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Uw partner in restauratie en renovatie
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RC ASTIVO

COLOURED, PRE-DOSAGED NATURAL HYDRAULIC LIME (NHL 3.5) JOINTING MORTAR

Natural lime mortars & jointing mortar

ADVANTAGES OF RC ASTIVO

- ✓ More elastic than cement mortars
- ✓ Less susceptible to freezing
- ✓ Excellent vapour permeability
- ✓ Based on natural hydraulic lime NHL 3.5 from Saint-Astier

Description

RC ASTIVO is a pre-dosed binder based on natural hydraulic lime (NHL 3.5), used to produce jointing mortar in accordance with ENV 459-1. Lime mortars for jointing tend to be softer and more porous than cement-based mixes, allowing moisture to evaporate more freely from the masonry. This can help reduce moisture content within walls and limit the migration of soluble salts to the surface, thereby minimising the risk of damage or surface degradation ('spalling'). Natural hydraulic lime (NHL) mortars offer several key advantages over cement-based mortars in historic and ecological construction.

Properties

- Elasticity and flexibility

Compared to cement or bastard mortars, RC ASTIVO is significantly more elastic and flexible. This is crucial in absorbing small structural movements and minimising shrinkage and cracking.

- Permeability and insulation

RC ASTIVO provides excellent vapour permeability, allowing moisture to escape from the wall and thus preventing condensation, mould growth, and damp issues. This enhances the overall indoor comfort and contributes to a healthier indoor environment. It also provides better thermal insulation compared to cementitious mortars.

- Mechanical strength

The mechanical strength of lime mortars develops gradually. NHL 3.5 reacts initially with water and then continues to harden through carbonation (reaction with atmospheric CO_2). This allows the mortar to accommodate settlement in the structure. The free lime within the mix continues to carbonate over time, giving the mortar self-healing properties, as minor cracks are naturally sealed over time.

Preparation of masonry

Ensure the substrate is sound, clean and free from dust or loose particles. Damaged or deteriorated bricks should be replaced. Existing defective joints must be carefully raked out to a depth of approximately 1.5 times the joint width, with a minimum of 20 mm. The bond faces of the joint should have a square profile and a rough surface for good adhesion. Use non-aggressive tools, such as diamond blades, to create a central relief cut and then remove remaining mortar with a narrow chisel.

After raking out, brush joints thoroughly or clean them using low-pressure water with a flat spray nozzle. Ensure that the masonry is not saturated but only damp before repointing. This reduces the risk of lime bloom (efflorescence). The jointing mortar should be applied as dry as practicable while remaining workable. This maximises compaction, reduces shrinkage, and limits staining of the masonry surface.

Preparation of the mortar:

Mix one 10 kg bag of RC ASTIVO with 40 kg of dune sand. Add water depending on the moisture content of the sand until the desired working consistency is achieved. Mixing in a concrete mixer should last approximately 5 minutes. For mechanical mixing, use a low-speed mixer to avoid overworking the lime and to maintain a dense, cohesive mix.

Application instructions

Always work from the top downwards to avoid staining finished work. Use appropriate jointing tools and press the mortar firmly into the joints. For joints deeper than 20 mm, a first infill (dubbing out) layer is recommended to avoid shrinkage and slumping. When the mortar reaches a "green hard" state — firm enough to brush without smearing but still workable — the joints should be finished using a churn brush. This removes surface laitance (lime bloom) and enhances the colour depth of the mortar, improving the aesthetic result.

Freshly applied mortar must be protected from direct sunlight, rain and wind. In cold conditions, protection against frost is essential. The use of lime mortar during freezing temperatures is strongly discouraged due to the risk of frost damage during curing.

Consumption

Average consumption: +/- 10 kg mixture/m^2

Can vary between 7 to 15 kg/m^2, depending on the width and depth of the joints and the size of the stone.

E.g. to grout 5 m^2 you need +/- 50 kg mixture = 1 bag 10 kg RC Astivo + 40 kg dune sand

Technical characteristics

Binding agent	100% natural, hydraulic lime NHL 3,5
Presence of cement	None
Delivery form	Powder
Density	0,8 kg/dm^3
Pigments	Mineral pigments
Organic additives	Less than 0,3%

Test results according to EN-459 on RC ASTIVO

Ratio RC ASTIVO/sand	1:2	1:2,5	1:3
Start of hardening (hours)	5,3	6	6
Elasticity modulus in N/mm^2			
28 days	9010	9000	8970
6 months	16250	13505	12450
24 months	17480	13785	13670
Compressive strength in N/mm^2 (Mpa)			
7 days	0,75	0,57	0,53
28 days	1,88	1,47	1,34
12 months	7,48	5,89	3,89
24 months	8,62	5,99	3,96
Water vapor permeability			
In g per m^2 per hour per mmHg	0,62	0,64	0,70

Colors

RC ASTIVO is available in **10 standard colors** (see our website).
Our samples are made with dune sand 0/2 (M31).

NOTE: the color may vary slightly due to the use of different types of fillers.

The colors in the image may differ from the actual colors of the product and of the sand that is used

Security

Consult the most recent safety data sheet. Limes are caustic. Always wear eye protection and protective gloves and clothing and follow the safety instructions on the labels.

Remarks

- Product for professionals.
- Protect the fresh mortar against water, wind, sun, drift water and fog, using a windscreen. Moisten the mortar again after curing.
- Do not apply on a frozen substrate or when there is a risk of frost. Minimum temperature for application: +5°C for light colors, +8°C for dark colors. Above 30°C special measures must be taken.

Cleaning of equipment

With water immediately after use.

Storage / Shelf life

- Keep only in the original container in a cool, well-ventilated place. Opened containers must be closed and stored upright to prevent leakage.
- 1 year after manufacturing in original, closed packaging.

Packaging

10 kg bag

Photos