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NANO TOPPING

FlexStone[®]

A NEW CULTURE WITH SUSTAINABLE &
HANDMADE STONES.

FEATURES & BENEFITS

- Nano Topping has been subjected to rigorous laboratory trials in order to test the performance and identify any weak points. The results demonstrate that Nano Topping has properties of resistance even greater than normal resin for floors (already considered extremely resistant). Nano Topping's resistance has been tested with mechanical and thermal stresses and against marks, impact, wear and tear, fire, cracks, chemical and corrosive substances. Nano Topping's impermeability has also been repeatedly tested and has achieved excellent results, even insulating against steam.



- Covering floors and surfaces following your own wishes allows you to create a pleasant environment that best suits your specific needs and tastes. Playing on the components, using different types of finishes, creating the particular colour and effect, we create a unique, tailor-made solution, exactly the desired one: the aesthetic possibilities and compositional effects of Nano Topping allows maximum design freedom and personalisation, both for interior as well as exteriors. Creating innovative surfaces to obtain pleasant environments in which to live and work is our mission.

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FEATURES

- Nano Topping consists of a proprietary blend of water base resins, hardeners, various aggregates and polymers. Flex Nano topping overlays can be applied thinly or thickly without fear of delimitation or typical product failure.
- In addition, these overlays are much more resistant to damage from salt, petrochemicals, UV, harsh weather conditions and traffic wearing. A water base, no VOC solution for beautifying horizontal as well as vertical surfaces.



MATERIAL

- Nano Topping is a material made up of liquid polymers, hardeners, aggregates and a special water base resins mixture that is blended manually by FlexStone installers before each application, depending on the final outcome the customer requires.

AESTHETICS

- Nano Topping can be customised to a high degree, in colour and tonal variations, in effects and in finishes. It confers an extremely natural material effect and an original, contemporary aesthetic.



CONTINUITY

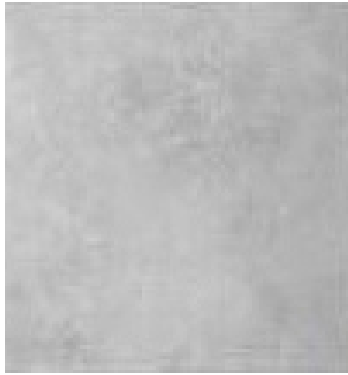
- One of the greatest advantages of Nano Topping is the possibility of applying it without limit or joints, inside or outside, on floors or walls, indeed, any surface or object in general.

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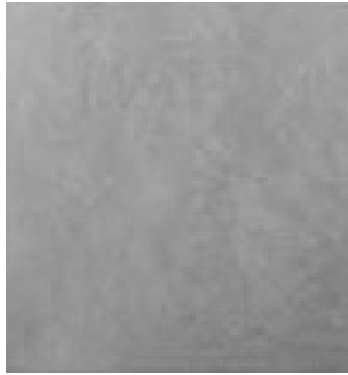
NANO TOPPING SHADE CARD



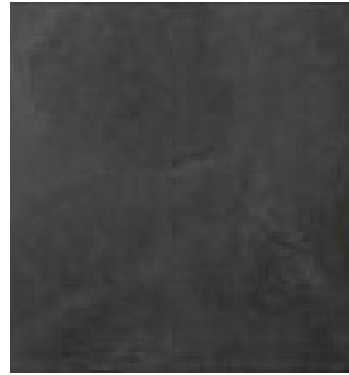
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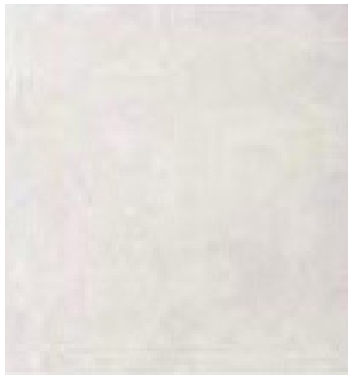
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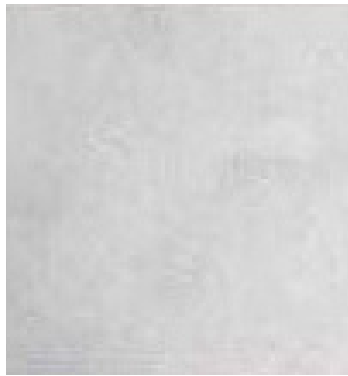
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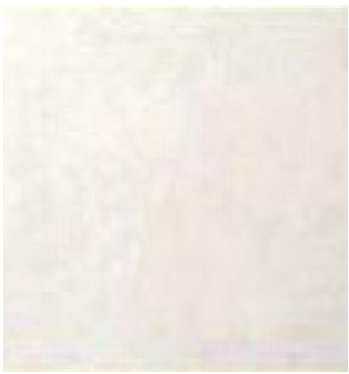
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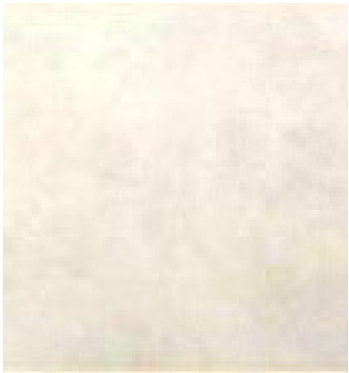
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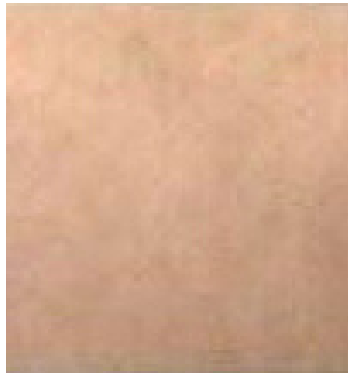
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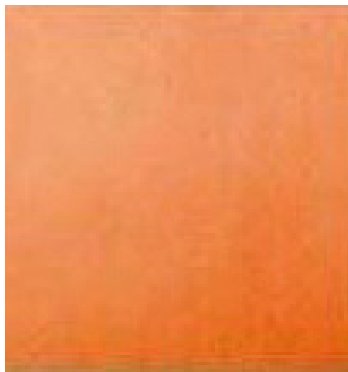
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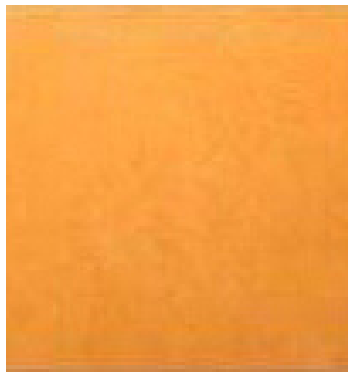
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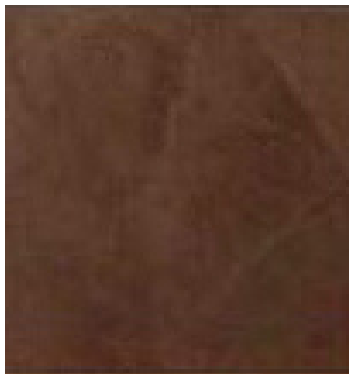
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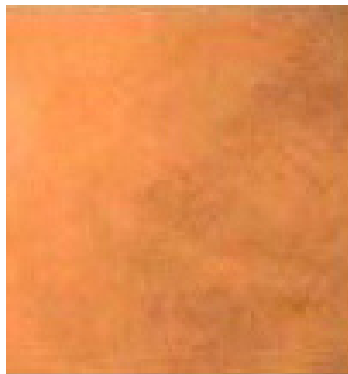
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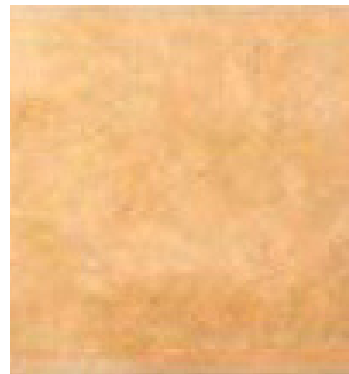
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NANO TOPPING TECHNICAL SPECIFICATIONS



IMPERMEABILITY

Water & Steam are not a problem. By selecting the right protective resin, Nano Topping can become a product with high impermeability, perfect for bathrooms & showers. In fact, in determining the depth of water penetration under pressure, Nano Topping demonstrated the complete absence of penetration



CLEANING

Nano Topping is also resistant to the harshest chemical agents. Continuous & without grouting, Nano Topping is easy & easy quick to clean. A wipe with a damp cloth with the addition of a little neutral, non-foaming detergent is enough to clean the surface. Moreover, various testes have shown that Nano Topping is resistant to the various chemical agents contained in many products in common use



SLIDE RESISTANCE

Various finishes for various degrees of slide resistance. Thanks to Nano Topping's craftsmanship application process, it is possible to choose the perfect grade of finish for your project. Smooth for interior flooring, rougher when a greater degree of slip-resistance is required, for exteriors or pool decks, for example.



FLAME RESISTANCE

Nano Topping is flame & smoke resistant. Nano Topping attained an excellent classification for flame resistance & smoke resistance (class S1). This allows it to be used in almost all civil and commercial locations.



IMPACT

Nano Topping is resistant to the hardest of blows. In a test in which a mass was dropped on the floor, Nano Topping was assessed "Class 3 - IR>20" which is the equivalent of a 1 kg sphere falling from a height of 2 meters. Sample intact following the impact.



RESISTANCE

You can be sure with Nano Topping. The material that most lends itself to comparison with Nano Topping is wood. However, Nano Topping is greatly superior in terms of resistance to scratches, impact and wear & tear. Numerous tests carried out in accordance with various regulations have demonstrated the unique features of Nano Topping.

NANO TOPPING TECHNICAL SPECIFICATIONS



ABRASIONS

No scratches, not even under stress. We rolled a chair with W-type wheels and soft polyurethane tread with a 90 kg load over a Nano Topping floor 25,000 times. The result of the test was "no visible defect".



INDENTATIONS

Nano Topping is twice as resistant as wood. We rolled a diameter of 10mm into Nano Topping laid on concrete base by applying a 1000N load. The result of the test was 9.6 kg/mm², more than double that of a high resistance wooden floor (4.51 kg/mm²).



ADHESION

Nano Topping adheres to every surface. Due to its polymeric formula, Nano Topping enables greater adhesion than that of traditional adhesives for floor laying, ensuring absolutely safety. Indeed, the so-called "tear test" produced results higher than 2.5 Nmm².



CRAKING

Nano Topping is more elastic than concrete. Unlike traditional materials (tiles, marble and concrete), Nano Topping has elasticity properties that enable it to undergo slight deformation before cracking. This allows it to be applied to special bases, for example, wooden surfaces.



AIR QUALITY

Nano Topping is a healthy choice. Living in a healthy environment means using products that do not release harmful substances in the places where they are applied. This is why Nano Topping is a "healthy" choice. The strict UNI EN ISO 16000-9:2006 tests demonstrated that Nano Topping does not emit any volatile organic compounds (VOC), awarding it an A+ rating, which is the maximum possible.



THERMAL CONDUCTIVITY

Excellent conductivity for reducing energy consumption. When using underfloor heating, thermal conductivity is important. Nano Topping has double the Lambda value ($\lambda=0.46$) of a wooden surface. The Lambda coefficient measures the capacity of a material to transmit heat. A high Lambda value corresponds to high thermal conductivity, less consumption & as a consequence, better performance from the heating equipment.

PROPERTIES

Type	Cementitious Polymer modified Nano topping	
Colour	Standard / Customized	
Density	3200 kg/m ³ (wet)	
Application	Trowel	
Application Temperature	+5°C to 35°C	
Cure Time	96 Hours	
Thickness	1.5mm to 3mm (total)	Method: ASTM C-836
Adhesion to Concrete (Peel, N/m)	Results: 1200 N/m	
Water Vapour Permeance	Results: <1 perms for 60-mil wet coating (grains/sf/hr)	Method: ASTM E-96 Wet Method
Resistance to Degradation in Soil	Results: Good	Method: ASTM E-154
Mould growth & Bacterial Attack	Results: No Degradation	Methods: ASTM D-3273, ASTM D-3274

USES

- Floors, Walls, Ceiling, Roofs & Furniture
- Pedestrian Decks
- Balconies and Terraces
- Parking
- Decks
- Horizontal & Vertical Surface application.

ADVANTAGES
















- Economical
- Water Resistant
- Sun Reflectivity
- Simple Application
- Anti-Root Properties
- Full Surface Adhesion
- Water Vapor Permeable
- Resistant to Detergents, Oils, and Common Chemicals
- Seamless
- Easy Local Repair, in Case topping is Mechanically Damaged
- Maintaining Mechanical Properties at a Temperature Range of -300 C to +900 C.
- UV Protected & Waterproofed Surfaces Usable for Medium to Heavy Pedestrian Traffic/ Light vehicular traffic.

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TEST

STANDARD

RESULTS

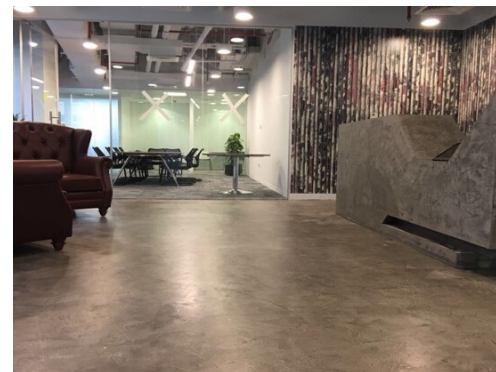
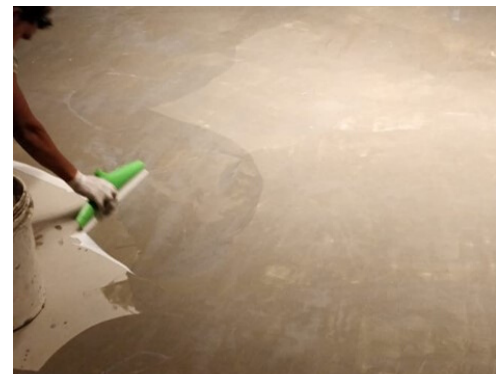
 Indoor air quality	UNI EN ISO 16000-9:2006	A+ Emission class
 Thermal resistance and thermal conductivity	ASTM E1530-11	$\lambda = 0,46$ (W/mK)
 Fire reaction	UNI EN 13501 EN 13501-1:2007 / A1:2009	A2FL -S1 European class
 Resistance to severe chemical attacks	UNI EN 13529 EN 13529:2003	Classe II Class No alteration and no reduction of Shore
 Determination of water vapour transmission properties	UNI EN 12086 EN 12086:1997	Class 1 : Sd <5 m For applications as described in the technical data sheet
 Depth of penetration of water under pressure	UNI EN 12390-8 EN 12390-8:2009	No penetration
 Determination of bond strength	UNI EN 13892-8 EN 13892-8:2002	2,5 N/mm ² Class B 2,0
 Determination of Crack bridging properties	UNI EN 1062-7 EN 13529:2003	786 μ m Class A3 (> 500 μ m)
 Determination of the action of a chair with wheels: consists in to run a chair x 25.000 times on a Nano Toppingsurface, with a load of 90 kg	EN 425:2002	No defects found
 Determination of abrasion resistance	UNI EN 13892/4 EN 13892-4:2002	Max 50 μ l (50 μ l=0,05 mm) Class AR2
 Resistance to impact	UNI EN 6272 EN 6272:2011	Class 3 - IR>20 Sample intact after collision
 Determination of surface hardness	UNI EN 13892-6 EN 13892-6:2002	> 300 N/mm ² (SH 200)
 Indentation using plate specimens	UNI EN 12697-20-21 EN 12697-20	Classe IC10 (UNI EN 13813) Class IC10 (UNI EN 13813) Indentation 0,1 mm
 Resistance to indentation	EN 1534:2000 EN 1534:2010	9,6 kg/mm ² Load evaluating unit area of residual impression
 Determination of the slip resistance / friction of a surface	UNI EN 13036-4 EN 13036-4:2011 DIN 51130:2014	Classes 2 MT-Base coat Class 2 MT-Base coat + 2 MT-Finish coat R11 2 MT-Base coat + 1MT-HP + Ideal PU78 R10 2 MT-Base coat + 1MT-HP + Ideal PUWB Sample polished with sandpaper - grade 60

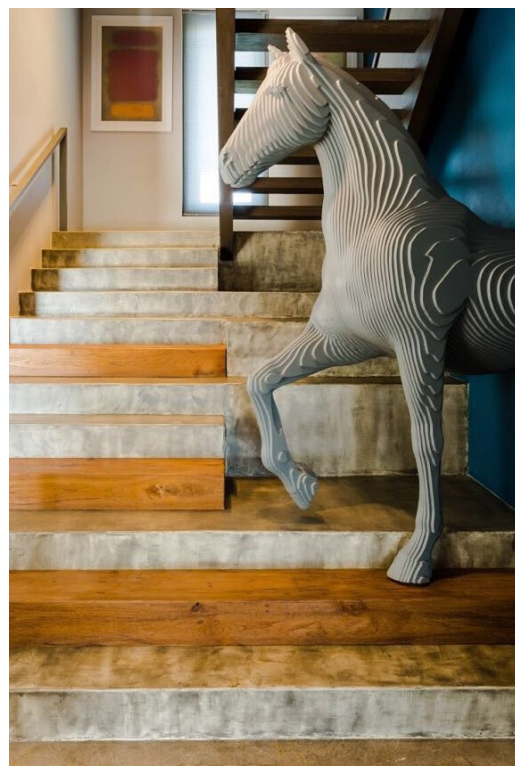
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STANDARD OPERATING PROCEDURE

- 1) E2I Polyurethane based Primer application.
- 2) When the Primer is wet, within 20 - 25minutes apply Fibre Mesh.
- 3) First coat of Nano Topping
(Curing time – 1 to 2 hours).
- 4) Second coat of Nano Topping
(Curing time – 1 to 2 hours).
- 5) Third coat of Nano Topping
(Curing time – 1 to 2 hours).
- 6) Fourth coat of Nano Topping
(Curing time – 24 to 48 hours).
- 7) Sanding with 1200 number paper
(minor dust accumulation).
- 8) Cleaning, then PU Sealer application.
Two coats in the ratio of 100:25:300
(Curing time – 24 to 48 hours).
- 9) Matt finish PU sealer application in the
ratio of 100:25
(Curing time – 24 to 48 hours).





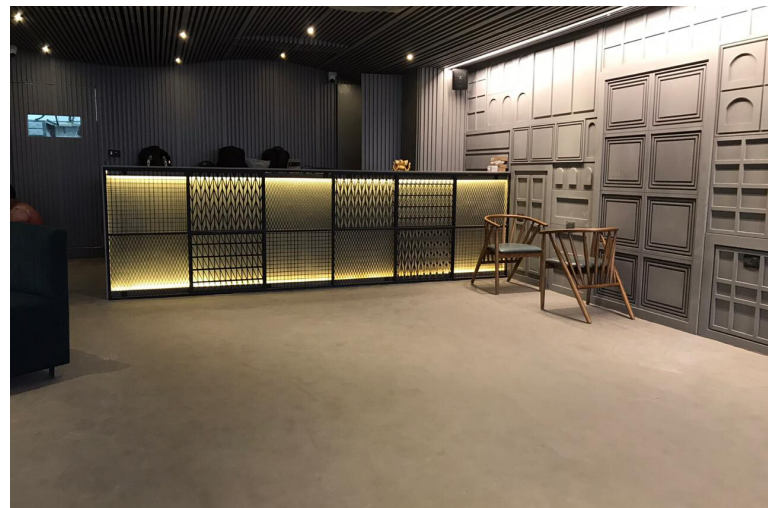
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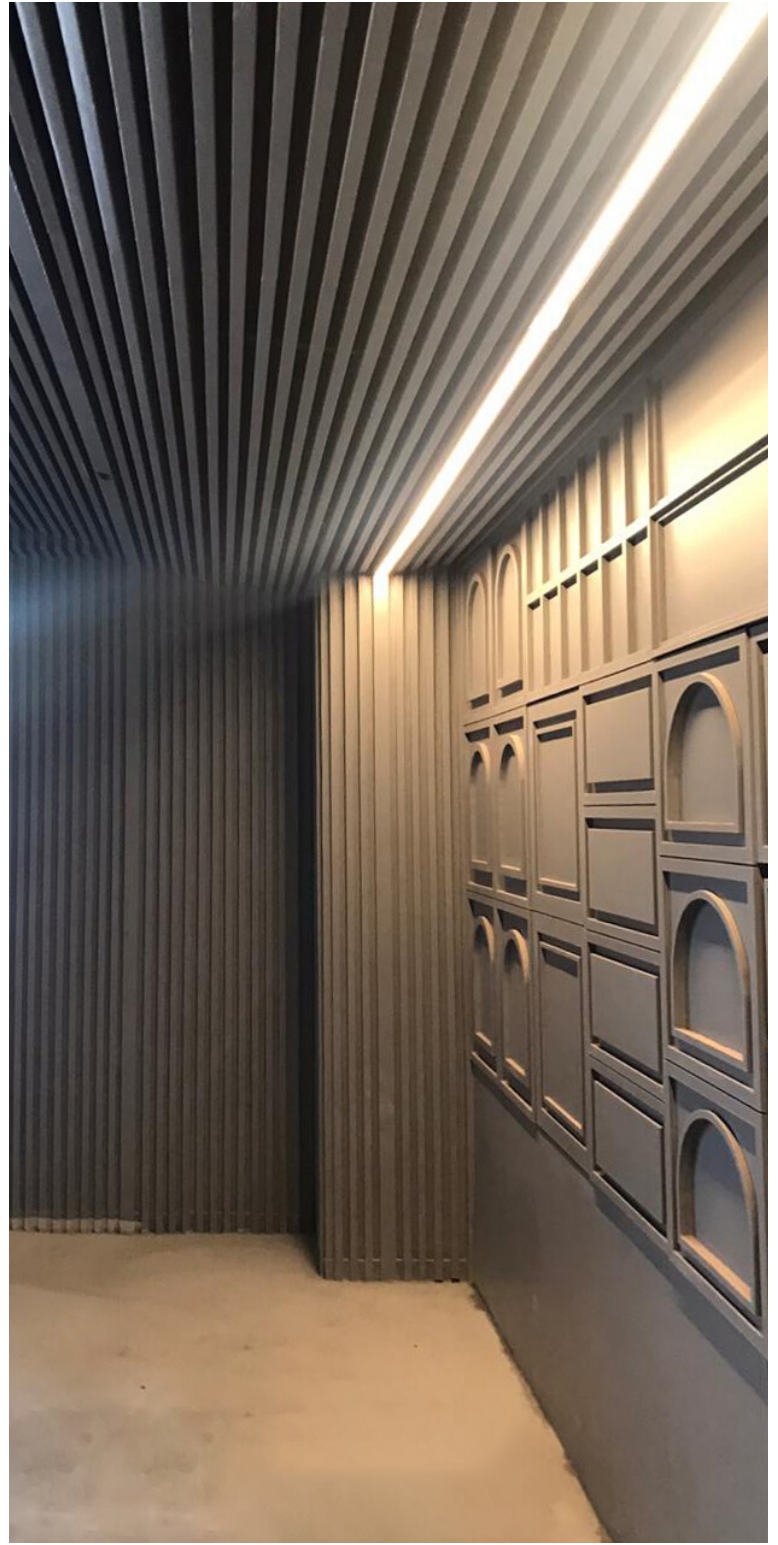
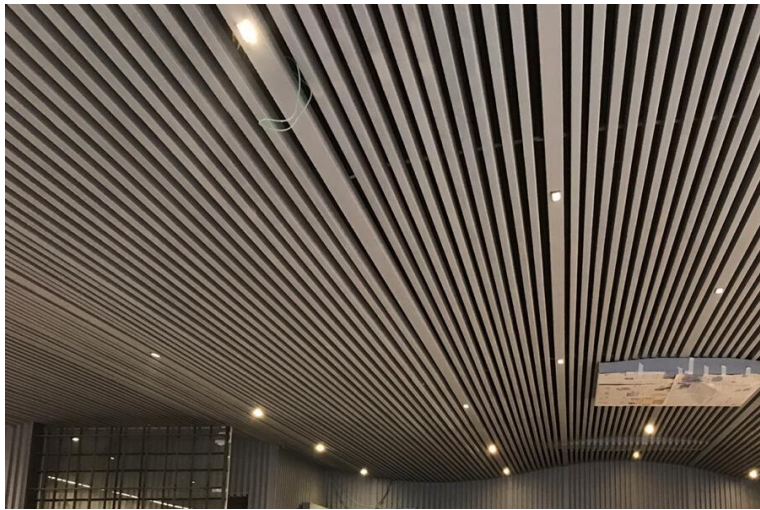
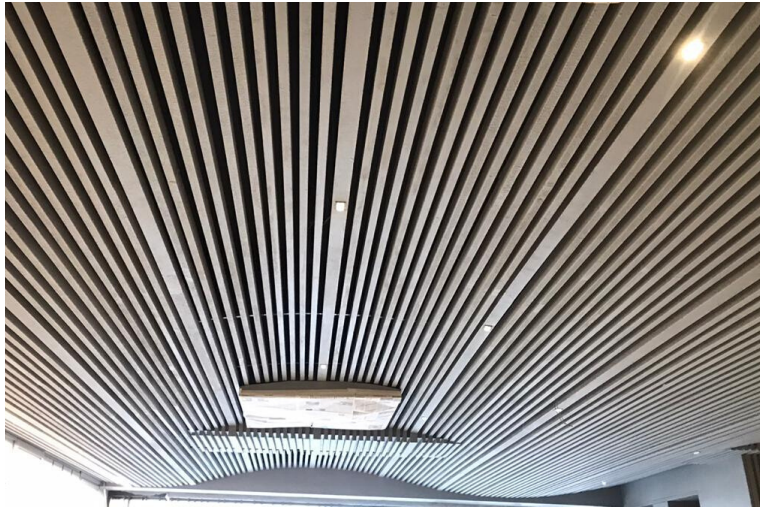
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