

INTRODUCTION

DESCRIPTION

Off-white powder, based on various types of hydrated and airborne natural limes, different very high performance clinkers, additives and special ingredients.

Mixing with the product **MORTEX® BEALCRYL 2** gives a malleable mortar, easy to apply, applicable with a float (plasterer's trowel), usable for approximately 20 minutes. Mortar mixed with the product **MORTEX® BEALCRYL 2** hardens to form an impermeable mass, low in tensions, reducing the formation of cracks practically to zero.

FIELD OF APPLICATION

For inside and outside use. For finishing floors, walls, wet rooms, furnishings, worktops, swimming pool surrounds, swimming pool finishes, etc.

Production of technical and decorative surfaces

ADVANTAGES

- Mineral
- Continuous finish
- Impermeable
- Fine thickness: 1 to 1.5 mm/coat, i.e. 2 to 3 mm in total
- Strong
- Flexible
- Good adhesion
- Unlimited range of colours and appearances
- Very economical



*ISO 16000/AFFSET



BEAL International s.a.
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MORTEX® COLOR 2-N
Waterproofing micro-mortar for
technical and decorative coating
15
Dop : MC2N998.1- 2015

EN 998-1 (2010)
NB1136 – NB1173

TECHNICAL SPECIFICATION

IDENTIFICATION DATA	
State	Solid
Appearance	Powder
Colour	Off-white
Particle size	Max. 0.8 mm
Density NBN EN 1015-10	1780 kg/m ³
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 product MORTEX® BEALCRYL 2 /kg of product MORTEX® COLOR 2-N (to be adjusted according to the quantity of pigments and the humidity of the air)
Consumption	1.8 kg/m ² /mm thickness
Thickness per coat	≥ 1 mm and ≤ 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	< 3%					
Opening time (at 20°C)	Approx. 20 min					
Drying time (at 20°C)	Dry to the touch: 1 hour Light traffic: 8 hours Between coats: 8 to 24 hours 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	32.2 N/mm ²					
Bending strength NBN EN 1015-11	9.83 N/mm ²					
Adhesion NBN EN 1015-12	3.42 N/mm ²					
Chloride content	0.01% 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 = 99					
Positive hydrostatic pressure	≤ 0.2 bars					
Thermal conductivity EN 1745:2002 (E)	λ = 0.83 W/Mk (P = 50%) et 0.93 W/Mk (P = 90%)					
Abrasion resistance - BCA wear EN 13892-4	40 μm Class AR 0,5					
Fire resistance EN 13501-1	A ₂ S ₁ d ₀					
Indoor air quality (COV) ISO 16000	A+					
Slip resistance (without protection) DIN 51130 DIN 51097	2 layers MC2-N R13 A+B+C			2 layers MC2-N + MC2-F2 (a fresco) R10 A+B+C		
Slip resistance (with protection) DIN 51130 DIN 51097	OIL	Oil + bealwax	Bipur M	Blipur M + as425	Repeloil	Polythane MAT+ As425
	R10	R9	R9	R10	R9	R10
	A+B+C	A	A	A+B	A+B	-

APPLICATION

SUBSTRATE AND PREPARATION

The substrate must be sound, dry before and after application, clean, matt, free from dust and non-oily. It must be hard, not vulnerable to frost and not floury.

The product **MORTEX® COLOR 2-N** will adhere to a multitude of media:

- Mineral media: mortars, screeds, concretes, masonry renders, cement-based renders, keyed tiling, etc.
- Reconstituted timber media or water-repellent agglomerates such as MDF (Medium Density Fibreboard)
- Polystyrene or polyurethane panels covered with a reinforced concrete rendering or cement fibre panels.
- Plaster, normal or water-repellent plasterboard.
- Tests on glass and metal have also been carried out with success.

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

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For any other substrate, perform tests.

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.

In order to achieve uniform absorption, start by applying undiluted **RESIDUR** primer and adhesion bridge to the substrate. On glass, gloss tiling and smooth surfaces, use **RESIPACT G** primer after keying. After the primer as dried, approx. 6 to 8 hours – depending on the porosity of the substrate and the site conditions – start to apply **MORTEX® COLOR 2-N** product.

If the substrate has had an application of a **MORTEX®** brand product already, do not apply primer.

PREPARATION OF THE MIXTURE

Mix 25 kg of **MORTEX® COLOR 2-N** product with 5 L of **MORTEX® BEALCRYL 2** product.

Pour 5 L of the product **MORTEX® BEALCRYL 2** into a clean tank and gently add 2/3 of the powder **MORTEX® COLOR 2-N**. 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.

To colour the mortar, add powdered pigment into the mixing liquid or into the powder, as you wish. Pass the pigment through a fine tammy if necessary. To avoid any problems, use only pigments from the **BEAL COLOR** range, designed for use with a **MORTEX®** brand product.

Ensure that you always counterbalance the pigment added to the mixing liquid, depending on the porosity of the pigment ($\frac{1}{2}$ to $\frac{3}{4}$ of the volume of pigment in the product **MORTEX® BEALCRYL 2**). Example: If 500 ml of pigment is added to the mixture, 250 to 375 ml of extra product **MORTEX® BEALCRYL 2** must now be added, i.e. in total: 5.25 to 5.375 L of the product **MORTEX® BEALCRYL 2** for a 25 kg bag of the product **MORTEX® COLOR 2-N**.

For delayed setting, add the **RBE3** (1.6 to 8 ml/kg **MORTEX® COLOR 2-N** 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 product **MORTEX® COLOR 2-N**) 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 20 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

Always use **RESIDUR**, unless damp is present or suspected in the substrate.

For strength and waterproofing, the product **MORTEX® COLOR 2-N** is always applied as two technical coats using a float (plasterer's trowel).

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.

You can consider adding different finishing levels with the products **MORTEX® COLOR 2-F**: Mineral-based micro-mortars for decorative finishes with finer particle sizes (see *technical data sheet*).

According to the purpose of the site, there several application systems listed in the explanatory table below. On a dry substrate not subject to capillary action.

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Technical coat = a coat of the product **MORTEX® COLOR 2-N** having a thickness of between 1 and 1.5 mm and a drying time not less than 8 and not more than 24 hours.

"A secco" = applying successive coats with a drying time from 8 to 24 hours between each coat.

"A fresco" = application of a new rendering "pass" into a first which has begun to set.

INDOORS					
Purpose	Primer	Technical coats		Finish ² (optional)	
		Number	Type of MORTEX® products	"A SECCO"	"A FRESCO"
Floor (public/private)	yes	2	MC2-N	MC2-F1	MC2-N MC2-F1 MC2-F2
Stairs	yes	2	MC2-N	MC2-F1	MC2-N MC2-F1 MC2-F2
Shower or area in contact with water or a wet space (showers, sinks, Turkish baths, etc.)	yes	2	MC2-N	MC2-F1 MC2-F2	MC2-N MC2-F1 MC2-F2
Working drawings in contact with water	yes	2	MC2-N	MC2-F1 MC2-F2	MC2-N MC2-F1 MC2-F2
Wall or furnishings requiring a certain strength (public place, lift cage, table, etc.)	yes	1	MC2-N	MC2-F1 MC2-F2	MC2-N MC2-F1 MC2-F2
Decorative	yes	free choice	MC2-N MC2-F1 MC2-F2 MC2-F3 MC2-F4	MC2-N MC2-F1 MC2-F2 MC2-F3 MC2-F4	MC2-N MC2-F1 MC2-F2 MC2-F3 MC2-F4
OUTDOORS					
Purpose	Primer	Technical coats		Finish (optional)	
		Number	Type of MORTEX® products	"A SECCO"	"A FRESCO"
All uses (except, swimming pool, pond, reservoir, etc.)	no	2	MC2-N	None	None
Swimming pool, pond, reservoir, etc.	See MORTEX® E-3 product technical data sheet				

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.

POLISHING

After 48 hours' drying of the chosen **MORTEX®** brand system, it is possible to polish the dry surface carefully with size 100 to 150 glasspaper or screened abrasives.

N.B.: never penetrate into the particles forming the basis of the technical coats.

² Choose a single technical coat and a single product from those offered.

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PROTECTIONS

The product **MORTEX® COLOR 2-N**, mineral-based, has a surface like a natural stone, which can be insulated from attack by a protection in order to keep or change the initial appearance.

The protection can be applied 48 hours (20°C) after applying the last coat of the chosen **MORTEX®** brand system.

Depending on the purpose of the site, choose from the protections in the explanatory table below.

Depending on your choice of protection, refer to the corresponding technical data sheets before use.

Purpose of the site	POLYTHANE N120	POLYTHANE N120 +BEALWAX	FINISH SA (TR)	FINISH SA (TR) +BEALWAX	OIL OH (TR)	OIL OH (TR) + BEALWAX	BIPUR	BIPUR + BEALWAX	REPELOIL	REPELOIL + BEALWAX	BEALWAX
Public floor	✓	✓									
Private floor	✓	✓			✓	✓	✓	✓			
Stairs	✓				✓		✓				
Shower or area in contact with water or a wet space				✓ (only on walls)		✓	✓	✓			
Working drawings in contact with water	✓					✓	✓	✓			
Wall or furnishings demanding a specified strength	✓	✓			✓	✓	✓	✓			
Decorative	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Terrace									✓		
Facade									✓		

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.

MAINTENANCE

Unprotected **MORTEX®** product : maintenance without a mordant agent.

Protected **MORTEX®** product : refer to the ad hoc technical data sheets.

For keeping clean: **FINISH SA TR** diluted in water.

To eliminate limescale (plumbing fitments also): vinegar diluted in water. Start with low concentrations and increase according to the hardness of the water.

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.

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

Owing to its limited chemical strength, it is not advisable to use the product **MORTEX® COLOR 2-N** mixed with water.

The product **MORTEX® COLOR 2-N** mixed with the product **MORTEX® BEALCRYL 2** 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.

The safety data sheet is available on request or at www.bealinternational.com

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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