

## Lime based repair mortar for natural stone and bricks

### Application

- Restoration of most types of natural stone except those with an excessively dense crystalline structure such as marble, granite, etc.
- Restoration of bricks
- Specifically designed for soft natural stones
- Local repairs of flat surfaces, profiles, ornaments and sculptures

### Properties

- Mortar based on natural hydraulic lime, hydraulic binders and selected mineral fillers.
- Can be applied in thick layers.
- Can be colored with compatible, alkali-resistant pigments.

### Directions

#### Preparation

- Thoroughly check the entire stone surface for loose flakes, cracks and parts that have lost all cohesion due to erosion.
- Clean if necessary.
- Remove erosion crusts and impurities.
- Deepen and roughen each damaged area down to the healthy stone and to a minimum of 1 cm below the surrounding stone surface. The most durable repair is achieved by working against a straight edge (e.g. by grinding, cutting, etc.).
- If the stone has lost its internal cohesion, it must first be consolidated with ethyl orthosilicate (orthosilicic acid ethyl ester, Artisil SVS 75 or Artisil SVS 100). The stone hardener is applied to the stone until it is saturated. Work can continue after the hardening reaction has taken place (after 14 days). It is important to check that the temporary hydrophobic behaviour of the stone hardener is no longer present before continuing to work with the mortar.

### Work method

#### Impregnating the substrate

- Anchoring rods or wood screws made of stainless steel or brass are fixed in 5 mm holes in the contact surface. In the case of strongly protruding restorations or overhanging parts, these anchor points are additionally connected by a brass wire (never use steel or iron). Note: all iron remnants such as wire ends, staples, screws, anchors, etc. must be removed from the areas to be repaired.
- Thoroughly wet the surface to be repaired beforehand.
- For slightly porous and/or questionable surfaces: pre-prime the surface with Monulime Primer Plus. Do not allow the primer layer to dry. After allowing it to set slightly, you can apply the Monulime repair mortar. First level out deeper areas with Monulime before finishing (also pre-prime with Monulime Primer Plus).
- It is also possible to create a 'sticking layer'. For this, mix Monulime Primer Plus with a small amount of Monulime powder and brush it into the surface.

#### Mixing the stone restoration mortar

- Prepare the mortar by adding 330 ml up to 350 ml of water per kilogram of powder.
- More water should be added to dark colors then to light colors.
- Mix well for at least 5 minutes to obtain a smooth and even mortar.
- Pigments can be added within certain limits: Oxide pigments: max 5%. Earth pigments: max 15%. These percentages apply to uncolored mortar (Chauvigny). In the case of colored mortars, the percentages need to be lower.

#### Applying the product

- Apply the prepared mixture with a spatula or trowel to the pre-wetted surface.
- When applying several layers (due to high total thickness), work wet-in-wet.
- When repairing deep cavities, the substrate must always be pre-wetted after levelling (see preparation of the substrate). Finishing must always be done in an even layer thickness to avoid cracking at the edges of the repair.

#### Finishing

- After sufficient hardening (depending on the temperature and humidity), the desired surface texture is obtained by working the surface with chisels, a stone plane or a stone rasp, just like with natural stone. In most cases, it is recommended to sand the surface.
- For thin layers, the mortar must be slightly moistened afterwards for 24 hours to prevent it from drying too quickly.
- A water-repellent treatment is possible after complete hardening (this can take a long time with lime mortars).
- The tools can be cleaned with water before the mortar has hardened.

#### Important remarks

- The definite end color will be obtained after full drying.
- Only work on stone that is free of dust, paint or a still active silicone treatment.
- Do not apply the mortar to a frozen surface.
- The ambient and surface temperature must be at least 10°C and no more than 30°C.
- Do not work during frost or in direct sunlight.
- Protect the applied mortar from direct sunlight and the wind.
- Do not apply to surfaces containing gypsum.
- The layer thickness is between 1 cm and a maximum of 5 to 6 cm.

#### Technical characteristics

Density of the powder	+/- 1,25
Density of the prepared mortar	+/- 1,80
Density of the hardened mortar	+/- 1,50
Compressive strength after 28 days	6 MPa
Capillary absorption	class W1
Vapour permeability coefficient $\mu$	25

**Colors****Standard colors**

- Chauvigny (no pigmentation)
- Euville (light, medium and dark)
- Balegem
- Balegem yellow
- Savonnières (light and dark)
- Mergel
- Massangis
- Gobertange
- Diestiaan
- Terra Cotta (light, medium and dark)
- Blauwe steen (light and dark)

**Mixing colors**

All colors can be mixed together to obtain the desired color tones.

Extra pigments can also be added, within certain limits.

The following pigments can also be obtained at Rewah:

Maximum 5% addition:

- Monulime Pigment Orange
- Monulime Pigment Blood Red
- Monulime Pigment Ochre
- Monulime Pigment Black
- Monulime Pigment Brown Wash
- Monulime Pigment Brown
- Monulime Pigment Ligth Brown

Maximum 15% addition:

- Monulime Pigment Sienna
- Monulime Pigment Light Blue

**Quantity to use**

1,3 à 1,6 kg powder per dm<sup>3</sup>

**Packaging**

10 kg

**Safety information – Transport – Handling and storage - Waste**

Consult the most recent and product-related safety information sheet from Rewah in compliance with the (EU) 453/2010 annex II/A guidelines. The information on the abovementioned safety information sheet has been drawn up with the greatest care and is based on the knowledge available at the date of issue. We accept no liability for damage or hindrance of any kind which could be caused by the use of the product concerned.

**Transport and storage**

Store the product and its packaging dry and protect against moisture.

**Storage life**

1 year after manufacturing in the original closed packaging.

**Considerations**

The data included in this sheet, the application advices and other recommendations are based on extensive research and experience. They are however not binding also in relation to third party liability. They do not protect the customer against checking the products and directions for their suitability for the purpose. The characteristics and properties described are average values and analyses registered at 20°C, variances are tolerated. Our customer service will gladly answer your questions. The rewrite of this sheet replaces all previous sheets.