FlexStone®

FlexNano System®

FEATURES & BENEFITS

- FlexNano System® has been subjected to rigorous laboratory trials in order to test the performance and identify any weak points. The results demonstrate that FlexNano System® has properties of resistance even greater than normal resin for floors (already considered extremely resistant). FlexNano System®'s resistance has been tested with mechanical and thermal stresses and against deliberate marks, impact, wear and tear, fire, cracks, chemical and corrosive substances. FlexNano System®'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, the desired one: the aesthetic possibilities and compositional effects of FlexNano System® 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.

FlexStone®

FEATURES

- FlexNano System® overlays can be applied thinly or thickly without fear of delimitation or typical product failure, On any hard solid substrate.
- 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.FlexNano Coating behave as per the base/substrate provided. A uniform coating of upto 2-3mm possible over any substrate.

MATERIAL

- FlexNano System® 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

- FlexNano System® 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 FlexNano System® is the possibility of applying it without limit or joints, inside or outside, on floors or walls, indeed, any surface or object in general.

FlexStone®

FLEXNANO SYSTEM® SHADE CARD

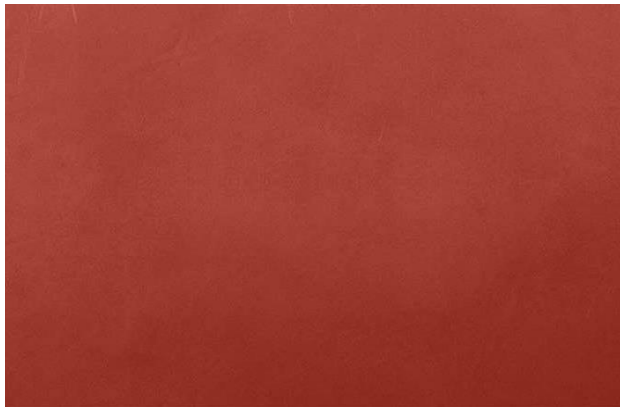
FSNT 1

FSNT 2

FSNT 3

FSNT 4

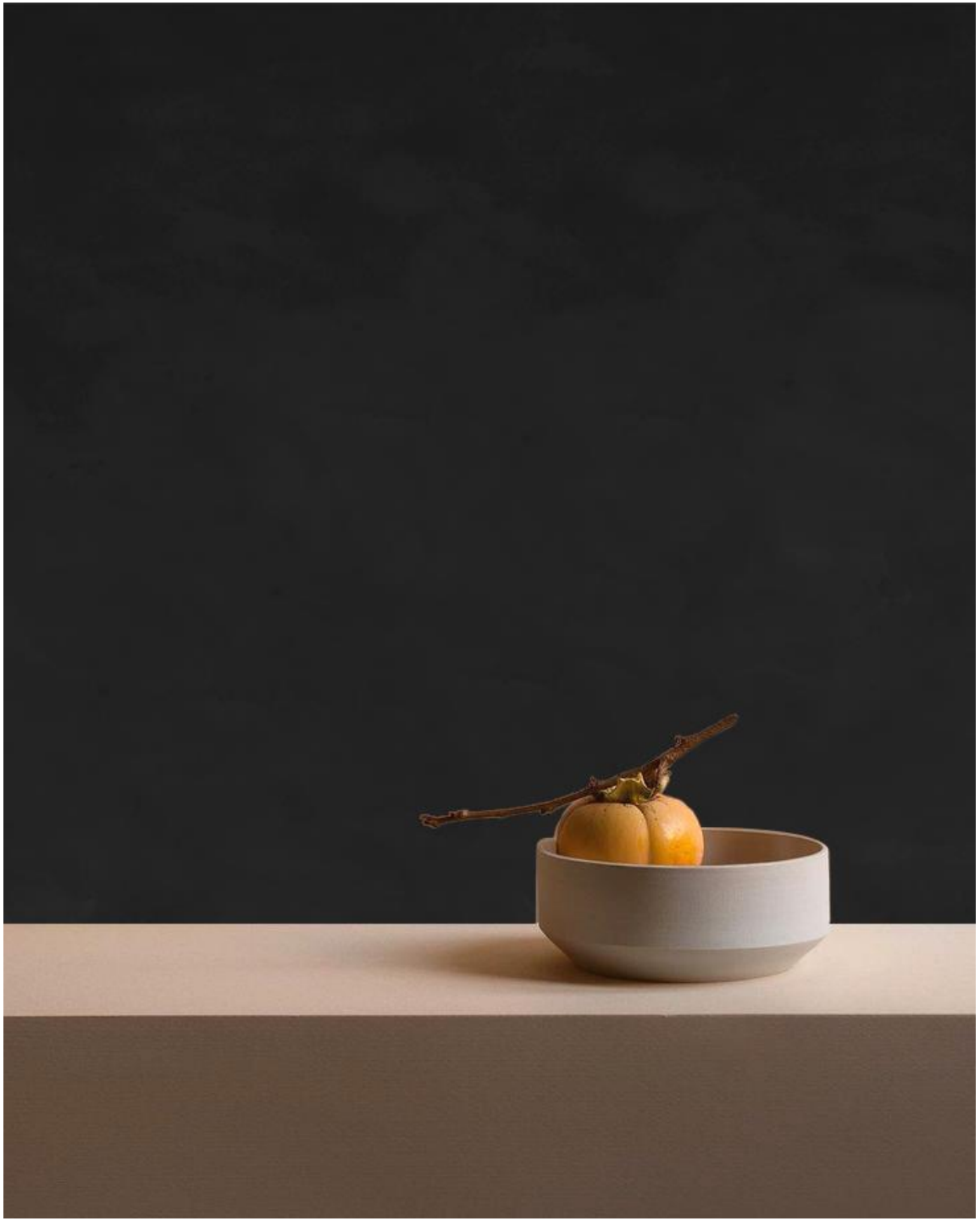
FSNT 5



FSNT 6

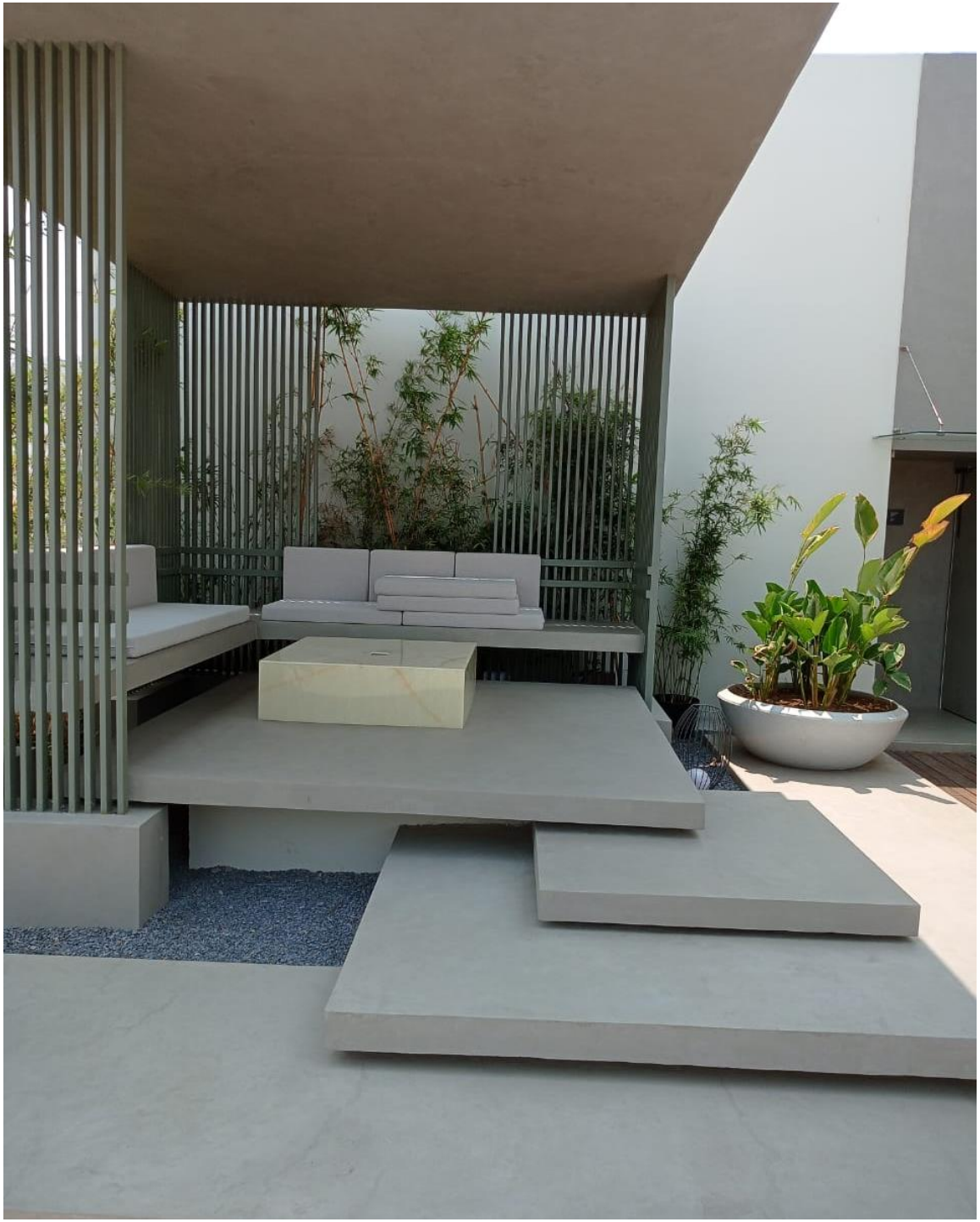
FlexStone®

FSNT 1



FlexStone®

FSNT 2



FlexStone®

FSNT 3

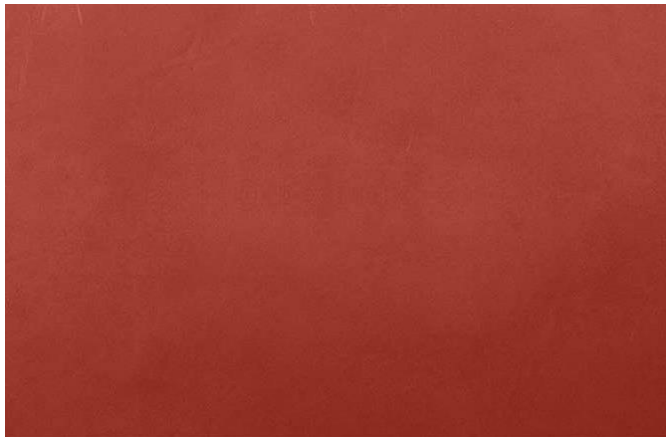
FlexStone®

FSNT 4

FlexStone®

FSNT 5

FlexStone®



FSNT 6

FlexStone®

FLEXNANO SYSTEM® TECHNICAL SPECIFICATIONS

IMPERMEABILITY

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

CLEANING

FlexNano System® is also resistant to the harshest chemical agents.
Continuous & without grouting, FlexNano System® 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 FlexNano System® 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 FlexNano System®'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

FlexNano System® is flame & smoke resistant.
FlexNano System® 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

FlexNano System® is resistant to the hardest of blows.
In a test in which a mass was dropped on the floor*, FlexNano System® was assesed "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.
***with Matt tile substrate**

RESISTANCE

You can be sure with FlexNano System®.
The material that most lends itself to comparison with FlexNano System® is wood. However, FlexNano System® is greatly superior in terms of resistance to, impact and wear & tear, just behaving like marble floor. Numerous tests carried out in accordance with various regulations have demonstrated the unique features of FlexNano System®.

FlexStone®

FLEXNANO SYSTEM® TECHNICAL SPECIFICATIONS

INDENTATIONS

FlexNano System® is twice as resistant as wood. We rolled a diameter of 10mm into FlexNano System® laid on concrete base by applying a 1oooN 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

FlexNano System® adheres to every surface. Due to its polymeric formula, FlexNano System® 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.

AIR QUALITY

FlexNano System® 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 FlexNano System® is a "healthy" choice. The strict UNI EN ISO 16000-9:2006 tests demonstrated that FlexNano System® 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. FlexNano System® has double the Lambda value (λ=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.

FlexStone®

PROPERTIES

Type	Cementitious Polymer modified FlexNano System®	
Colour	Standard / Customized	
Density	3200 kg/m³ (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

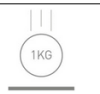
USES

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

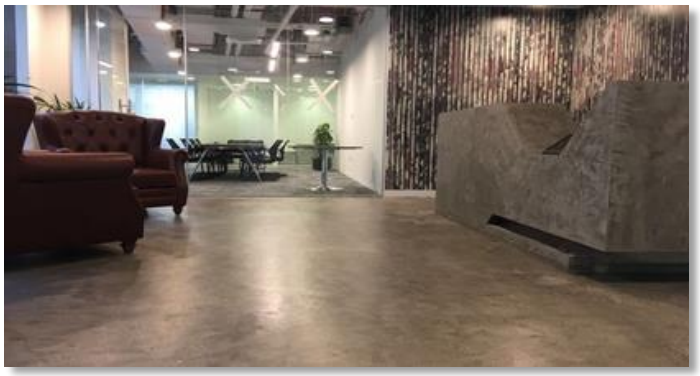
ADVANTAGES

- Seamless
- Water Resistant
- Sun Reflectivity
- Simple Application
- Anti-Root Properties
- Full Surface Adhesion
- Water Vapor Permeable
- Resistant to Detergents, Oils, and Common Chemicals
- Economical solution for jointless surfaces
- Easy Local Repair, in Case topping is Mechanically Damaged
- Maintaining Mechanical Properties at a Temperature Range of -30o C to +90o C.
- UV Protected & Waterproofed Surfaces Usable for Medium to Heavy Pedestrian Traffic/ Light vehicular traffic.

FlexStone®

TEST	STANDARD	RESULTS
 Indoor air quality	UNI EN ISO 16000-9:2006	A+ Emission class
 Thermal resistance and thermal conductivity	ASTM E1530-11	λ =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 from top
 Determination of bond strength	UNI EN 13892-8 EN 13892-8:2002	2,5 N\mm² Class B 2,0
 Determination of Crack bridging properties	UNI EN 1062-7 EN 13529:2003	786 µm Class A3 (> 500 µm)
 Determination of the action of a chair with wheels: consists in to run a chair x 25.000 times on a FlexNano System® surface, 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 50µ (50µ=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/mm² (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/mm² 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

FlexStone®



FLEXNANO SYSTEM®
STANDARD OPERATING PROCEDURE
FOR HORIZONTAL SURFACES (FLOORS)

1) E21 Polyurethane based Primer application.
2) Broadcasting silica uniformly
   (Curing time 3-4 hours).
3) Brushing off excess silica
4) First coat of FlexNano System®
   (Curing time 2-3 hours).
5) Second coat of FlexNano System®
   (Curing time 2-3 hours).
6) Third coat of FlexNano System®
   (Curing time 2-3 hours).
   *Coats vary depending on the substrate.
7) Sanding with 1200 number paper
   (minor dust accumulation).
8) Cleaning the surface, preparation for PU Sealer application.
9) PU Sealer application – ratio 100:50,
   First coat shiny sealer, second coat matt

*** Procedure various as per the substrate , design.**

FlexStone®

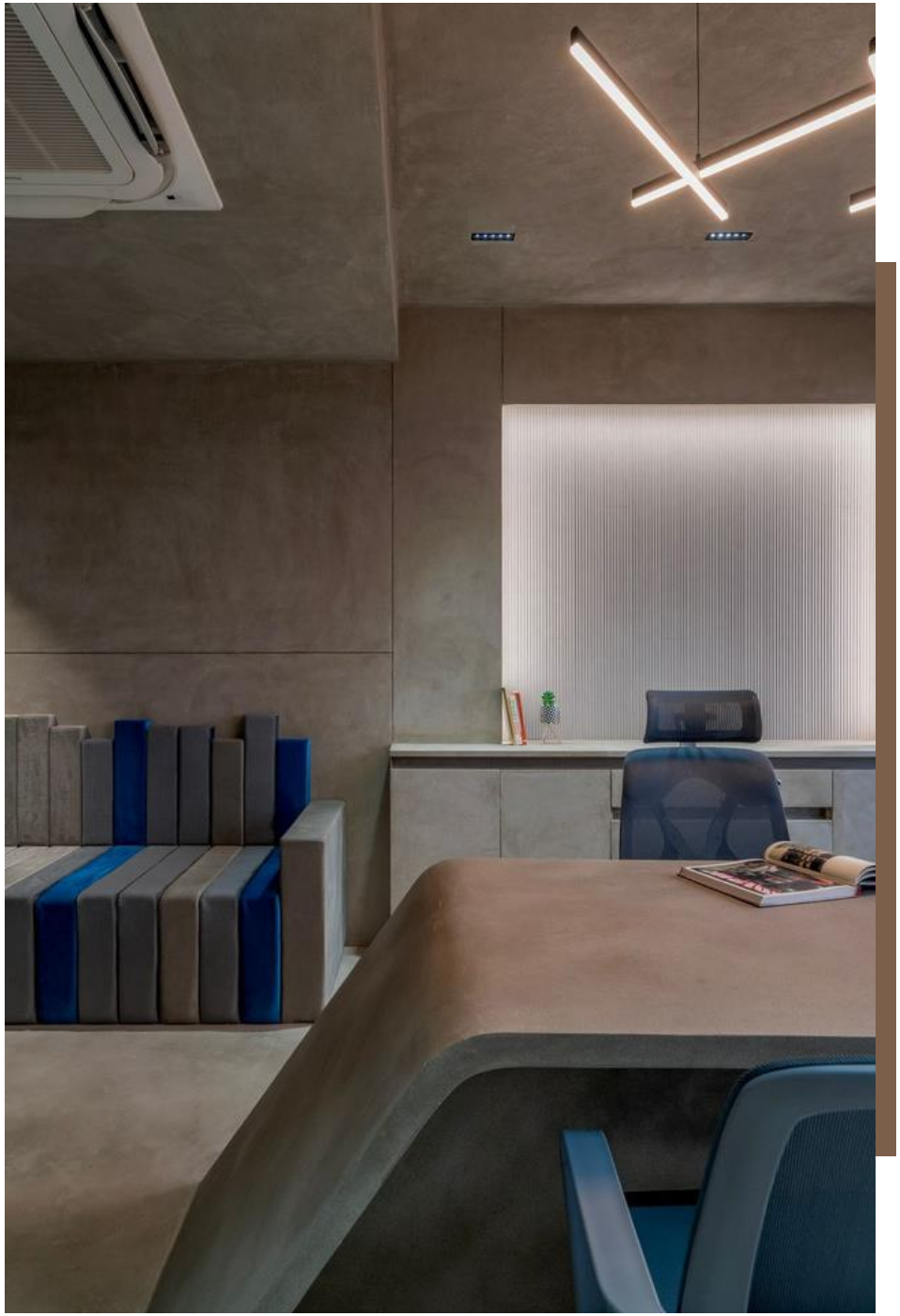
FLEXNANO SYSTEM®
STANDARD OPERATING PROCEDURE FOR VERTICAL SURFACES (WALLS)

1) Apply pure 3001 primer
2) After 30 minutes start first coat of glass aggregate based Nano Coating.
   (Let it dry for 6-8 hours)
3) Sand a little and start 2nd coat of glass aggregate based Nano Coating.
4) Let it dry for 6-8 hours and start 3rd coat of Nano Coating.
5) Once dry, sand it.
6) Post Sanding apply Basel sealer 1:2 ratio.

*** Procedure various as per the substrate , design.**

FlexStone®

FlexStone®



FlexStone®

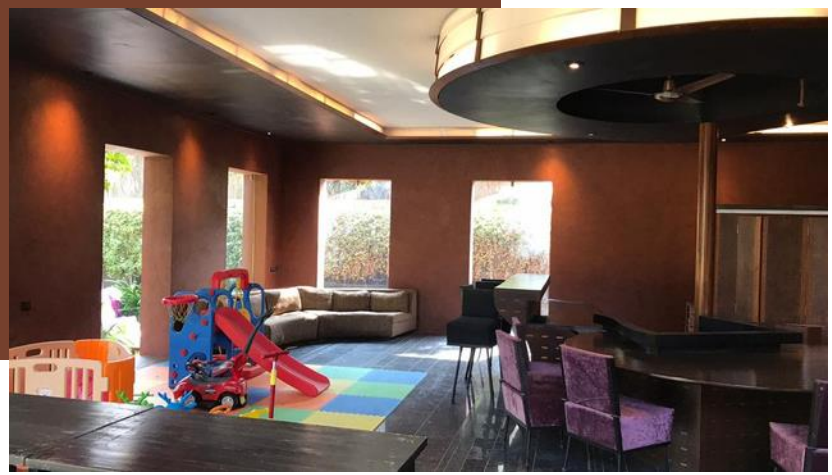
FlexStone®

FlexStone®

FlexStone®

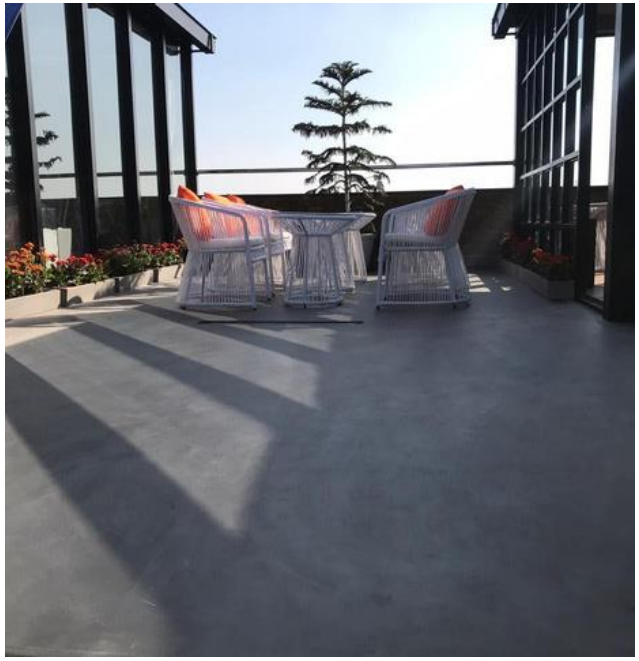
FlexStone®

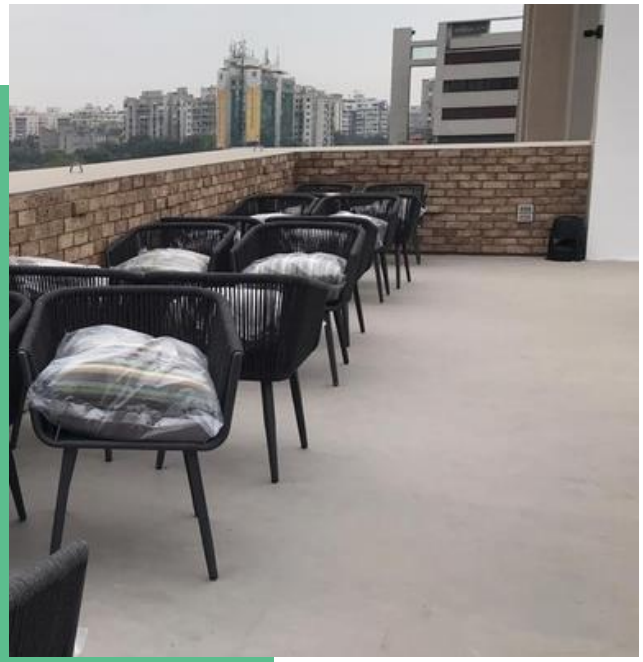
FlexStone®



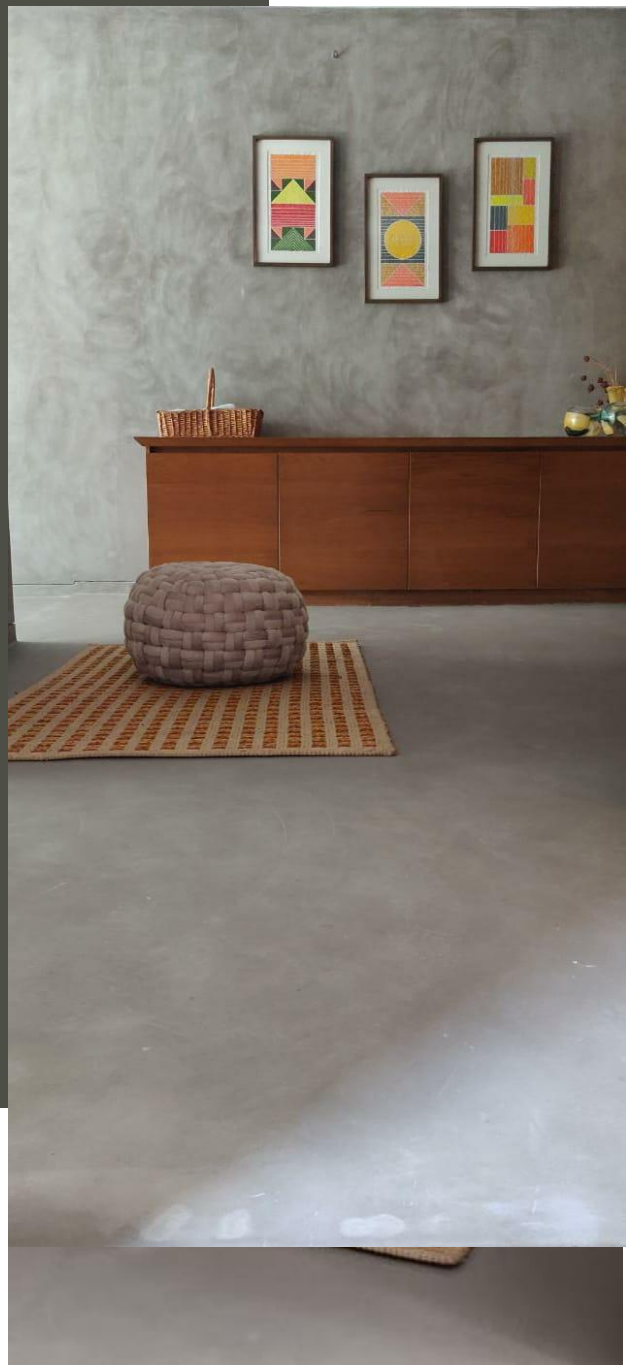
FlexStone®

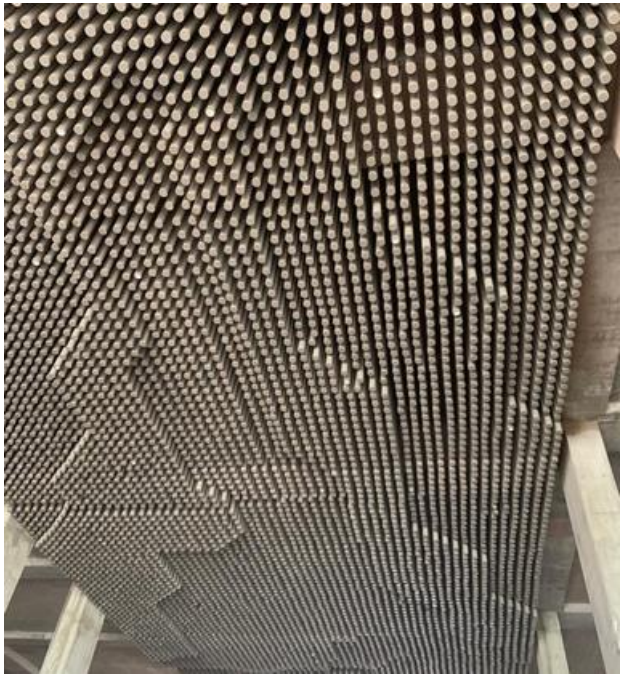
FlexStone®



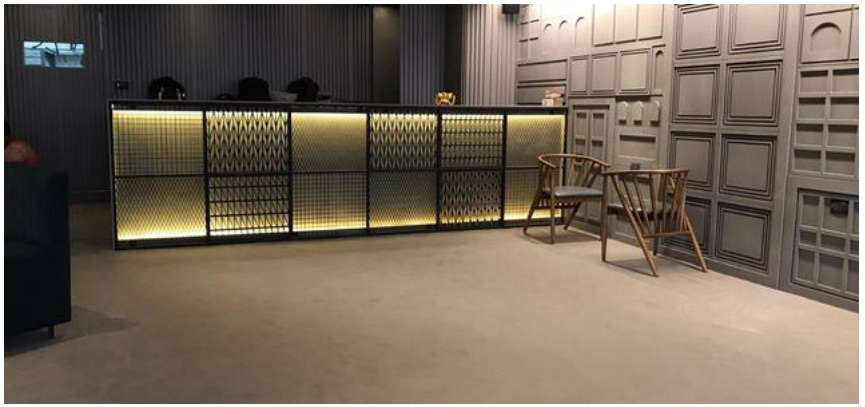


FlexStone®

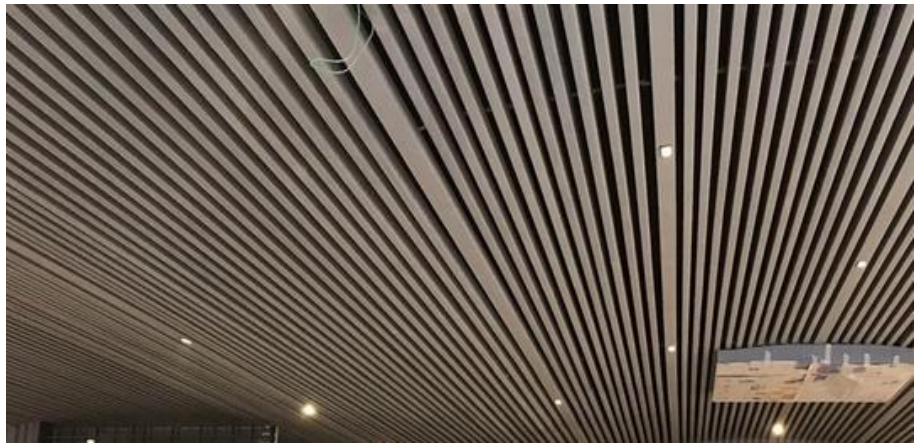


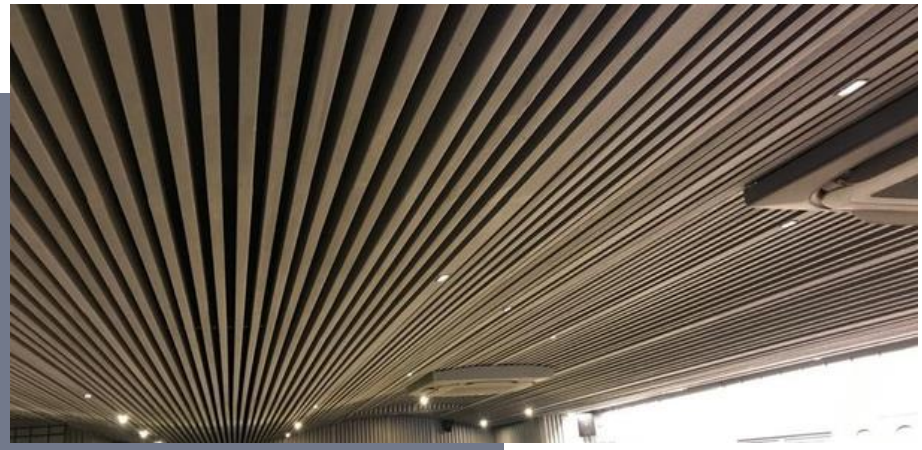


FlexStone®



FlexStone®





FlexStone®

Wishing You Great Surfaces!

FlexStone®

FlexStone Inc.

www.flexstoneinc.com

FlexStone®