

Restomix

Repointing mortar

1- PRODUCT DESCRIPTION

1.1 USE

Restomix is a repointing mortar based on GU hydraulic cement, type S hydrated lime and well-graded sand. It also contains an air entraining agent and colourants (optional). Restomix is formulated to meet the property specification of CSA A179-04 standard in Table A.3, annex A for a type O mortar. It can be used for repointing of interior or exterior, brick or stone masonry work.

1.2 ADVANTAGES

Utilisation of a calibrated mortar ensures quality of the raw materials used especially for the sand that is free of any contaminants such as plants. It also provides control of the sand gradation and the final composition of the mortar such as the cement/lime/sand proportions. Restomix is a mortar specially formulated for repointing. It was formulated to meet compressive strength specifications for a type O mortar but with a texture that is suitable for repointing. A dry texture is required to ensure good compaction of the mortar.

1.3 LIMITATIONS

1.3.1 This mortar can only be used for repointing of vertical surfaces.

1.3.2 Any modification of the mortar composition is forbidden and automatically cancels the warranty.

1.3.3 Addition of additive and/or admixture of any nature such as set accelerators, retarders, antifreeze agents, waterproofing agents, polymers (latex) or else, is forbidden.

1.3.4 Only addition of colourants¹ is allowed although not recommended.

1.3.5 Do not retemper; respect the prescribed amount of water.

1.3.6 Restomix is not ment to be used as a bedding mortar. It would be necessary to increase considerably the amount of mixing water which would modify greatly the final physical properties of the mortar.

2- INSTALLATION

2.1 FIELD CONDITIONS

2.1.1 Make sure the temperature (surface, surrounding and material) is between 5°C (40°F) and 35°C (95°F), during the application and for the following 72 hours.

2.1.2 Never apply Restomix on frozen mortar or frozen masonry elements.

2.2 SURFACE PREPARATION

2.2.1 Using a chisel, carefully remove damaged mortar. It is possible to use a grinder when mortar is very hard and conventional tools are not efficient. Blade thickness must be smaller than half of the joint thickness. Take all necessary precautions to avoid damaging surrounding masonry elements.

2.2.2 Remove damaged mortar up to a minimum thickness of 25 mm (1 in). In all cases, sound mortar should be reached.

2.2.3 Remove dust and other residues with a low stream of water or air.

2.2.4 Humidify joints before application avoiding accumulations.

2.3 MIXING

2.3.1 MIXING IN SMALL QUANTITY (1 BAG)

2.3.1.1 Pour 3 liters (0.65 gallon) of potable water in an appropriate container (20 liter pail).

2.3.1.2 Slowly add dry ingredients while mixing at low speed with an industrial drill equipped with a mixing attachment such as a Jiffler. Use a variable speed drill with at least 1/2 in capacity.

2.3.1.3 Mix for a minimum of 3 minutes and maximum of 5 minutes. Product should have a thick consistency forming a ball when hand pressure is applied. Let material sit for 30 to 45 minutes then add approximately 0,5 liter (17 ounces) of water to obtain required consistency.

Note: It might be necessary to reduce amount of added water depending on humidity and temperature conditions.

Note: Never mix less than one bag.

2.3.2 MIXING IN LARGE QUANTITIES

2.3.2.1 Use a mortar mixer of appropriate size (mixer should be 3/4 full). Selection of mixer type is very important to obtain a homogeneous mix. Contact a Daubois technical sales representative to confirm that the righth mixer has been chosen.

Note: Always mix full units.

2.3.2.2 Start mixer. Introduce 3 litres (0.65 gallon) of potable water per 22.7 kg (50 lb) bag.

¹ The quality and quantity of colourant used should respect ASTM C-979 standard

2.3.2.3 Slowly add dry ingredients. Continue mixing as per instructions in section 2.3.1.3.

2.4 APPLICATION

2.4.1 Mortar should be applied in three strokes. Push mortar firmly into the joint with a round-nose trowel (avoid spreading). Compact tightly to remove air pockets. Apply a first coat on humid surface to obtain a uniform depth.

2.4.2 Let mortar dry until finger pressure barely leaves any traces before applying the second coat.

2.4.3 Slightly wet the surface then apply a second coat. Repeat steps 2.4.1 and 2.4.2, until final thickness is reached. A concave joint is recommended.

Note: It is possible to increase waiting time between each coat as long as the mortar is wetted before the next application.

2.4.4 Mortar should be used within 1 ½ hour following mixing if temperature is higher or equal to 25°C (77°F). If temperature is lower than 25°C (77°F), use within 2 ½ hours. Discard unused mortar.

2.5 FINISHING

2.5.1 All mortar joints must be finished using a metal or plexiglas tool to provide the required look as well as weather resistance.

2.5.2 Finishing must be done just before the mortar loses its plasticity, when finger pressure barely leaves any traces. It is impossible to set a specific time, it is necessary to rely on the mason's judgment.

2.6 PROTECTION AND CURING

2.6.1 This step is crucial to obtain a durable mortar. Accelerated drying will promote crack formation and will result in a weak mortar (friable).

2.6.2 Protect from freezing (temperature over 5°C, 40°F) and rain for the first 72 hours. In hot weather, protect from sun and wind to avoid rapid water evaporation of mortar.

2.6.3 Keep the joints damp for the first 72 hours. If job is interrupted (evening, weekends) protect the joints with wet jute (burlap) without touching the mortar. Cover the jute with plastic sheeting.

2.6.4 Protect and cover surroundings such as windows, openings, metallic flashings, sills and any other material sensitive to alkaline material.

2.7 CLEANING

2.7.1 Clean tools with water while mixture is not yet hardened. Once hard, only mechanical cleaning will be efficient.

2.7.2 During application, remove mortar spots with jute (burlap) or with a stiff bristle brush. Do not use a metal brush.

2.7.3 Consult a cleaning specialist before any cleaning step is initiated. It is important to preserve mortar's integrity. Let the mortar dry for 28 days prior to initiate cleaning. Protect and cover surroundings (windows, openings, etc.).

3- PACKAGING

This product is available in 22.7 kg (50 lb) paper bags. A pallet contains 63 bags.

4- STORAGE

4.1 INTERIOR STORAGE

Store in a cool, dry place. Avoid placing bags directly on the floor.

4.2 EXTERIOR STORAGE

Cover bags with a waterproof sheeting. Do not store directly on the ground.

4.3 SHELF LIFE

Shelf life is one year in original, unopened bags.

5- FIRST AID

This product contains cement and lime and may cause eye, skin and respiratory system irritation. Wear rubber gloves, safety glasses and approved dust mask. If swallowed, call a Poison Control centre or doctor immediately. Do not induce vomiting. In case of contact with eyes, rinse well with water for 15 minutes. In case of skin contact, rinse well with water. Keep out of reach of children. Consult the safety data sheet for more information.

6- TECHNICAL SUPPORT

Daubois offers the possibility to colour Restomix in factory to match it perfectly with the joint to be repointed. In this case, a representative sample of at least 6 cm² (1 in²) area of the old mortar to match is required. Once the colour matches completed, Daubois will supply a coloured sample of 8 cm by 1 cm (3 in by 3/8 in) to its customer for approval. Expect 5 business days delay for the coloration of one sample.

Contact Daubois for more information about application methods or conditions or to obtain the latest version of our technical documents.

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7- WARRANTY

Daubois guarantees that this product will perform as specified in this technical data sheet and suits the application for which it was intended. Nonetheless, Daubois does not offer any explicit or implicit warranty since it cannot control application methods and/or field conditions. Under this warranty, Daubois' responsibility is limited to either replace or refund the cost the product proved defective.

8- WARNING

Colour variation may be observed on the final job even if a precoloured mortar was used. These variations are generally caused by several application conditions such as:

- waiting time before finishing is done (tooling).
- variable humidity content of the elements.
- lack of protection during installation or job interruption.

Technical data table

Property		Results ¹
Compressive strength, ASTM C-109	7 days 28 days 28 days	min. 1.5 MPa (217 psi) min. 2.5 MPa (362 psi) Average ² 3.8 MPa (551 psi)
Water vapour transmission, ASTM E-96		24 perms
Water absorption, ASTM C-1403	24 hours	104 g/100 cm ²
Pull-off adhesion on clay brick, CSA 23.2-6B	28 days	0.43 MPa (62 psi)
Drying shrinkage, ASTM C-596	91 days	0.13 %
Freeze/thaw resistance, ASTM C-666M ³		25 cycles
Flexural strength, ASTM C-348	7 days 28 days	1.0 MPa (145 psi) 1.2 MPa (174 psi)
Air content, CSA A3004-C4		maximum 18%
Specific gravity		1860 kg/m ³ 112 lb/pi ³
Yield of a 22.7 kg (50 lb) bag		0.012 m ³ 0.42 pi ³
Approximative lenght of repointing per 22.7 kg (50 lb) bag for 10 mm high and 25 mm deep joints (3/8 in high by 1 in deep)		50 m (165 linear feet)

¹ Results obtained in laboratory controlled conditions with a standard sample mixed with the recommended amount of water that corresponds to a flow of about 70 to 80%. These results may vary slightly from one sample to the other and are used as a performance indicator of the mortar. These results cannot be used for the acceptance or rejection of a mortar bag.

² Average value obtained during quality control analysis. Results may vary from this value but will always meet CSA A179-04 standard for a type O mortar.

³ Test executed according to Procedure A of ASTM C-666M standard.