
Single component hydraulic micromortar with a high-performance Reinforcement Hardener based on special cement and impalpable loads in addition to other additives which, when mixed with the previous ones, provide magnificent physico-chemical and aesthetic properties for a finish coat that is part of the system: ***Base Microconcrete + Fine Microconcrete.*** It has 'waters' (light-dark) effects stronger than those of the Microconcrete Finish or Base. This product prevents, more than any other range of Microconcretes, the appearance of "greys" caused by the wear of the steel trowel against the surface.

Due to its lower resistance to compression, the Fine Microconcrete finish will only be used on walls and floors with moderate human transit.

**Depending on the trowel size, the pressure put when smoothing, or if the Penetrating Acrylic Protection is used as the first sealed coat ('waters' less strong), these light-dark effects typical of Microconcretes may be more or less visible.*

**Suggested applications:** Wall and floor decoration in hotels, offices, malls and venues, schools/nurseries, hospitals, and museums with great properties such as:

- Be a continuous coating.
- Flame retardant (due to its mineral nature).
- Breathable (permeable to water vapour molecules).
- Due to its crystalline structure, it reflects the radiations of light and heat.
- Aseptic (high alkalinity 12,5)
- Antistatic.
- High resistance to rubbing/wear.
- High adhesion.
- High deformability for a mineral finish.
- Low thermal spread.
- In its simpler finish technique, the burnished smooth, the stylistic contrasts are well resolved, and decorations are not conditioned.
- The possibility of creating unified environments, since the same decoration can be applied to floors and walls.
- Clean and uncomplicated commissioning work with respect to other systems/materials.

**Physical Location:** indoors, even in aggressive indoor environments such as wash rooms and kitchens, with the suitable protections and proofings.

## Technical Data:

**PH:** 12.5± 0.5
**PRESENTATION:** single-component, powdered product to which water must be added and stirred mechanically until achieving a completely homogeneous mixture.

**BULK DENSITY of the POWDER: 1 0.05 g/cm$^3$**
**DENSITY of the mix with water (already mixed):** 1.55 0.05 g/cm$^3$
**Standard PACKAGING:** 12 kg containers.
**MIX (mixing powder+water+hardener):** 12 kg of Fine Microconcrete, prepared with 4.1 L of water + 1 L of Microconcrete Reinforcement Hardener.
Pour the necessary water first, then the Microconcrete Reinforcement Hardener, the Toner Dye and finally the powder, homogenise-knead the mix using an electric mixer.
If it is necessary to thin the mix for some reason, a maximum 2% of water can be added. However, it must be taken into account that for some Dyes/Toners (or for certain concentrations), the mix may be less dense.
**LIFE SPAN OF THE MIX:** 8½-9 hours, at 20° C and 55% relative humidity conditions. Higher temperatures and lower relative humidity conditions will progressively shorten working-setting times.
**LIFE SPAN IN CONTAINER:** Approximately 16 months in stable environmental conditions +5º C (min.) and +32º C (max.) without opening the tin or bag containing the Fine Microconcrete. Avoid frost and high temperatures.

## Application Technical Data:

**FINISH:** matte or high satin depends on the degree of polishing (compacting) with the trowel in the finish coat, but fundamentally depends on the final protection/seal chosen.

**INDOORS COLOURS:** 27 obtained from Dye Toners of the ***Microconcrete & Microconcrete Colour Chart***, added to the neutral Base Microconcrete (i.e., as it appears after mixing). All Dyes and Toners can be mixed among them to obtain new colours.

**OUTDOORS COLOURS:** only use the Dyes/Toners referenced in the Colour Charts as Outdoors. For a more extensive range of colours in this location, contact our commercial department.
**THINNER:** water. Use the same dilution in all containers to avoid modifying colour intensity.
**MAXIMUM THICKNESS PER COAT:** 1.5-2 mm.
**REQUIRED TOTAL THICKNESS for the entire system:** 2-2,5 mm, for the material to have the ideal mechanic resistance qualities and a good cohesion, i.e., 2 coats of Base Microconcrete + 1 or 2 coats of Fine Microconcrete.
**INTERVAL BETWEEN COATS:** allow the Base Microconcrete coats to dry completely for 14 to 16 hours at 20°C and 55% relative humidity. Then, apply the Fine Microconcrete.
**TOTAL DRYING of the entire system:** 38 hours (20° C and 55% relative humidity).
Progressive hardening by carbonation, after 30 days it presents a considerable hardness.
**APPLICATION TOOLS:** stainless steel trowels and spatulas. **TOOL**
**CLEANING:** clean with soap and water immediately after use. Keep in mind that the product is highly adherent. If it dries, it must be cleaned by abrasion/sanding.

## Application conditions:

***PREVIOUS PREPARATIONS****: Surfaces must be dry, firm/set up, well adhered, free of salts, free of any biological contamination such as mould, algae, lichens, free of environmental contamination (grease stains, soot, substances of unknown nature, etc.); i.e., free of any visible or invisible substance or contaminant that prevents the perfect attachment and finish of the Base Microconcrete + Fine Microconcrete or its previous primers.*

**ACTUATION SYSTEM**

| Types of Surfaces | Application Method |
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| **Base Microconcrete** | Make sure that it is in perfect conditions -those previously described in this technical sheet- and to apply the ***FINE MICROCONCRETE*** directly. |

## GENERAL OBSERVATIONS

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| ➢ Working temperature of both the environment and the surface: minimum 7ºC -maximum 32ºC. |
| ➢ Screed floors on which Base + Fine Microconcrete will be applied must be installed according to regulations that mark minimum plate thickness according to mortar type, distance-width-depth of retraction joints, expansion and hardening/maturation time. To avoid strong retractions that are manifested in the breaking of the plate.<br>➢ It is necessary to respect expansion, retraction, and dilation joints in the application of the Fine Microconcrete. |
| ➢ For screeds in floorings or wall parge coats, use industrially manufactured mortars with suitable typology for each case that guarantee homogeneous dosing and additives.<br>➢ Those fabricated on site are forbidden because of the generation of retractions for at least 3 to 6 months depending on the thickness and type/dosing of the cement. |
| ➢ Check that concrete and mortars do not contain any harmful water-resistant material that may affect adhesion or generate contamination that will appear as stains. |
| ➢ Fine Microconcrete coloured with the same amount of Dyes/Toners as Base Microconcrete will have a lower shade. |
| ➢ If you would like to avoid a "greying" in light colours caused by the wear of the steel trowel against the wet Microconcrete surface, apply using a plastic trowel and polish it mechanically once it has dried. |
| ➢ If an intense colour has been chosen with the addition of a lot of Dye/Toner, the hardening time slows 1-3 times, something that must be taken into consideration in the case of the execution of floors, for varnishing and subsequent use. |
| ➢ The setting time in the tin can be increased or decreased depending on the Toner Dye chosen and the amount used. |
| ➢ Bathrooms often have poor air recirculation. This must be considered for the products drying process. |
| ➢ Fine Microconcrete is not a waterproof material. Therefore, waterproofing in the execution of bathtubs, toilets, etc. comes from the construction itself. |
| ➢ Preserve from the direct action of water when it is being applied outdoors and protections/proofings have not been applied yet. The same applies when applying the latter with the aim of forming a protective and durable film. |
| ➢ When applying on bathrooms, keep in mind most of them have poor ventilation and, therefore, drying times may be slower. To partially prevent this, consider using air convectors. |
| ➢ The resulting colour will be more or less intense depending on the amount of friction applied using the trowel or other tools. |
| ➢ If a floor/wall is to be later made with the same colour, both surfaces have to receive the same number of coats and the same treatment to avoid changes in the decorative effects and the colour intensity. |
| ➢ In façades as well as in large floors, if you do not want to address the finish by polishing in the latter case, it will be necessary to carry out day-to-day assessments apart from using the correct work equipment in order to not produce unsightly "joints." |
| ➢ The colour may lower in intensity after finishing/smoothing with water. |
| ➢ For proportional colour calculations it is necessary to take into account that the Dyes/Toners are presented in 200ml tins, but their weight is 250 grams. |
| ➢ The "wet on dry" technique is the most viable when working in several or large spaces and several work teams. |
| ➢ The floors made with Base Microconcrete + Fine Microconcrete are only fit for moderate to intense human traffic. |
| ➢ Pisa is exempt from responsibilities for damage and problems in regards to stains, detachment, lack of cohesion, exposures, produced by deficiencies of the direct surface or structure. |

**Protections for the Fine Microconcrete system:**

In order to prevent penetration of dirt, water, or other contaminants, and to avoid colour bleeding or staining, in certain locations: bathrooms, kitchens, bars, restaurants, and floors in general; houses or high-transit spaces, etc., it is necessary to thoroughly apply any of our protective systems listed below:

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| **Aggressive locations such as kitchens, bathrooms, restaurants, hair salons.** | Apply 3 or 4 coats of the Bicomponent Varnish or apply 3 coats of the One Component Varnish and a last coat of the matt, satin, or gloss Farbetano AR two-component Polyurethane varnish. |
| **House floors** | Apply 3 or 4 coats of the Bicomponent Varnish or apply 3 coats of the One Component Varnish and a last coat of the matt, satin, or gloss Farbetano AR two-component Polyurethane varnish to increase physical resistance. |
| **Floors in non-aggressive commercial premises or subject to high transit** | Apply 3 or 4 coats of the Bicomponent Varnish or apply 3 coats of the One Component Varnish and a last coat of the matt, satin, or gloss Farbetano AR two-component Polyurethane varnish to increase physical resistance. |

**Observations on the application of varnishes to achieve effective protection:**

- The smoother the Fine Microconcrete, the easier it will be to close the pore and therefore make it waterproof.
- We recommend application of at least the final varnish coats using a turbine or airless, both being continuous pressure systems, which leave an even coat of material. They can also be applied with a roller/brush.
- If applied manually, perform the varnishing carefully and by leaving a coat.
- Estimated consumption of varnishes, so that it results in a consistent film, is 0.260-0.300lt./m² in 3 coats.
- Varnish coats can be applied with an interval of 4-6 h under 20°C and 55% relative humidity environment conditions.
- The interval between coats cannot exceed 6-8h for the Two-component Varnish.
- For any of the varnishes to have acceptable hardening properties, waterproofing, and chemical resistance, 10 to 15 days will have to pass; they reach their maximum performance after 30 days.
- Maintenance of the Fine Microconcrete sealed with either of the two solvent or water-based Polyurethane Varnishes is the same as for a varnished wood platform: specific cleaners and neutral soaps.

## Application method:

**a)** **and (b)** Apply the Fine Microconcrete in arches on the last coat of Base Microconcrete and smooth it (the Base Microconcrete should be laid as smooth as possible since this will affect the result and consumption of the product).

**a)** 

**b)** 

**Technical data of the applied and dry material:**

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| Determination of resistance to bending | UNE-EN 1015-11:2000<br>and<br>1015-11:2000/A1:2007 | Resistance to Bending<br>(N/mm²) **8.6** | |
| Determination of resistance to compression | UNE-EN 1015-11:2000<br>and<br>1015-11:2000/A1:2007 | Resistance to Compression<br>(Nmm²) **15.42** | |
| Determination of the elasticity modulus in compression | UNE-EN 13412:2008 | Elasticity modulus<br>(MPa) **8220** | Resistance to compression (MPa) **17.4** |
| Resistance to adhesion on concrete | UNE-EN 1015-12:2000 | Fn<br>(MPa) **1.24** | |
| Determination of water vapour permeability | UNE-EN 1015-19:1999<br>1015-19:1999 Erratum<br>1015-19:1999/A1:2005 | Water vapour permeability<br>(Kg/P·a·m²·s)<br>**$2.24 \cdot 10^{-10}$** | Water vapour permeability (Kg/Pa·m·s)<br>**$4.60 \cdot 10^{-13}$** |

**THEORETICAL PERFORMANCE:** The indicated consumption of the product may vary depending on roughness, planimetry, and absorption. Keep in mind that changing from an almost smooth texture to a very textured finish can double consumption.

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| 0.6-0.8kg/m² in 1 or 2 coats |

**PRECAUTIONS FOR USE:** Alkaline material. Protect skin and eyes.