) #	As per Manufacturer	Min. 0.55	ISO 10545-5/IS 13630-14	Min 0.55
Frost Resistance	As per Manufacturer	As per Manufacturer	ISO 10545-12/IS 13630-10	Frost Proof
Crazing Resistance at 7.5 bar	As per Manufacturer	4 Cycle	ISO 10545-11/IS 13630-9	6 cycle
Chemical Properties				
Resistance to Staining Glazed	Min. Class 3	Min. Class 1	ISO-10545-14/IS 13630-7	Min. Class 4/Min. Class 1
Resistance to Household Chemicals & Swimming Pool Salts Glazed	Min Class GB	Min Class AA	ISO-10545-13/IS 13630-8	Min Class GB/Min Class AA
Resistance to Low Concentrate Acid and Alkalis Glazed	As per Manufacturer	As per Manufacturer	ISO-10545-13/IS 13630-8	Min Class GLB***/Min Class A***
Resistance to High Concentrate Acid and Alkalis Glazed	As per Manufacturer	As per Manufacturer	ISO-10545-13/IS 13630-8	Min Class GHB***/Min Class B***
Safety Properties				
Skid Resistance (DCOF-WET PENDULUM)##	As per Manufacturer	As per Manufacturer	ASTM E-303	Polished/Glossy: < 0.2 Matt: > 0.3 Strong X: > 0.4
Slip Resistance - (Ramp test Value)	As per Manufacturer	As per Manufacturer	DIN 51130	Posh, CRV, Matt: R9 - R10 Strong X: R10 R11 Surface: R11
Lead and Cadmium release	As per Manufacturer	NA	ISO-10545-15	Does not yield Pb & Cd



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