

400 ASSOCIATION, INC

400 S. Ocean Blvd., Palm Beach, Florida 33480
Tel: 561-655-5470

SUMMARY PAGE

A. Opened in 1962, The 400 was commissioned and designed by architect, Edward Durell Stone, to be a luxury long-term seasonal rental with five-star hotel services. Decks and walkways concrete.

B. In 1965. Converted to the first condominium in Florida.

C. Major building-wide restoration from 2002 to 2005. All facade balconies and atrium decks and walkways received rebar and concrete restoration. Travertine was added to these areas to level the walking surfaces.

D. January 7, 2012, received a landmark designation.

E. In 2019, developed a five-year building-wide restoration plan. Board and membership approval and vote.

F. Subsequently, in June of 2021, the Champlain Tower collapsed.. State passed two new safety laws in 2022 (SB 4-D) and 2023 (SB 154), requiring all co-ops and condominiums over three stories high to pass a new Milestone Structural Inspection (MSI) in 2024 and fully fund a Structural Integrity Reserves Study (SIRS) by January 1, 2025.

G. Therefore, the most water-resistant travertine in porcelain with a non-skid surface was selected and voted upon by the board and the majority of the membership. Giving the façade balconies the best protection, with a 25-year warranty, from the oceanfront extreme weather conditions.



400 ASSOCIATION, INC

400 S. Ocean Blvd., Palm Beach, Florida 33480
Tel: 561-655-5470

September 8, 2023

James G. Murphy
Assistant Director of Planning, Zoning & Building
Town of Palm Beach
360 County Road
Palm Beach, FL 33480

Sir:

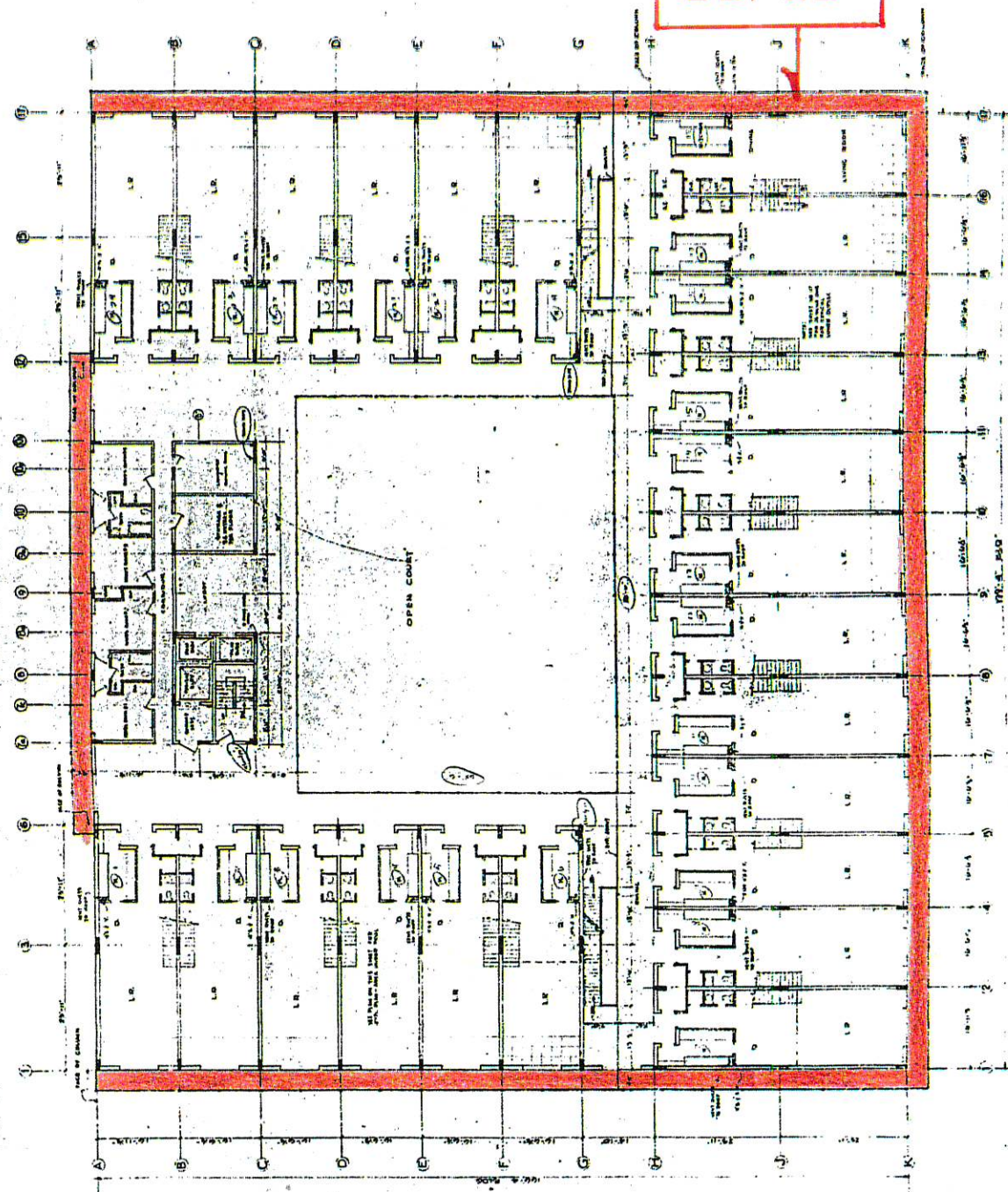
This is to certify that the Board of Directors of 400 Association, Inc. has authorized and approved the installation on the balconies of the Italian Porcelain Tile (which is called "Travertine"), which comes in slabs 24" x 48".

The foregoing has also been approved by the design committee and 95% of our residents.

Please advise me if you need any further information regarding this subject matter.

Cordially,

David Missner
President and Treasurer
400 Association Inc.



1	GENERAL	REVISION	DATE
2			

SECOND FLOOR PLAN

400 SOUTH OCEAN BOULEVARD

WALKER BEACH, FLORIDA

JOHN CLARK'S SELECTED CITY

STANDARD DRAWING ROOM, ARCHITECT

1000 BAYVIEW AVENUE, MIAMI, FLORIDA

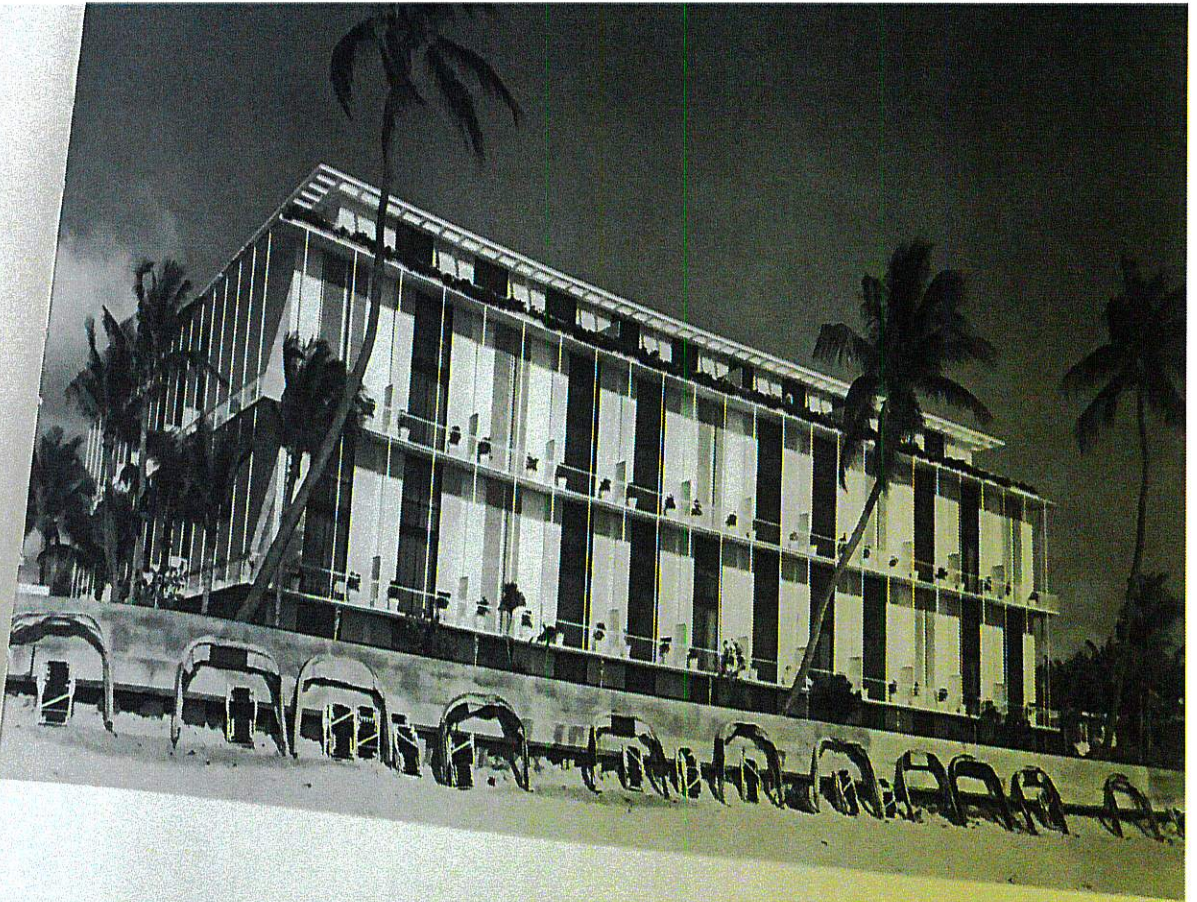
DATE: 1934

SCALE: 1/8" = 1'-0"

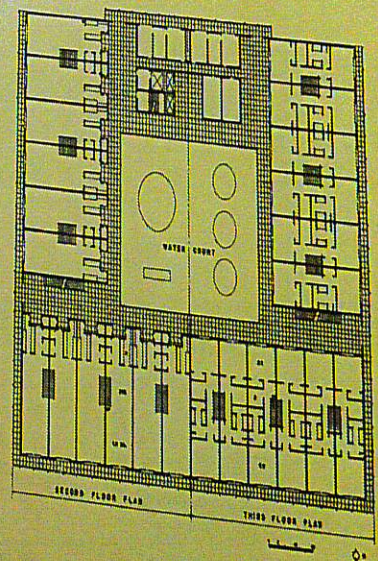
MILES A. GORDON
 ASSOCIATE ARCHITECT
 1000 BAYVIEW AVENUE, MIAMI, FLORIDA

1000 BAYVIEW AVENUE, MIAMI, FLORIDA

The 400 in 1962, with an architectural plan indicating the wraparound balconies.



This luxury apartment building at 400 South Ocean Boulevard in Palm Beach, Florida, contains 48 duplex apartments and a top floor of six penthouses. The ground floor units, which, like the duplexes, contain two bedrooms, all have small private gardens (left). The duplex apartments, which form the building's two main levels, have two-story-high windows and a railed balcony. All of the windows and doors are flanked by sliding aluminum shutters for protection against hurricanes. The duplexes contain an entrance hall, living and dining rooms, a kitchen and a powder room on their lower floors, with two bedrooms and a bath above. The building has no interior corridors; circulation on each floor is by means of



In 2022, due to an aging 20 year old waterproofing membrane and porous travertine, leaks needed to be immediately repaired around the balcony sliders



Damage to the travertine on the balconies due to old styled hurricane shutters attached to the sliders. The hurricane shutters with a central support created water intrusion into the balconies overhang and into units with leaks and efflorescence.



New porcelain travertine is a good companion color to the 2022 travertine.



Envelope needs deep concrete restoration,..cracks in the façade,..



Treated rebars,..



Theresa Pussinen

From: Scott Reavy <sreavy1@gmail.com>
Sent: Tuesday, August 22, 2023 3:01 PM
To: David Missner; Nancy Gardiner; Theresa Pussinen
Subject: Walkway repair process

The following is a typical list of items required by the engineer to repair exterior cantilevered walkways or balconies.

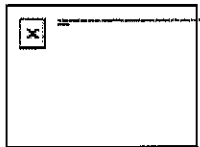
1. Engineer to determine types of repair
2. Removal of any overlay that is present on top of the structural concrete slabs. Including tile, stone or marble, cementitious overlays ect.
3. Removal of all membrane systems if present down to bare concrete to expose the slab surface
4. Engineer determines the areas of concrete spalling that may have occurred.
5. The Contractor then begins demolition of the areas mark by the engineer to ICRI (International Concrete Repair Institute) standards.
6. Once the concrete is remove the reinforcing bars are exposed to determine if the bar can remain in place or must be removed and replaced.
7. The reinforcing bar is mechanically cleaned and coated with corrosion inhibitor to prevent further corrosion.
8. The repair area is inspected by the engineer and then new concrete is placed back into the repair area.
9. Once all concrete repairs are complete the entire walkway is pressure cleaned and a corrosion inhibitor is applied to prevent reinforcing bar to corrode again.
10. Perimeter intersections at the walls and slabs are caulked with a urethane sealant.
11. New membrane system is installed as per manufacturer's specifications.
12. New tiles or overlay (finishes) are applied on top of the new membrane system.

That in a nutshell is the repair process.

--

Scott Reavy
President

Reavy Property Management & Maintenance, Inc
16115 64th Place North
Loxahatchee, Florida 33470
954-649-5304 cell
561-795-9237 fax
CGC#1522801





BOTKIN PARSSI & ASSOCIATES, INC.
CONSULTING ENGINEERS

August 16, 2023

400 S. Ocean Condominiums
400 South Ocean Boulevard
Palm Beach, FL 33480

ATTENTION: 400 Association, Inc.

SUBJECT: Installation of Travertine Tiles on Exterior Walkways

PROJECT NO.: 23-027

Dear Board of Directors,

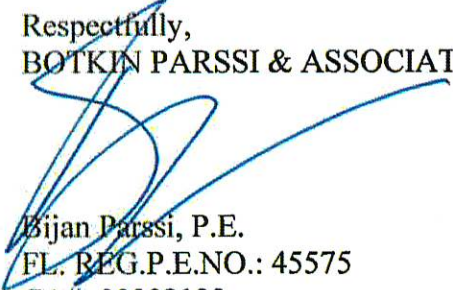
As discussed, Travertine Tiles are not appropriate for installation on the building exterior, including walkways, due to the following reasons:

1. Travertine Tiles are pourous natural stones with numerous voids. These voids are cleaned and filled with epoxy at the factory. Tiles are then polished and shipped. Over time, the epoxy compound pop out, resulting in creation of voids on the tile surface. The voids gather dirt and make it very hard to clean the tiles.
2. Due to the acidic nature of coastal environment (rain/weather) the polish on the tiles wears off, making them dull looking. To avoid this, the tiles will need to be polished every 2 to 3 years. This also results in creation of additional voids on the tile surface.
3. Development of the voids in the tiles due to either rain, or the epoxy compound popping out, will create a tripping hazard, especially for women wearing high heel shoes

Based on the above, I do not recommend the use of Travertine Tiles, especially for exterior. It is my opinion that Porcelain Tiles are best suited for the exterior walkways at the 400 Building.

If you have any questions or require further information, please contact our office.

Respectfully,
BOTKIN PARSSI & ASSOCIATES, INC.



Bijan Parssi, P.E.
FL. REG.P.E.NO.: 45575
CA#: 00002133
BP/jv

From: "Direktor, Kenneth" <kdirektor@beckerlawyers.com>

Date: August 21, 2023 at 12:06:48 PM CDT

To: David Missner <mizzner@icloud.com>

Subject: Re: See if the Statutes agree, the Board has the responsibility for all needed alterations for storm protection.

My prior email addresses replacements by the Association on common elements. If I understand this supplemental email correctly, your inquiry pertain to tile installed on balconies which are part of the unit under Section 3.4 of the Declaration. I assume the tile was installed by current or former owners.

If that assumption is correct, this is governed by Section 9.2 of the Declaration, which requires Board approval of tile installations. Since the Board has the right to approve, I have no problem with the Board adopting and publishing standards for the types of decorative surfaces which will be permitted on unit balconies. This will enable owners and contractors to know what they can and cannot do before they even submit paperwork for approval. The standards can and should certainly be based upon competent engineering advice.

Kenneth S. Direktor

Shareholder

Chair, Community Association Law Practice Group

Board Certified Specialist, Condominium and Planned Development Law

Fellow, College of Community Association Lawyers

Becker & Poliakoff
1 East Broward Blvd., Suite 1800
Ft. Lauderdale, FL 33301

--- 954.965.5050

--- 954.985.4176

--- kdirektor@beckerlawyers.com

--- www.beckerlawyers.com

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MARVEL TRAVERTINE



GRES PORCELLANATO
TECHNICAL FEATURES - COMPLIANT WITH STANDARDS EN 14411 (ISO
13006)
ANNEX G GROUP B1a



Sizes	120x278 cm 47 1/4"x109 1/4" 9mm	120x240 cm 47 1/4"x94 1/4" 9mm	120x120 cm 47 1/4"x47 1/4" 9mm	60x120 cm 23 1/2"x47 1/4" 9mm	60x120 cm 23 1/2"x47 1/4" 20mm	60x60 cm 23 1/2"x23 1/2" 9mm
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		Technical features	Test method	Requisites for nominal size N			Marvel Travertine			
				7 cm ≤ N < 15 cm	N ≥ 15 cm		Matte rectified 6mm 120x278 cm	Matte rectified 9mm	Grip rectified	Outdoor rectified
				(mm)	(%)	(mm)				
Regularity features		Length and width	ISO 10545-2	± 0.9 (*) Non-rect. ± 0.4 (*) Rect.	± 0.6 (*) Non-rect. ± 0.3 (*) Rect.	± 2.0 (*) Non-rect. ± 1.0 (*) Rect.	Suitable for	Suitable for	Suitable for	Suitable for
		Thickness		± 0.5 (**)	± 5 (**)	± 0.5 (**)	Suitable for	Suitable for	Suitable for	Suitable for
		Straightness of sides		± 0.8 (***) Non-rect. ± 0.4 (***) Rect.	± 0.5 (***) Non-rect. ± 0.3 (***) Rect.	± 1.5 (***) Non-rect. ± 0.8 (***) Rect.	Suitable for	Suitable for	Suitable for	Suitable for
		Perpendicularity (Measurement only on short edges when L/l ≥ 3)		± 0.8 (***) Non-rect. ± 0.4 (***) Rect.	± 0.5 (***) Non-rect. ± 0.3 (***) Rect.	± 2.0 (***) Non-rect. ± 1.5 (***) Rect.	Suitable for	Suitable for	Suitable for	Suitable for
		Surface flatness		c.c. ± 0.8 Non-rect. c.c. ± 0.6 Rect.	c.c. ± 0.5 Non-rect. c.c. ± 0.4 Rect.	c.c. ± 2.0 Non-rect. c.c. ± 1.8 Rect.	Suitable for	Suitable for	Suitable for	Suitable for
				e.c. ± 0.8 Non-rect. e.c. ± 0.6 Rect.	e.c. ± 0.5 Non-rect. e.c. ± 0.4 Rect.	e.c. ± 2.0 Non-rect. e.c. ± 1.8 Rect.				
				w. ± 0.8 Non-rect. w. ± 0.6 Rect.	w. ± 0.5 Non-rect. w. ± 0.4 Rect.	w. ± 2.0 Non-rect. w. ± 1.8 Rect.				
Structural features		Water absorption level (in% by mass)	ISO 10545-3	Es 0,5% Individual Maximum 0,6%			≤ 0.1%	≤ 0.1%	≤ 0.1%	≤ 0.1%
			ASTM C373-18	Requirement ANSI A137.1-2017 Water Absorption Max < 0,5%			≤ 0.5%	≤ 0.5%	≤ 0.5%	≤ 0.5%
Bulk mechanical features		Breaking strenght	ISO 10545-4	S ≥ 700N (for thickness < 7,5mm) S ≥ 1300N (for thickness ≥ 7,5mm)			S ≥ 1000 N	S ≥ 1500 N	S ≥ 1500 N	S ≥ 10000 N
		Bending resistance		R ≥ 35 N/mm²			R ≥ 40 N/mm²	R ≥ 40 N/mm²	R ≥ 40 N/mm²	R ≥ 45 N/mm²
		Bending and breaking load resistance (4)(5)	EN 1339 Annex F	-						≥ T11 120x120 90x90 ≥ U4 60x120
		Impact resistance	ISO 10545-5	Declared value			≥ 0.55	≥ 0.55	≥ 0.55	≥ 0.55
Surface mechanical features		Deep abrasion resistance of unglazed tiles	ISO 10545-6	≤ 175 mm³			≤ 150mm³	≤ 150mm³	≤ 150mm³	≤ 150mm³

* Permitted deviation, in % or mm, from the average size of each tile (2 or 4 sides) with respect to the manufacturing size (W).

** Permitted deviation, in % or mm, from the average thickness of each tile with respect to the cited manufacturing thickness (W).

*** Maximum permitted straightness deviation, in % or mm, with respect to the corresponding manufacturing sizes (W).

**** Maximum permitted perpendicularity deviation, in % or mm, with respect to the corresponding manufacturing sizes (W).

***** Maximum permitted centre curvature deviation, in % or mm, with respect to the diagonal calculated according to manufacturing sizes (W).

e.c. Maximum permitted corner curvature deviation, in % or mm, with respect to the corresponding manufacturing sizes (W).

w. Maximum permitted bending deviation, in % or mm, with respect to the diagonal calculated according to manufacturing sizes (W).

(1) Determining the slip resistance of pedestrian surfaces; not applicable to sports flooring or road traffic flooring.

(2) The anti-slip performance is guaranteed at the time of delivering the product.

(3) However, tiles with a DCOF of 0.42 or greater are not necessarily suitable for all projects. The specifier shall determine tiles appropriate for specific project conditions, considering by way of example, but not in limitation, type of use, traffic, expected contaminants, expected maintenance, expected wear, and manufacturers' guidelines and recommendations."

(4) For further details, please refer to the outdoor design general catalogue.

(5) Only for products with 20 mm thickness

MARVEL TRAVERTINE



GRES PORCELLANATO
TECHNICAL FEATURES - COMPLIANT WITH STANDARDS EN 14411 (ISO 13006)
ANNEX G GROUP BIIa



Sizes	120x278 cm 47 1/4"x109 1/4" 6mm	120x240 cm 47 1/4"x94 1/4" 9mm	120x120 cm 47 1/4"x47 1/4" 9mm	60x120 cm 23 1/2"x47 1/4" 9mm	60x120 cm 23 1/2"x47 1/4" 20mm	60x60 cm 23 1/2"x23 1/2" 9mm
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		Technical features	Test method	Requisites for nominal size N			Marvel Travertine			
				7 cm ≤ N < 15 cm		N ≥ 15 cm	Matte rectified 6mm 120x278 cm	Matte rectified 9mm	Grip rectified	Outdoor rectified
				(mm)	(%)	(mm)				
Thermo- igrometric features		Coefficient of linear thermal expansion	ISO 10545-8	Declared value			≤7MK ⁻¹	≤7MK ⁻¹	≤7MK ⁻¹	≤7MK ⁻¹
		Thermal shock resistance	ISO 10545-9	Test passed in accordance with ISO 10545-1			Resistant	Resistant	Resistant	Resistant
		Moisture expansion (in mm/m)	ISO 10545-10	Declared value			≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)
		Frost resistance	ISO 10545-12	Test passed in accordance with ISO 10545-1			Resistant	Resistant	Resistant	Resistant
Physical properties		Bond strenght	EN 1348	Declared value			≥1.0 N/mm ² (Class C2 - EN 12004)	≥1.0 N/mm ² (Class C2 - EN 12004)	≥1.0 N/mm ² (Class C2 - EN 12004)	≥1.0 N/mm ² (Class C2 - EN 12004)
		Reaction to fire	-	Class A1 or A1 _{fl}			A1 - A1 _{fl}	A1 - A1 _{fl}	A1 - A1 _{fl}	A1 - A1 _{fl}
Chemical features		Resistance to household chemicals and swimming pool salts	ISO 10545-13	Minimum B class			A	A	A	A
		Resistance to low concentrations of acids and alkalis		Declared class			LA	LA	LA	LA
		Resistance to high concentrations of acids and alkalis		Declared class			HA	HA	HA	HA
		Stain resistance	ISO 10545-14	Declared class			5	5	5	5
Safety characteristics (1)/(2)		Booted ramp test	DIN EN 16165 ANNEX B (EX DIN 51130)	Declared class			R9	R10	R11	R11
		Barefoot Ramp test	DIN EN 16165 ANNEX A (EX DIN 51097)	Declared value			A	A+B	A+B+C	A+B+C
		Pendulum friction Test	BS EN 16165 ANNEX C (EX BS 7976)	PTV ≥ 36 classifies the surface as "low slip risk"			PTV ≥ 36 Wet on demand	≥36Dry ≥36Wet	≥36Dry ≥36Wet	≥36Dry ≥36Wet
			AS 4586	Declared Classification of the new pedestrian surface materials according to the Pendulum Test			P3 on demand	Class P3	Class P4	Class P4
			UNE 41901 EX:2017	Declared value			C2 on demand	Class C2	Class C3	Class C3
		Coefficient of friction	B.C.R.A. Rep. CEC/81	Min. Dec. 236/89 of 14/06/89 μ >0.40 for a sliding leather element on a dry floor μ >0.40 for a sliding hard rubber element on a wet floor			>0.40Asciutto >0.40Bagnato	>0.40Asciutto >0.40Bagnato	>0.40Asciutto >0.40Bagnato	>0.40Asciutto >0.40Bagnato
		Dynamic coefficient of friction (DCOF)	ANSI A 326.3	-			Wet DCOF ≥ 0.42	Wet DCOF ≥ 0.50	Wet DCOF ≥ 0.55	Wet DCOF ≥ 0.55

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(4) For further details, please refer to the outdoor design general catalogue.

(5) Only for products with 20 mm thickness

MADE IN ITALY. MADE TO EXCEL.

MARVEL

TRAVERTINE

Interactive version

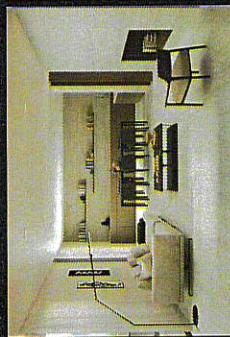


 **atlas concorde**

April 2023

Image Gallery

Exclusive Apartment - White Vein Cut



Residential Bathroom - Pearl Vein Cut



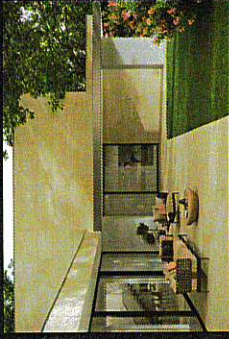
Luxury Showroom - Sand Vein Cut



Pool Villa - Sand Vein Cut & Cross Cut



Modern Villa - Sand Vein Cut & Cross Cut



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OVERVIEW



HBA
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BEDNER
ASSOCIATES



IMAGE
GALLERY



EXCLUSIVE APARTMENT
LUXURY VILLA
MODERN VILLA
POOL VILLA
MODERN VILLA

SURFACE
RANGE &
TECHNICAL
SPECS



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THE VIDEO
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Pool villa.

FLOOR
Marvel Travertine Sand Vain Cut
Outdoor 4 20mm Sensitech
60x120 cm | 23 1/2 x 47 1/2
Marvel Travertine White Vain Cut
Outdoor 4 20mm Sensitech
60x120 cm | 23 1/2 x 47 1/2
WALL
Marvel Travertine Sand Cross Cut
Kale/Matt Sensitech
60x120 cm | 23 1/2 x 47 1/2



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OVERVIEW



H&A
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EXCLUSIVE APARTMENT
LUXURY SUITE
LUXURY SUITE
LUXURY SUITE

POOL VILLA
MODERN VILLA

SURFACE
RANGE &
TECHNICAL
SPECS



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FLOOR
 Marvel Travertine Sand Ven Cut
 Outdoor ± 20mm Seratech
 60x20 cm | 23 1/4 x 7 1/2
 Marvel Travertine White Ven Cut
 Outdoor ± 20mm Seratech
 60x20 cm | 23 1/4 x 7 1/2

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OVERVIEW



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EXCLUSIVE APARTMENT
 LUXURY SHOWROOM
 POOL VILLA
 MODERN VILLA

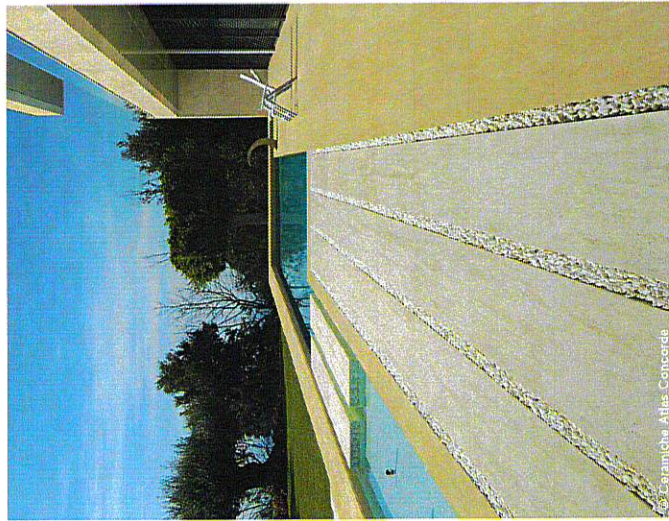
SURFACE
 RANGE &
 TECHNICAL
 SPECS



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Atlas Concorde — Marvel Travertine



FLOOR
Marvel Travertine Sand Vein Cut
Outdoor • 20mm Sintered
60x120 cm | 23 1/2" x 47 1/2"
Marvel Travertine White Vein Cut
Outdoor • 20mm Sintered
60x120 cm | 23 1/2" x 47 1/2"
WALL
Marvel Travertine Sand Cross Cut
Matte/Flat Sintered
60x120 cm | 23 1/2" x 47 1/2"

Image gallery



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OVERVIEW



HBA
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EXCLUSIVE APARTMENT
RESIDENTIAL BATHROOM
LUXURY BROWPOOM
MODERN VILLA

SURFACE
RANGE &
TECHNICAL
SPECS



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FLOOR:
Marvel Travertine Sand Grass Cut
15x40x30 cm
15x40x30 cm | 477/1447/1

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EXCLUSIVE APARTMENT
EXCLUSIVE APARTMENT
LUXURY SHOWROOM
POOL VILLA
MODERN VILLA

SURFACE
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Porcelain tiles

PORCELAIN TILES - Gres Porcellanato - Glaz Ceram - Feinsteinzeug - Gres porcelánico - Керамический гранит
RECTIFIED KRONOCER® - Rectificate ennobelato - Rectified ennobelato - Rectified ennobelato - Rectified ennobelato

VEIN CUT



Floor & Wall Furniture

120x278 cm - 47 1/4" x 109 1/2"	± 6 mm	White	White	White
120x240 cm - 47 1/4" x 94 1/2"	± 3 mm	White	White	White
60x180 cm - 23 5/8" x 70 7/8"	± 3 mm	White	White	White



Countertops Furniture

160x264 cm - 62 9/16" x 103 7/8"	± 6 mm	White	White	White
160x264 cm - 62 9/16" x 103 7/8"	± 12 mm	White	White	White



Outdoor

60x120 cm - 23 5/8" x 47 1/4"	± 9 mm	White	White	White
60x120 cm - 23 5/8" x 47 1/4"	± 20 mm	White	White	White

CROSS CUT



Floor & Wall Furniture

120x120 cm - 47 1/4" x 47 1/4"	± 9 mm	White	White	White
60x120 cm - 23 5/8" x 47 1/4"	± 9 mm	White	White	White
60x60 cm - 23 5/8" x 23 5/8"	± 9 mm	White	White	White



Outdoor

60x120 cm - 23 5/8" x 47 1/4"	± 9 mm	White	White	White
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Sensitech

SAFETY SMART

The constant research of Alfas Concordo Laboratories has led to the creation of Sensitech, the porcelain tile surface for interiors made using a production method patented in Italy that combines superior slip-resistance with an unprecedented tactile softness, guaranteeing ease of cleaning and maintenance.
Dalla costante ricerca del Laboratorio Alfas Concordo nasce Sensitech, la superficie in gres porcellanato per interni realizzata con metodo produttivo brevettato in Italia, che associa elevate prestazioni di resistenza allo scivolo alla morbidezza della camminata, garantendo facilità di pulizia e manutenzione.

Destination of use

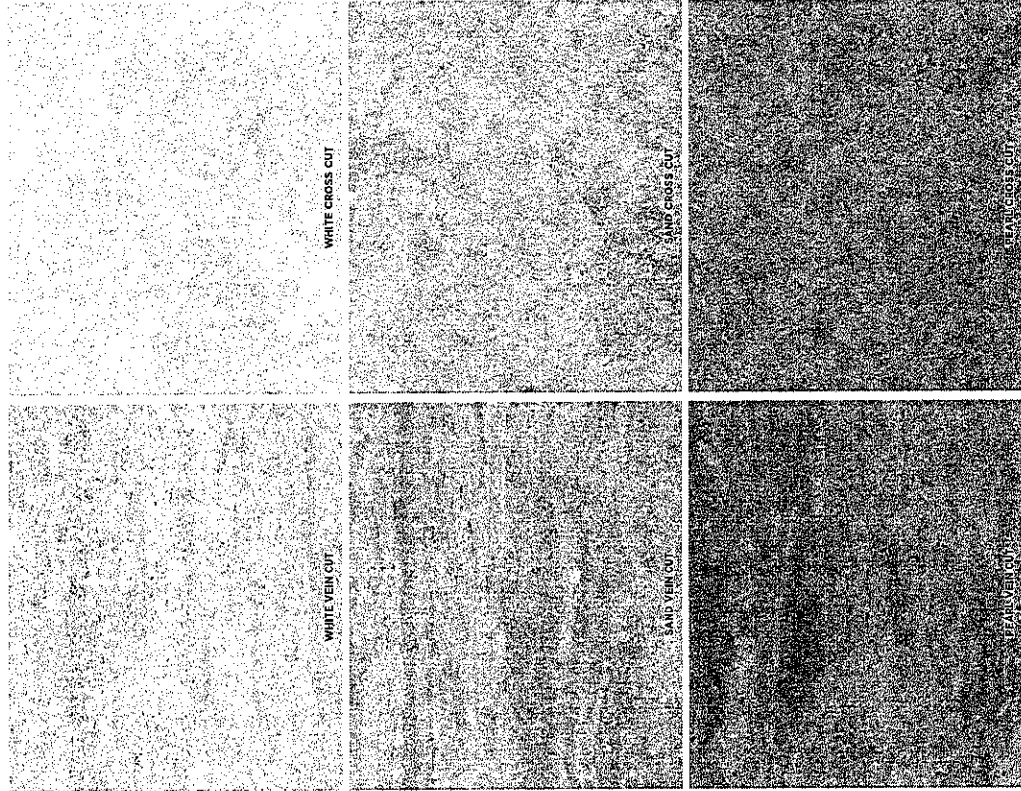
Indoor	Indoor	Indoor	Indoor
Indoor	Indoor	Indoor	Indoor
Indoor	Indoor	Indoor	Indoor

Anti-slip

80 Points 0-1 mm	80 Points 0-1 mm	80 Points 0-1 mm	80 Points 0-1 mm
R11 C Dry-Smooth 0-1 mm	R11 C Dry-Smooth 0-1 mm	R11 C Dry-Smooth 0-1 mm	R11 C Dry-Smooth 0-1 mm
R11 C Outdoor-Smooth 0-1 mm	R11 C Outdoor-Smooth 0-1 mm	R11 C Outdoor-Smooth 0-1 mm	R11 C Outdoor-Smooth 0-1 mm

Color-shading

V13 MacFate	V13 MacFate	V13 MacFate	V13 MacFate
V13 MacFate	V13 MacFate	V13 MacFate	V13 MacFate
V13 MacFate	V13 MacFate	V13 MacFate	V13 MacFate



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SURFACE
RANGE &
TECHNICAL
SPECS

COLLECTION RANGE
MARVEL WORLD
TECHNICAL SPECIFICATIONS
& CERTIFICATIONS

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Porcelain Tiles Decors



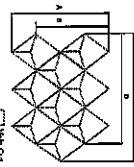
Marvel Travertine Travertino White
Mosaic Original
28x41.2 cm - 11 3/8" x 16 1/2"



Marvel Travertine Travertino Sand
Mosaic Original
28x41.2 cm - 11 3/8" x 16 1/2"



Marvel Travertine Travertino Pearl
Mosaic Original
28x41.2 cm - 11 3/8" x 16 1/2"



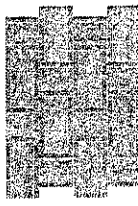
Marvel Travertine Travertino White
Mosaic Original
28x41.2 cm - 11 3/8" x 16 1/2"



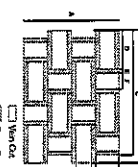
Marvel Travertine Travertino White
Mosaic Backwaters
35x46.8 cm - 13 3/4" x 18 1/2"



Marvel Travertine Travertino Sand
Mosaic Backwaters
35x46.8 cm - 13 3/4" x 18 1/2"



Marvel Travertine Travertino Pearl
Mosaic Backwaters
35x46.8 cm - 13 3/4" x 18 1/2"



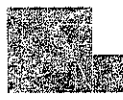
Marvel Travertine Travertino White
Mosaic Backwaters
35x46.8 cm - 13 3/4" x 18 1/2"



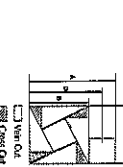
Marvel Travertine Travertino White
Mosaic Travertino
22x26 cm - 8 1/2" x 10 1/4"



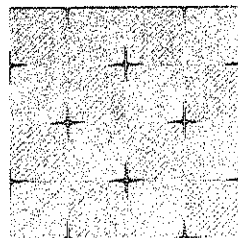
Marvel Travertine Travertino Sand
Mosaic Travertino
22x26 cm - 8 1/2" x 10 1/4"



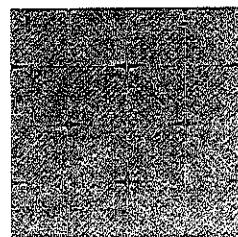
Marvel Travertine Travertino Pearl
Mosaic Travertino
22x26 cm - 8 1/2" x 10 1/4"



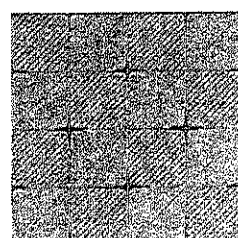
Marvel Travertine Travertino White
Mosaic Travertino
22x26 cm - 8 1/2" x 10 1/4"



Marvel Travertine Travertino White
Diamond m
60x60 cm - 23 5/8" x 23 5/8"



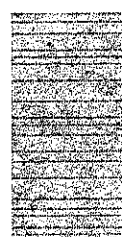
Marvel Travertine Travertino Sand
Diamond m
60x60 cm - 23 5/8" x 23 5/8"



Marvel Travertine Travertino Pearl
Diamond m
60x60 cm - 23 5/8" x 23 5/8"



Marvel Travertine Travertino White
Cross Checkerboard Urban Grid m
30x60 cm - 11 7/8" x 23 5/8"

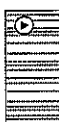


Marvel Travertine Travertino Sand
Cross Checkerboard Urban Grid m
30x60 cm - 11 7/8" x 23 5/8"

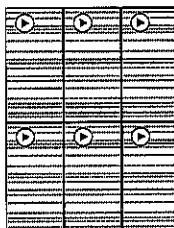


Marvel Travertine Travertino Pearl
Cross Checkerboard Urban Grid m
30x60 cm - 11 7/8" x 23 5/8"

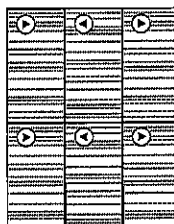
For best results it is recommended to follow one of the following laying patterns. - Per un risultato estetico ottimale si consiglia di seguire uno dei seguenti schemi di posa. - Pour une meilleure apparence des schémas de pose suivants pour un résultat esthétique optimal. - Für ein optisch optimales Resultat empfehlen wir eines der nachstehenden Verlegemuster zu befolgen. - Para obtener un mejor resultado estético, se recomienda seguir uno de los siguientes esquemas de colocación. - Para proporcionar un mayor atractivo estético, recomendamos seguir uno de los siguientes esquemas de colocación.



LAYING PATTERN 1



LAYING PATTERN 2



It is recommended to use the same type of grout for all the tiles in the same area. - It is recommended to use the same type of grout for all the tiles in the same area. - It is recommended to use the same type of grout for all the tiles in the same area. - It is recommended to use the same type of grout for all the tiles in the same area. - It is recommended to use the same type of grout for all the tiles in the same area.

Precious

RANGE SUMMARY (in m)



Floor & Wall



Furniture

120x278 cm 47 1/2" x 109 1/2"

120x120 cm 47 1/2" x 47 1/2"

60x120 cm 23 1/2" x 47 1/2"

75x150 cm 29 1/2" x 59"

75x75 cm 29 1/2" x 29 1/2"



Wall

50x120 cm 19 1/2" x 47 1/2"



Countertops

162x324 cm 62 1/2" x 127 1/2"

> Non rectified

159x324 cm 62 1/2" x 127 1/2"

> Non rectified



± 6 mm	Polished	Polished	Polished	Polished	Polished
± 9 mm	Polished	Polished	Polished	Polished	Polished
± 9 mm	Polished	Polished	Polished	Polished	Polished
± 9 mm	Polished	Polished	Polished	Polished	Polished
± 9 mm	Polished	Polished	Polished	Polished	Polished

± 8,5 mm	Shiny	Shiny	Shiny	Shiny	Shiny
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± 6 mm	Polished *	Polished *	Polished *	Polished *	Polished *
± 12 mm	Polished *	Polished *	Polished *	Polished *	Polished *
± 20 mm	Polished *	Polished *	Polished *	Polished *	Polished *
± 20 mm	Polished *	Polished *	Polished *	Polished *	Polished *

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* Also available in bookmanga®
For more information see page 137

Marvel Calacatta Extra, Moon Onyx, Champagne Onyx, Beige Mystery, Bronze Luxury, Silver Dream, Grey Stone



Marvel Pro Statuario Select, Crema Delicato, Travertine Alabastro, Travertine Silver, Grey Flurry, Nero St. Laurent



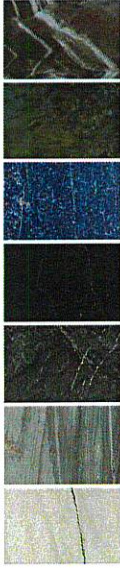
Marvel Stone Carrara Pure, Bianco Dolomite, Cream Prestige, Bardiglio Grey, Nero Marquina



Marvel Edge Royal Calacatta, Imperial White, Gris Clair, Gris Supreme, Absolute Brown, Gold Onyx, Agata Azul, Red Luxury



Marvel Dream Bianco Fantastico, Morning Sky, Grigio Intenso, Black Atlantis, Ultramarine, Brazil Green, Crystal Beauty



Marvel Shine Calacatta Delicato, Calacatta Prestigio, Statuario Supreme, Calacatta Imperiale



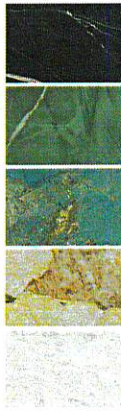
Marvel X Calacatta Apuano, Calacatta Sublime, Calacatta Perla, Grey Cloud, Fior di Bosco, Calacatta Apuano Hammered, Fior di Bosco Hammered



Marvel Travertine White Ven Cut, White Cross Cut, Sand Ven Cut, Sand Cross Cut, Pearl Ven Cut, Pearl Cross Cut



Marvel Gala Crystal White, Desert Soul, Amazonia, Ecotic Green, Calacatta Black



There are three main types of the difference: the surface, the texture and the pattern. The surface is the most important one. It is the one that is visible to the eye. The texture is the one that is felt by the hand. The pattern is the one that is seen by the mind. The surface is the most important one. It is the one that is visible to the eye. The texture is the one that is felt by the hand. The pattern is the one that is seen by the mind.

1) The surface is the most important one. It is the one that is visible to the eye. The texture is the one that is felt by the hand. The pattern is the one that is seen by the mind.

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The evolution of ceramic surfaces



Sensitech is the high-tech surface for indoor and outdoor settings created by Atlas Concorde Laboratories. The surface combines high slip resistance performance with tactile softness. With Sensitech, the meaning of surface evolves and takes on a reassuring, pleasant and practical touch, making architectural spaces more comfortable and appealing.

Sensitech è la superficie ad alto coefficiente tecnologico per gli ambienti interni ed esterni realizzata dai Laboratori Atlas Concorde. La superficie coniuga elevate prestazioni di resistenza allo scivolamento ad una maggiore morbidezza tattile. Con Sensitech il significato di superficie si evolve e assume un tocco rassicurante, piacevole e pratico, rendendo gli spazi architettonici sempre più confortevoli e appealing.

Sensitech est la surface hautement technologique conçue par les laboratoires Atlas Concorde pour les espaces intérieurs et extérieurs. Elle associe des performances de résistance au glissement élevées à une plus grande douceur au toucher. Avec Sensitech, la définition de surface évolue et acquiert un aspect rassurant, agréable et pratique, rendant ainsi les espaces architecturaux de plus en plus confortables.

Sensitech ist die High-Tech-Oberfläche für Innen- und Außenbereiche, die von den Laboratorien Atlas Concorde realisiert wurden. Die Oberfläche kombiniert hohe Rutschfestigkeit mit taktiler Weichheit. Mit Sensitech entwickelt sich die Bedeutung der Oberfläche weiter und erhält einen beruhigenden, angenehmen und praktischen Touch, der architektonische Räume komfortabler gestaltet.

Sensitech es la superficie de alto valor tecnológico para ambientes interiores y exteriores creada por los laboratorios de Atlas Concorde. La superficie combina un alto rendimiento de resistencia al deslizamiento con una mayor suavidad al tacto. Con Sensitech, el significado de superficie evoluciona y adquiere un aire tranquilizador, agradable y práctico, haciendo que los espacios arquitectónicos resulten cada vez más cómodos y agradables.

Sensitech - это высокотехнологичная поверхность для помещений и улицы, созданная лабораторией Atlas Concorde. Она сочетает в себе высокие показатели противоскольжения с высокой тактильной мягкостью. Sensitech трансформирует значение поверхности, делая их успокаивающими, приятными и практичными, благодаря чему архитектурные пространства становятся удобнее.

Sensitech

SAFE. SOFT. SMART.



INDOOR & OUTDOOR
CONTINUITY



SOFT TO
THE TOUCH



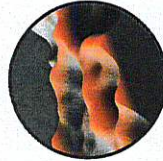
EXTREMELY
SAFE



HYGIENIC AND EASY TO
CLEAN



LONG-LASTING
QUALITIES



Traditional anti-slip surface



The innovative Sensitech Surface

The profile of standard anti-slip surfaces has an accentuated alternation of peaks and hollows, which generates friction and increases slip resistance, but also results in very rough surfaces. In Sensitech, special micro-particles fill hollows, leaving the anti-slip performance intact, while the surface is levelled and smoothed. These qualities make cleaning easier because it is less likely to retain dust and dirt.

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FINISHES, COLOURS
& TECHNICAL SPECIFICATIONS

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MARVEL TRAVERTINE



GRES PORCELLANATO
TECHNICAL FEATURES - COMPLIANT WITH STANDARDS EN 14411 (ISO
13006)
ANNEX G GROUP B1a



Sizes	120x278 cm 47 1/4"x109 1/4" 6mm	120x240 cm 47 1/4"x94 1/4" 9mm	120x120 cm 47 1/4"x47 1/4" 9mm	60x120 cm 23 1/2"x47 1/4" 9mm	60x120 cm 23 1/2"x47 1/4" 20mm	60x60 cm 23 1/2"x23 1/2" 9mm
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		Technical features	Test method	Requisites for nominal size N			Marvel Travertine			
				7 cm ≤ N < 15 cm (mm)	N ≥ 15 cm (%)	N ≥ 15 cm (mm)	Matte rectified 6mm 120x278 cm	Matte rectified 9mm	Grip rectified	Outdoor rectified
Regularity features		Length and width	ISO 10545-2	± 0,9 (*) Non-rect. ± 0,4 (*) Rect.	± 0,6 (*) Non-rect. ± 0,3 (*) Rect.	± 2,0 (*) Non-rect. ± 1,0 (*) Rect.	Suitable for	Suitable for	Suitable for	Suitable for
		Thickness		± 0,5 (**)	± 5 (**)	± 0,5 (**)	Suitable for	Suitable for	Suitable for	Suitable for
		Straightness of sides		± 0,8 (****) Non-rect. ± 0,4 (****) Rect.	± 0,6 (****) Non-rect. ± 0,3 (****) Rect.	± 1,5 (****) Non-rect. ± 0,8 (****) Rect.	Suitable for	Suitable for	Suitable for	Suitable for
		Perpendicularity (Measurement only on short edges when L/l ≥ 3)		± 0,8 (****) Non-rect. ± 0,4 (****) Rect.	± 0,5 (****) Non-rect. ± 0,3 (****) Rect.	± 2,0 (****) Non-rect. ± 1,5 (****) Rect.	Suitable for	Suitable for	Suitable for	Suitable for
		Surface flatness	ISO 10545-2	c.c. ± 0,8 Non-rect. c.c. ± 0,6 Rect.	c.c. ± 0,5 Non-rect. c.c. ± 0,4 Rect.	c.c. ± 2,0 Non-rect. c.c. ± 1,8 Rect.	Suitable for	Suitable for	Suitable for	Suitable for
				e.c. ± 0,8 Non-rect. e.c. ± 0,6 Rect.	e.c. ± 0,5 Non-rect. e.c. ± 0,4 Rect.	e.c. ± 2,0 Non-rect. e.c. ± 1,8 Rect.				
				w. ± 0,8 Non-rect. w. ± 0,6 Rect.	w. ± 0,5 Non-rect. w. ± 0,4 Rect.	w. ± 2,0 Non-rect. w. ± 1,8 Rect.				
Structural features		Water absorption level (in % by mass)	ISO 10545-3	≤ 0,5% Individual Maximum 0,6%			≤ 0,1%	≤ 0,1%	≤ 0,1%	≤ 0,1%
			ASTM C373-18	Requirement ANSI A137.1-2017 Water Absorption Max < 0,5%			≤ 0,5%	≤ 0,5%	≤ 0,5%	≤ 0,5%
Bulk mechanical features		Breaking strenght	ISO 10545-4	S ≥ 700N (for thickness < 7,5mm) S ≥ 1300N (for thickness ≥ 7,5mm)			S ≥ 1000 N	S ≥ 1500 N	S ≥ 1500 N	S ≥ 10000 N
		Bending resistance		R ≥ 35 N/mm²			R ≥ 40 N/mm²	R ≥ 40 N/mm²	R ≥ 40 N/mm²	R ≥ 45 N/mm²
		Bending and breaking load resistance (4)(5)	EN 1339 Annex F	-						≥ T11 120x120 90x90 ≥ U4 60x120
		Impact resistance	ISO 10545-5	Declared value			≥ 0,55	≥ 0,55	≥ 0,55	≥ 0,55
Surface mechanical features		Deep abrasion resistance of unglazed tiles	ISO 10545-6	≤ 175 mm³			≤ 150mm³	≤ 150mm³	≤ 150mm³	≤ 150mm³

* Permitted deviation, in % or mm, from the average size of each tile (2 or 4 sides) with respect to the manufacturing size (W).

** Permitted deviation, in % or mm, from the average thickness of each tile with respect to the cited manufacturing thickness (W).

*** Maximum permitted straightness deviation, in % or mm, with respect to the corresponding manufacturing sizes (W).

**** Maximum permitted perpendicularity deviation, in % or mm, with respect to the corresponding manufacturing sizes (W).

**** Maximum permitted centre curvature deviation, in % or mm, with respect to the diagonal calculated according to manufacturing sizes (W).

e.c. Maximum permitted corner curvature deviation, in % or mm, with respect to the corresponding manufacturing sizes (W).

w. Maximum permitted bending deviation, in % or mm, with respect to the diagonal calculated according to manufacturing sizes (W).

(1) Determining the slip resistance of pedestrian surfaces; not applicable to sports flooring or road traffic flooring.

(2) The anti-slip performance is guaranteed at the time of delivering the product.

(3) However, tiles with a DCOF of 0.42 or greater are not necessarily suitable for all projects. The specifier shall determine tiles appropriate for specific project conditions, considering by way of example, but not in limitation, type of use, traffic, expected contaminants, expected maintenance, expected wear, and manufacturers' guidelines and recommendations."

(4) For further details, please refer to the outdoor design general catalogue.

(5) Only for products with 20 mm thickness

MARVEL TRAVERTINE



GRES PORCELLANATO
TECHNICAL FEATURES - COMPLIANT WITH STANDARDS EN 14411 (ISO 13006)
ANNEX G GROUP B1a



Sizes	120x278 cm 47 1/4"x109 1/2" 6mm	120x240 cm 47 1/4"x94 1/2" 9mm	120x120 cm 47 1/4"x47 1/4" 9mm	60x120 cm 23 1/2"x47 1/4" 9mm	60x120 cm 23 1/2"x47 1/4" 20mm	60x60 cm 23 1/2"x23 1/2" 9mm
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		Technical features	Test method	Requisites for nominal size N			Marvel Travertine			
				7 cm ≤ N < 15 cm	N ≥ 15 cm		Matte rectified 6mm 120x278 cm	Matte rectified 9mm	Grip rectified	Outdoor rectified
				(mm)	(%)	(mm)				
Thermo- igrometric features		Coefficient of linear thermal expansion	ISO 10545-8	Declared value			≤7MK ⁻¹	≤7MK ⁻¹	≤7MK ⁻¹	≤7MK ⁻¹
		Thermal shock resistance	ISO 10545-9	Test passed in accordance with ISO 10545-1			Resistant	Resistant	Resistant	Resistant
		Moisture expansion (in mm/m)	ISO 10545-10	Declared value			≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)	≤0.01% (0.1mm/m)
		Frost resistance	ISO 10545-12	Test passed in accordance with ISO 10545-1			Resistant	Resistant	Resistant	Resistant
Physical properties		Bond strenght	EN 1348	Declared value			≥1.0 N/mm ² (Class C2 - EN 12004)	≥1.0 N/mm ² (Class C2 - EN 12004)	≥1.0 N/mm ² (Class C2 - EN 12004)	≥1.0 N/mm ² (Class C2 - EN 12004)
		Reaction to fire	-	Class A1 or A1 _{fl}			A1 - A1 _{fl}	A1 - A1 _{fl}	A1 - A1 _{fl}	A1 - A1 _{fl}
Chemical features		Resistance to household chemicals and swimming pool salts	ISO 10545-13	Minimum B class			A	A	A	A
		Resistance to low concentrations of acids and alkalis		Declared class			LA	LA	LA	LA
		Resistance to high concentrations of acids and alkalis		Declared class			HA	HA	HA	HA
		Stain resistance	ISO 10545-14	Declared class			5	5	5	5
Safety characteristics (1)(2)		Booted ramp test	DIN EN 16165 ANNEX B (EX DIN 51130)	Declared class			R9	R10	R11	R11
		Barefoot Ramp test	DIN EN 16165 ANNEX A (EX DIN 51097)	Declared value			A	A+B	A+B+C	A+B+C
		Pendulum friction Test	BS EN 16165 ANNEX C (EX BS 7976)	PTV ≥ 36 classifies the surface as "low slip risk"			PTV ≥ 36 Wet on demand	≥36Dry ≥36Wet	≥36Dry ≥36Wet	≥36Dry ≥36Wet
			AS 4586	Declared Classification of the new pedestrian surface materials according to the Pendulum Test			P3 on demand	Class P3	Class P4	Class P4
			UNE 41901 EX:2017	Declared value			C2 on demand	Class C2	Class C3	Class C3
		Coefficient of friction	B.C.R.A. Rep. CEC/81	Min. Dec. 236/89 of 14/06/89 μ > 0.40 for a sliding leather element on a dry floor μ > 0.40 for a sliding hard rubber element on a wet floor			>0.40Asciutto >0.40Bagnato	>0.40Asciutto >0.40Bagnato	>0.40Asciutto >0.40Bagnato	>0.40Asciutto >0.40Bagnato
		Dynamic coefficient of friction (DCOF)	ANSI A 326.3	-			Wet DCOF ≥ 0.42	Wet DCOF ≥ 0.50	Wet DCOF ≥ 0.55	Wet DCOF ≥ 0.55

* Permitted deviation, in % or mm, from the average size of each tile (2 or 4 sides) with respect to the manufacturing size (W).

** Permitted deviation, in % or mm, from the average thickness of each tile with respect to the cited manufacturing thickness (W).

*** Maximum permitted straightness deviation, in % or mm, with respect to the corresponding manufacturing sizes (W).

**** Maximum permitted perpendicularity deviation, in % or mm, with respect to the corresponding manufacturing sizes (W).

**** Maximum permitted centre curvature deviation, in % or mm, with respect to the diagonal calculated according to manufacturing sizes (W).

e.c. Maximum permitted corner curvature deviation, in % or mm, with respect to the corresponding manufacturing sizes (W).

w. Maximum permitted bending deviation, in % or mm, with respect to the diagonal calculated according to manufacturing sizes (W).

(1) Determining the slip resistance of pedestrian surfaces; not applicable to sports flooring or road traffic flooring.

(2) The anti-slip performance is guaranteed at the time of delivering the product.

(3) However, tiles with a DCOF of 0.42 or greater are not necessarily suitable for all projects. The specifier shall determine tiles appropriate for specific project conditions, considering

by way of example, but not in limitation, type of use, traffic, expected contaminants, expected maintenance, expected wear, and manufacturers' guidelines and recommendations."

(4) For further details, please refer to the outdoor design general catalogue.

(5) Only for products with 20 mm thickness