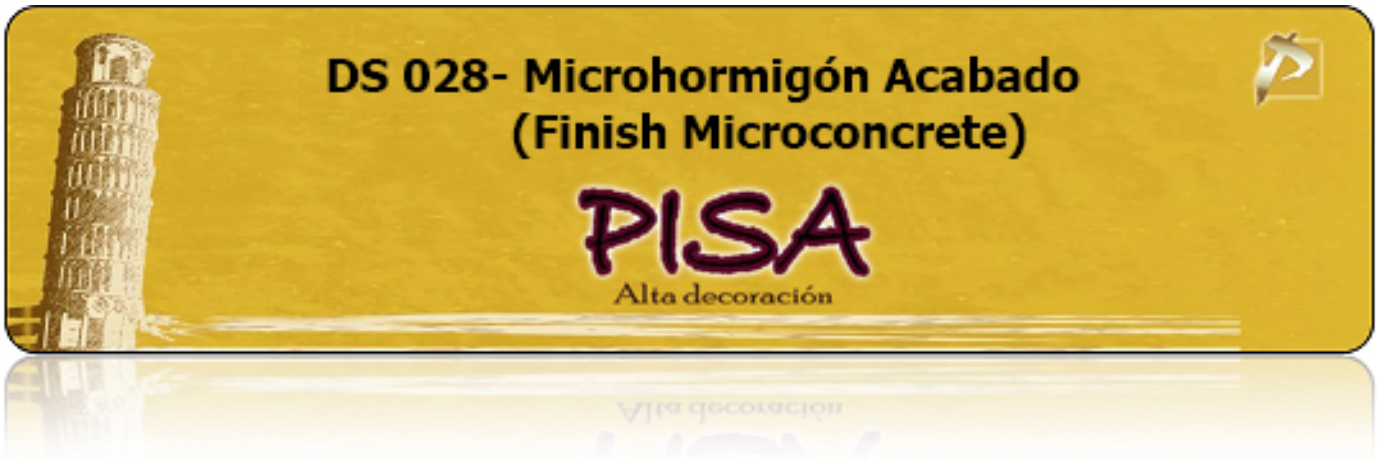


Product Definition:

High performance single component hydraulic micromortar made with special cement and sand with varying granulometry that are thinner than those of the Base Microconcrete in addition to other additives that, in combination with the above, provide it with great physico-chemical and aesthetic properties.

It is used for making highly decorative continuous coatings with cement-mineral appearance; in floors and walls.

It is used as a finish coat, forming part of the system: ***Base Microconcrete + Finish Microconcrete.***

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.
- Low allergenic levels.
- Magnificent ageing, the action of environmental CO2 hardens it progressively.
- 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.

Technical Data:

PH: 12.5±0.5
PRESENTATION: Single-component powder product to which water must be added and mechanically removed until it is completely homogenised.

BULK DENSITY of the POWDER: 1.1±0.05 g/cm^3
DENSITY of the mix with water (previously mixed): 1.65±0.05 g/cm^3
Standard PACKAGING: 14kg containers.
MIX (mixing powder + water): 14kg of Base Microconcrete are prepared with 4.6-4.8 l of water.
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.
LIFE SPAN OF THE MIX: 8- 8½ hours under 20°C and 55% relative humidity conditions. The working-setting times will vary accordingly depending on higher temperature and lower humidity conditions.
LIFE SPAN IN CONTAINER: Approximately 14 months in stable environmental conditions +5ºC min. and + 32ºC max. without opening the tin or the bag containing the 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 ***Microcement & Microconcrete Colour Chart***, added to the neutral Base Microconcrete (i.e., as it appears after mixing), in the same proportion as it appears in the chart. They 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.
METALLIC FINISH: Once finished and dry, Microconcrete Finish can be finished with Microcement Glazing, which is available in Gold, Silver, and Bronze and applied using a trowel or spatula. The Glazing option should be finished with any of our two Single-component or Two-component varnishes in Gloss quality.
THINNER: Water. Use the same dilution in all containers so that the colour intensity is not affected.
MAXIMUM THICKNESS PER COAT: 1.5-2 mm.
REQUIRED TOTAL THICKNESS for the entire system: 2-2,5mm, for the material to have the ideal mechanic resistance qualities and a good cohesion, i.e., 2 coats of Base Microconcrete + 1 of Microconcrete Finish.
INTERVAL BETWEEN COATS: Allow the Base Microconcrete to dry completely 14-16 hours at 20°C with 55% relative humidity in order to apply the Microconcrete Finish, which in turn can be applied in a thick coat for subsequent smoothing or in two fine "wet on wet" or "dry on dry" coats in the latter case with an interval of 10-12 hours in the same environmental conditions.
TOTAL DRYING of the entire system: 48 hours (20ºC at 55% relative humidity).
Progressive hardening by carbonation, after 30 days it presents a considerable hardness.
APPLICATION TOOLS: Stainless steel trowels and spatulas.
*Another way to finish the Microconcrete Finish is by mechanical polishing using glass sandpaper disks No. 220 to 400 if the finish was semi-smooth after the last trowel coat.
CLEANING OF TOOLS: 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 + Microconcrete Finish or its previous primers.*

ACTUATION SYSTEM

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

DS 028-Microhormigón Acabado
(Finish Microconcrete)

GENERAL OBSERVATIONS

➢ Working temperature of both the environment and the surface: minimum 7ºC -maximum 32ºC.
➢ Screed floors on which the Base Microconcrete + Microconcrete Finish system 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. ➢ It is necessary to respect expansion, retraction, and dilation joints in the application of the Medium Microcement.
➢ Apply the Ultrafine Binding Primer on very absorbent floors or floors in which this property is increased by the effect of high temperatures for better workability of the Base Microconcrete + Microconcrete Finish system. The same applies when the surface is uncoated with loose sand that is impossible to vacuum or sweep.
➢ For screeds in floorings or wall parge coats, use industrially manufactured mortars with suitable typology for each case that guarantee homogeneous dosing and additives. ➢ 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.
➢ 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.
➢ If a wall is to be later made with the same colour with Microconcrete Finish in a space, both surfaces have to receive the same amount of coats and the same treatment to avoid changes in the decorative effects and the colour intensity.
➢ 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 + Microconcrete Finish are only fit for moderate to intense human traffic.
➢ 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.
➢ 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."
➢ Bathrooms often have poor air recirculation. This must be considered for the products drying process.
➢ If you would like to avoid a "greying" in light colours caused by the wear of the steel trowel against the wet Microconcrete surface, finish using Fine Microconcrete, applying it with a plastic trowel and polishing it mechanically once it has dried.
➢ The resulting colour will be more or less intense depending on the amount of friction applied using the trowel or other tools.
➢ The colour may lower in intensity after finishing/smoothing with water.
➢ 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 Microconcrete system: In order to prevent penetration of dirt, water, or other contaminants, and to avoid colour bleeding or staining, in certain locations: façades, 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:

Aggressive locations such as kitchens, bathrooms, restaurants, hair salons.	Apply 4 coats of **undiluted water-based One Component Varnish (240grs/m2)** and a final coat of **Fabertano AR Two-component Polyurethane varnish** diluted from 8 to 10% (80-86grs/m2) matt, satin, or gloss qualities.
House floors	Apply 4 coats of **undiluted water-based One Component Varnish.** *If greater chemical resistance is desired, a final coat of Farbetano AR two-component Varnish can be applied in matt, satin, or gloss qualities.
Floors in non-aggressive commercial premises or subject to high transit	Apply 4 coats of **undiluted water-based One Component Varnish (240grs/m²)**.

Observations on the application of varnishes to achieve effective protection:

- The smoother the Microconcrete Finish, 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 0.30-0.33lt./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 two varnishes to have acceptable hardening properties, waterproofing and chemical resistance, 5 to 7 days will have to pass; they reach their maximum performance after 30 days.
- Maintenance of the Microconcrete Finish sealed with either of the two water-based Polyurethane Varnishes is the same as for a varnished wood platform: specific cleaners and neutral soaps.

Application methods:

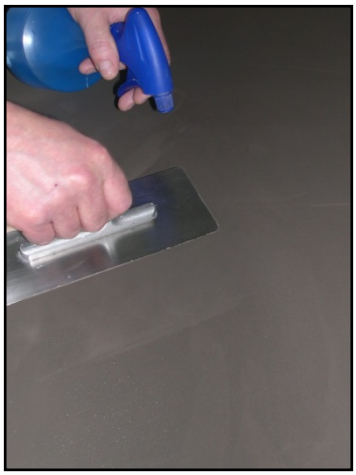
Method 1-this method is useful when the surface of the Base Microconcrete is not too coarse.

a) Apply a relatively thick coat of Microconcrete Finish on the dry Base Concrete using a stainless-steel trowel.

b) When this coat has hardened but is still wet, proceed to smooth the Microconcrete with the aid of a vaporiser loaded with water, closing the pore with the cement "grout" raised by the water. Then, polish the area on which we have just done this process without using water.

a)

b)



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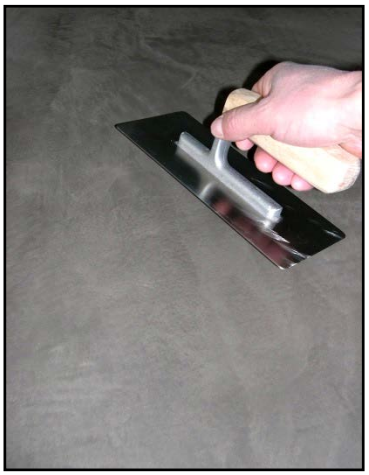
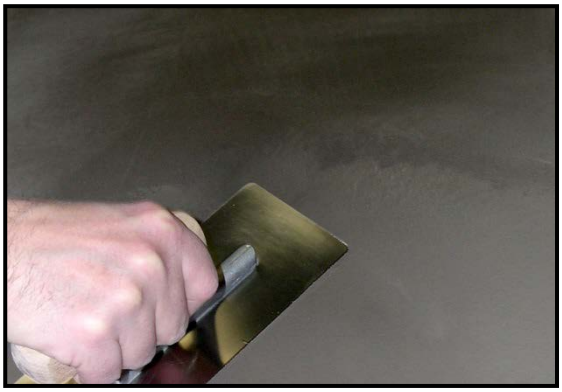
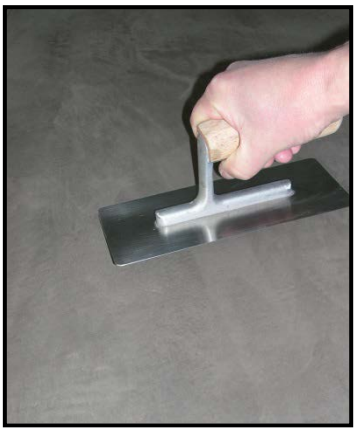


Method 2

a) Apply a relatively thin coat depending on how the last Base Microconcrete coat was left.

b) While this is occurring, apply a second coat with less product by pressing while passing and smoothing the finished surface with a clean trowel.

a)  **b)**  **b)** 

Technical data of the applied and dry material:

Determination of resistance to bending	UNE-EN 1015-11:2000 and 1015-11:2000/A1:2007	Resistance to Bending (N/mm²) **8.7**	
Determination of resistance to compression	UNE-EN 1015-11:2000 and 1015-11:2000/A1:2007	Resistance to Compression (Nmm²) **17.2**	
Determination of the elasticity modulus in compression	UNE-EN 13412:2008	Elasticity modulus (MPa) **8646**	Resistance to compression (MPa) **20.4**
Resistance to adhesion on concrete	UNE-EN 1015-12:2000	Fn (MPa) **1.60**	
Determination of water vapour permeability	UNE-EN 1015-19:1999 1015-19:1999 Erratum 1015-19:1999/A1:2005	Water vapour permeability (Kg/P·a·m²·s) **$2.57 \cdot 10^{-10}$**	Water vapour permeability (Kg/Pa·m·s) **$5.13 \cdot 10^{-13}$**

THEORETICAL PERFORMANCE: depending on the product's roughness, planimetry and absorption.

0.8 -0.9kg/m² per coat

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