

Two-component lime-based micro-mortar for continuous, thin-layer coatings on floors and walls for decorative finishes.

Uses

The system is designed as a high-performance continuous cladding, suitable for for use on floors, vertical surfaces, stairs, ceilings and even furniture items. Its high level of functional and aesthetic versatility makes it an ideal solution for both residential projects and works on commercial premises, large-scale facilities such as sports centres, industrial buildings and high-traffic environments such as hotels and restaurants

Description

Betoncire divides its range of **lime-based micro-mortars** into three types, classified according to their function within the system. These are organised into two main groups:

• Primer or undercoat:
ORIGINE O ETERNEL are designed to correct irregularities in the substrate, increase its structural strength and provide an ideal surface for the adhesion of the layers.
• Top layer:
ORIGINE, ETERNEL and NATURE are designed to provide the finishing touch, both in terms of aesthetics and performance. The choice depends on the desired finish.

Classification of Betoncire micro-mortars by particle size and recommended application

BASIE CAL MICRO-MORTAR	particle size (mm)	Recommended use
ORIGIN	0,4	Floor preparation and finishing
ETERNEL	0.3	
NATURE	0.2	Interior and exterior floor and wall finishes

Properties

- Continuous, seamless coating (always allow for expansion joints). Thickness: 1–3 mm.
- It stands out for its handcrafted finish, its workability and its extreme hardness.
- It is applied with a trowel in several layers, allowing for a wide variety of effects such as tadelakt or exposed concrete finishes. Excellent workability.
- Suitable for use on almost any type of surface, whether horizontal or vertical.
- High mechanical strength and excellent adhesion to all types of substrates: concrete, cement-based mortars, ceramic tiles, MDF, plaster and plasterboard.
- High resistance to abrasion, particularly at coarse grain sizes.
- Wide range of colours.

TECHNICAL INFORMATION

NATTURE	RATIO Component A/B	COVERAGE (2 layers) kg/m²	GRIT
ETERNEL	20 kg / 6.6 L	1.4	40
ORIGIN	20 kg / 6 L	2	40
NATURE	18 kg / 6.6 L	1	80

PROPERTIES OF POWDER COMPONENT A	SPECIFICATION	UNIT	METHOD
Features	Dust		
Composition	Cement, lime, additives and selected aggregates		
Apparent density of NATURE powder	1175±50	kg/m³	
Apparent density of ETERNEL powder	1175±50	kg/m³	
Apparent density of ORIGINE powder	1175±50	kg/m³	
PROPERTIES OF RESIN COMPONENT B BetonResin	**SPECIFICATION**	**UNIT**	**METHOD**
Features	Milky liquid		
Composition	Polyacrylate emulsion		
Density Comp. B	1,03±0.01	g/cm³	UNE-EN ISO 2811-1
Viscosity at 23°C, Comp. B	<100	mPa·s	EN ISO 3219
Non-volatile contents, Part B	22-23	%	UNE-EN ISO 3251:2020
Class B	9-10		UNE-EN ISO 19396-1:2020

PROPERTIES OF MIXTURE A+B	TYPE		
	NATURE	**ETERNEL**	**ORIGIN**
Apparent density (wet) kg/m³	1450±50	1450±50	1450±50
Apparent density (hardened) kg/m³	1390 ±50	1430±50	1430±50
Pot life at 20°C (min)	60	60	60
Drying time between layers (hours)	3-4		
Number of layers	2	2	2
Maximum thickness for each type (mm)	<1	<1	<1
System thickness (mm)	1-3		
Type of trowel (material)	Flexible Steel	Metal	Metal

Certificates: Declared performance; CE marking

EN 13813:2002	ORIGIN	ETERNEL	NATURE
Flexural strength at 28 days (EN 13892-2) MPa	49.7	48.3	43.9
Compressive strength at 28 days (EN 13892-2) MPa	13.4	12.3	12.7
Adhesion resistance (EN 13892-8) MPa	>1.5	>1.5	>1.2
Fire performance (EN 13501-1)	Bfl-s1	Bfl-s1	Bfl-s1

Application

1.1. Preparation of the substrate.

The substrate must be clean, dry and free from grease, dust or debris that could compromise the adhesion of the system.
The substrate must be stable and level before applying the lime-based micro-mortar.

1.2. Priming.

Before applying ORIGINE micro-mortar, it is essential to prepare the substrate properly, taking into account its specific conditions. Depending on the type and condition of the substrate, specific technical solutions may be required, such as the incorporation of flat, flexible fibreglass mesh for structural reinforcement, the use of BetonPrim 200 primers on non-absorbent surfaces or BetonPrim 100 on absorbent surfaces, as well as the application of barriers against rising damp or vapour using BetonPox.

In any case, it is recommended that the micro-mortar be applied whilst the primer is still tacky (sticky to the touch) to ensure optimum adhesion. If the primer cures completely and loses its tack (particularly in the case of epoxy-based primers), adhesion is reduced and flaking may occur. If the primer is already dry, the surface must be sanded before applying the micro-mortar to restore adhesion.
In all cases, you must strictly follow the technical advice provided by our specialists and consult the relevant technical data sheets for each product.

1.3. Kneading.

The lime-based micro-mortar is mixed with BetonResin and the colourants according to the chosen colour. To ensure the coating's properties, it is essential to maintain the correct ratio of micro-mortar to resin.

The mortar should be prepared as follows:

1. Pour a small amount of BetonResin into a container, add the full amount of pigment corresponding to the quantity of micro-mortar you are going to use, and mix until you obtain a liquid of uniform colour.
2. Gradually add the micro-mortar powder and resin whilst mixing the product with a low-speed mechanical mixer.
3. Mix for at least 4 minutes until the mixture is smooth and free from lumps.

1.4. Application of the mortar.

a. Preparation layers:
Apply two layers of ORIGINE O ETERNEL using a metal trowel. On floors, lay the flexible fibre mesh before applying the micro-mortar, then apply two layers of the micro-mortar. Allow 4 hours to dry between layers, then lightly sand using a random-orbit sander and 40-grit sandpaper to remove any imperfections.

b. Layers of finish on walls and floors, both indoors and outdoors:

- If a rustic finish is required, apply a third layer of ORIGINE or ETERNEL. Lightly sand the surface using a random-orbit sander or 40-grit sandpaper to remove any imperfections.

- If a more natural and elegant finish is required, apply two layers of NATURE. Allow each layer to dry for 4 hours, then lightly sand using a random-orbit sander or 80-grit sandpaper to remove any imperfections.

The finishing layers can be applied using the "wet-on-wet" technique
or "wet-on-dry".

<u>"Wet-on-wet"</u>

The lime-based micro-mortar can be worked using the "fresco on fresco" technique, applying the next layer as soon as the previous one loses its tack, that is, when the
Freshly applied micro-mortar no longer sticks to your fingers when you touch it. In this case, the
The first layer of lime-based micro-mortar applied using this technique should not be sanded. If any burrs or lumps remain, these should be removed using the trowel, trimming away any excess material. Apply the next layer using polystyrene boards
extruded. Once the material is dry, sand it lightly using a random-orbit sander
or with sandpaper of the appropriate grit (see table) to remove imperfections.

<u>"Wet on dry"</u>

Before applying a new layer, allow the previous layer to dry (for around 4 hours) and sand it lightly using a random-orbit sander or sandpaper of the appropriate grit (see table) to remove any imperfections.
Do not apply layers thicker than 1 mm for lime-based micro-mortars. A total system

thickness of 1 to 3 mm is recommended.

1.5. Sealing.

Micro-mortar systems must be sealed once the curing process is complete, which occurs between 24 and 48 hours after application. The sealing process must not begin until the coating has a residual moisture content of less than 5%, a value which must be verified using specific moisture measurement instruments. For sealing, it is recommended to apply two layers of BetonSeal Primaire, followed by two layers of a varnish from the BetonSeal range. In particular,
recommends using BetonSeal Finition Total, as it is the most advanced product and the entire line, allowing between 18 and 36 hours for drying between layers. It is essential to strictly follow the application instructions detailed in the technical data sheets for each product.

1.6. Cleaning the tools.

Tools should be washed with water immediately after use. A
Once hardened, the material can only be removed using mechanical means.

Limitations

The better the levelling and preparation of the surface to be coated, the better the finish and the lower the material costs and application time.
It is advisable to choose the appropriate method for each application.

Low temperatures significantly extend the product's pot life and drying time, whilst high temperatures significantly reduce them. Do not apply the product at ambient temperatures below 10°C or above 30°C. The relative humidity must be between 65% and 90%.

Special precautions

This product contains cement.

• Avoid contact with eyes and skin, and do not inhale the dust.

• Wear rubber gloves and safety goggles.

• Do not apply the product at ambient temperatures below 10°C or above 30°C.

It is essential to follow the instructions on the label. For further information, please refer to the product safety data sheet.

Empty containers must be disposed of in accordance with current legislation.

Keep out of reach of children.

Introduction

Available in 20 kg packs: **ETERNEL and ORIGINE**

Available in 18 kg packs: **NATURE**

Available in 5-litre and 25-litre containers: **BetonResin**

Storage conditions

The product must be stored in its original, unopened packaging, protected from the elements, at temperatures between 10°C and 30°C, in a dry, well-ventilated place, away from sources of heat and direct sunlight. When stored correctly, the product has a shelf life of 24 months from the date of manufacture.