

INTRODUCTION

DESCRIPTION

Off-white powder, based on various types of hydrated and airborne natural limes, different very high performance clinkers, selected silicas and modifying agents.

Mixing with **MORTEX® BEALCRYL 2** product gives a malleable mortar, easy to apply, applicable with a float (plasterer's trowel) and a brush, usable for approximately 25 minutes.

Mortar mixed with **MORTEX® BEALCRYL 2** product hardens to form a strong impermeable membrane - flexible, adhesive and durable.

Mortar requires the use of **DISSEL A15** between coats to remove the natural salts in its formulation.

USES

For inside and outside use. Surfaces above ground or buried.

For producing lightweight tanking: Cellar, basement, lift pit, cistern, foundation, swimming pool and pond, etc. finishes

ADVANTAGES

- Mineral
- Continuous finish
- Impermeable
- Fine thickness/ 3 mm
- Strong
- Flexible
- Good adhesion

TECHNICAL SPECIFICATION

IDENTIFICATION DATA	
State	Solid
Appearance	Powder
Colour	Off-white
Particle size	Max. 0.8 mm
Density NBN EN 1015-10	1650 kg/m ³
Apparent density (at 20°C)	1.65 kg/L
Packaging	25 kg bags 5 kg tubs
Storage	6 months in a dry spot, sheltered from frost, not in contact with the ground and in the original unopened packaging. Never leave the products in full sunlight.
Customs classification	38 16 00 00
APPLICATION DATA	
Mixing ratio	200 ml of MORTEX® BEALCRYL 2 product / kg of MORTEX® E-3 product (to be adjusted according to the humidity of the air)
Wet density	2.05 kg/L
Consumption	1.7 kg/m ² /mm thickness
Thickness per coat	1.5 mm
Application temperature	+5°C min to +30°C max
Relative humidity	65% min and 90% max Bar the use of appliances which are capable of drying out the humidity of the air (dehumidifier, air conditioner, etc.) 1 week before and after the site, as well as during application.

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Humidity of the substrate	Water soaked but looking matt, not trickling
Opening time (at 20°C)	Approx. 25 min
Drying time (at 20°C)	Dry to the touch: 1 hour 15 minutes Light traffic: 8 hours Between coats: 8 to 24 hours maximum Light usage: 72 hours Immersion in water: 5 days Complete drying: 7 days
FINAL SPECIFICATION (AFTER 28 DAYS)¹	
Compressive strength NBN EN 1015-11	41.3 N/mm ²
Bending strength NBN EN 1015-11	11.27 N/mm ²
Initial adhesion NBN EN 1015-12	3.73 N/mm ²
Adhesion after freezing/defreezing cycle NBN EN 14891SA.6.6	1.81 N/mm ²
Adhesion after exposure to heat NBN EN 14891SA.6.5	3.05 N/mm ²
Adhesion after immersion in water NBN EN 14891SA.6.4	1.27 N/mm ²
Chloride content	0.24% by weight
Water absorption by capillarity NBN EN 1015-18	C = 0.0 kg/(m ² .min ^{0.5})
Resistance to water vapour NBN ISO 12572	μ = 81
pH	± 7 after 1 month in water

APPLICATION

SUBSTRATE AND PREPARATION

The substrate must be:

- Mineral, with normal porosity
- Sound, clean, matt, free from dust and oil
- Hard, solid, non-floury, without openings and with setting/curing terminated
- Structurally sound

If the substrate consists of materials of different kinds, unstable and/or incorporating joints (e.g.: tiling), it is essential to take the necessary precautions to avoid, as far as possible, any movement due to expansion, to the difference between surface and internal tensions and to shearing – please choose from the following options:

- Reinforcement mesh or reinforced textile braid at joints
- Reinforcement mesh to be rolled into the first technical coat.
- Special mortar adhesion textile braid in corners
- Separation membranes over the whole of the surface

It is essential to ensure that the substrate is properly stable. If you have any doubt, talk to us. A test is always advisable.

All foreign materials likely to have an adverse effect on adhesion must be removed. This should be done by cleaning with a high pressure jet of water, shot blasting or sanding.

In the last instance, the surface will be cleaned with water and vacuumed to remove dust and non-adhesive particles.

¹ Results obtained in standard conditions. Some data may still be modified, according to atmospheric conditions.

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All crevasses and cracks more than 3 mm wide and not exposed to vibrations, temperature variations or movement of any kind whatsoever must be repaired with **MORTEX® REPAIR CONCRETE** product (see technical data sheet) or a sand and cement mortar enhanced with **ADHECRYL**. (Formulation available on request)

All pressurized water inlets must be stopped with **MORTEX® RAPID+** product (see technical data sheet)

Any joints must be flush with the masonry.

Dampen the substrate well before starting application.

PREPARATION OF THE MIXTURE

Mix 25 kg of **MORTEX® E-3** product with 5 L of **MORTEX® BEALCRYL 2** product.

Pour 5 L of **MORTEX® BEALCRYL 2** product into a clean tank and gently add 2/3 of the **MORTEX® E-3** powder. Mix at a slow speed (400 to 600 rpm) with a mortar paddle, gradually adding the remaining 1/3 of the powder until you obtain a homogeneous mortar without lumps.

For delayed setting, add the **RBE3** (1.6 to 8 ml/kg **MORTEX® E-3** product) beforehand in the **MORTEX® BEALCRYL 2** mixing liquid and mix before adding the powder. To fluidify, add **FBE3** (2,2 to 4,4 ml/kg **MORTEX E-3** product) under the same conditions. Never use both these additives in a single mixture.

At a temperature of 20°C, without additives, the mortar can be used for approximately 25 min. Low temperatures prolong the time of application and high temperatures shorten it.

*Comment: For specific applications needing more elasticity with lower compressive strength (e.g.: certain types of moving cracks, etc.), it is possible to use other mixing liquids from the **MORTEX®** range, viz. **BEALFLEX** and **BEALELAST**, demanding different mixing ratios (see the ad hoc technical data sheets).*

USE

The substrate must be dampened to avoid "burning" of the clinker-based product. However, there may not be any stagnant water on the surface. If the substrate dries quickly and the material starts to roll without keying, take care to top up the damping.

MORTEX® E-3 product must be applied with a float (plasterer's trowel) and brushed with a semi-hard brush in the undercoat. Coats must be "crossed" to fill hollows in the waves.

Chamfer the material at wall/floor junctions in the first two coats.

Always take care never to end a coat in a corner. To achieve this, make a return on the adjoining walls or floors by using the "stairs" technique.

MORTEX® E-3 product must always be applied in 2 technical coats² in cases of positive pressure (reservoir etc.) and in 3 technical coats³ in cases of slight negative pressure (reservoir etc.). The final coat of **MORTEX® E-3** product can be replaced by a coat of **MORTEX® COLOR 2-N** product (See technical data sheet) coloured in bulk for a finish adequate from both an appearance and a technical viewpoint.

Just before each coats it is a need to remove salts which may compromise the adhesion of the coats and the aesthetic appearance of the finish. To achieve this, treat with undiluted **DISSEL A15** (see the technical data sheet).

In cases of severe heat and/or high winds, a gentle spray with clean water just before application of the next coat can make application easier.

In closed rooms or in a damp atmosphere, condensation can occur at the surface. This must be adequately sponged off before applying the next coat.

² Technical coat = a coat of **MORTEX® E-3** product having a thickness of 1.5 mm and a drying time not less than 8 hours and not more than 24.

³ Ditto.

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MISCELLANEOUS**CLEANING TOOLS**

All tools can be cleaned with water while the product has not hardened. If the product has started to go off already, allow the tools to soak for 30 minutes in water before cleaning.

WARNINGS

Sites must be protected against rain, sun, wind and frost until drying is complete and until immersion in water is complete.

In closed and poorly ventilated rooms, severe condensation may occur after application, owing to the relatively lower temperature of the walls. Increasing the ventilation will resolve this problem very quickly, as often as not. Using dehumidifying installations is inadvisable during the first 28 days following application.

It is extremely inadvisable to apply media containing salts (sodium sulphate, nitrates, calcium, etc.).

Owing to its limited chemical strength, it is inadvisable to use **MORTEX® E-3** product mixed with water for tanking.

MORTEX® E-3 product mixed with **MORTEX® BEALCRYL 2** product keeps its water-resistant properties in conditions where the chalk-carbon water balance is maintained.

The quality of the mains water and the treatment of swimming pool water is the responsibility of the client, who must ensure compatibility of the systems and materials used.

In any event, the client must check that water intended to fill a pond (mains water) is compliant for use in a swimming pool and that it remains compatible with hydraulic mortar coatings. For borehole water and source water, a prior analysis is essential to establish the pH, TAC, TH and concentrations of sulphates, magnesium, ammonium and carbon dioxide.

Use only "special swimming pool" treatment products, at the dosage recommended by the manufacturer and do not let concentrated products (disinfectants, pH correction products, etc.) come into direct contact with the finish. Talk to us if you have any doubts.

ADVICE

BEAL advises you strongly to attend one or more training courses on MORTEX® brand products, depending on the purpose of the site. The company organizes frequent training courses, of different types (according to the different application systems) at its headquarters or on the premises of its distributors. They are accessible to both professionals and individuals alike, in Belgium and abroad (see www.beal.be).

After attending training courses, private coaching sessions on site can be organized. For more information, contact us.

Follow the application instructions exactly, according to the purpose of the product. Never use products other than those shown in this technical data sheet, to avoid any risk of things going wrong.

Always carry out tests with the chosen protection, as each pigment and each protection reacts differently.

For a single site and for each product type, always use products bearing the same batch number.

ENVIRONMENT

Remove waste to a specialist collection centre.

SAFETY

Contains limes, cements, silicates and additives. Avoid inhaling dust while mixing. Protect your skin and eyes. Wear gloves. If a product comes into contact with your eyes or skin, rinse immediately and copiously with clean water. In the event of a problem, consult a specialist.

Consult the safety data sheet available on request or at www.beal.be

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LEGAL NOTICE

These instructions, and , in particular, the recommendations for the application and final use of the products, are provided in good faith and are based on the knowledge and experience that the BEAL Corporation has acquired to date about its products when they have been properly stored, handled and applied under normal conditions. In practice, the differences between materials, substrates and specific conditions on site are such that this information or any written recommendation or advice given do not imply any guarantee of merchantable quality other than the statutory guarantee against hidden defects. Our liability cannot be committed in any way, assuming an application not compliant with our teaching. None of the data and information relating to suitability and application absolve the client from the need to carry out its own verifications and tests. All orders are accepted subject to our current terms and conditions of trading. It is essential that users consult the most recent version of the instructions for the product in question. These will be delivered to them on request.

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