

Neostone C35

Stone restoration mortar: limestone and sandstone

1- Product description

1.1 GENERAL USE

• Neostone C35 is a single component mortar based on cement and mineral fillers that is specially formulated for the restoration of stone elements.

• Neostone C35 can be used to repair simple elements such as flat stone blocks but it can also be sculpted to fix various ornamental frescos. The limit of the details resides in the hand of the applicator.

• Neostone C35 can be used to repair limestone, sandstone or concrete elements.

1.2 ADVANTAGES

- Properties compatible with stone
- Excellent water vapour transmission and water tightness
- Very low shrinkage
- Does not contain polymer
- Resist to freeze/thaw
- Strong adhesion
- Finish similar to stone

1.3 LIMITATIONS

- It is forbidden to add any additives on field

Technical data

Characteristic		Results
Compressive strength, ASTM C-109	7 days 28 days	9.5 MPa (1375 psi) 15.0 MPa (2175 psi)
Water vapour transmission ASTM E-96		20 perms
Water absorption, ASTM C-1403	24 hours	11 %
Linear shrinkage, ASTM C-596	28 days	0.06 %
Expansion in lime water, ASTM C-596	28 days	0.01 %
Flexural strength ASTM C-348	7 days 28 days	2.5 MPa (362 psi) 3.0 MPa (435 psi)
Résistance au gel/dégel ASTM C-666 M		Resistant
Linear coefficient of thermal expansion ASTM C-531		$8.7 * 10^{-6}(\text{mm/mm}) ^\circ\text{C}$
Specific mass		1720 kg/m ³ 107 lb/ft ³
Approximate yield for a 20 kg (44 lb) pail		0.014 m ³ 0.5 ft ³
Colour **		Off white

* Results obtained in laboratory at 23°C, mortar was mixed with 11% water

** Custom coloured as requested

2- Installation

2.1 SURFACE PREPARATION

- 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.

- Surface to be repaired must be sound, clean and free from bond inhibiting materials such as grease, dust, oil or paint.

- Remove all loose material from the stone surface using a chisel or a pneumatic cutting tool.

Note: It is suggested to well define the edges and to avoid very thin applications

(feathered edge) since it may cause premature damages.

- Wash thoroughly the surface with a brush and clean water.

2.2 MIXING

- Mixing proportions are approximately 1 volume of water for 6 volumes of powder (220 ml of water for 2 kg of powder). These quantities may vary according to temperature and humidity. Do not add too much water or make a very dry mix.

- Mix the powder (Neostone C35) in the pail before taking the requested amount of product.

- Pour water in a clean container then add the dry ingredients. It is possible to mix by hand or with a low speed drill equipped with a paint mixing attachment.

- Once mixed, the mortar has a dry but slightly humid consistency. It can easily form a ball with small hand pressure. Avoid water excess. Do not prepare a mix that is too dry in order to have enough humidity for accurate curing.

- Humidify the surface before the application. If a stone seems to have a high absorption, saturate the stone prior to the application especially in hot weather. If the surface dries before the application it is imperative to moisten the stone again.

- Apply on a saturated surface dry surface.

2.3 APPLICATION

- Slurry coat: It is necessary to apply a bond slurry coat on the substrate. Add additional water to a small part of the mix to obtain a very smooth texture that will be easy to spread on the surface. Spread this slurry coat in small sections to avoid fast drying.

- Apply the mortar on the humid slurry coat according to the techniques learned in the training session*.

- Apply material at a thickness superior to the stone surface. Minimum thickness is 6 mm (1/4 in) but it can be scraped to thinner section in the finishing step.

- When initial set is started, scrape off the extra material until desired thickness is reached. This step is started when the mortar does not stick to the tools. Waiting time before finishing can have an effect on the final colour of the mortar.

NOTE: It is very hard to determine the waiting time before finishing since it will vary enormously according to field conditions: air and element temperature, humidity, wind, sun, etc.

- Do not overwork the material since it will bring water on the top surface and can alter the quality of the mortar and its final colour.

- Neostone C35 can be applied to a thickness of up to 10 cm (4 inches) in one pass. For projections, it could be necessary to use stainless steel rivets, dowels or anchors.

2.4 PROTECTION AND CURING

- It is important to spray water periodically on the surface for the first 72 hours. Vaporisation must be started when the surface is strong enough to avoid damages. This step should be repeated several times a day. If this operation is impossible for a short period of time (ex. night) cover the surface with a plastic without touching the mortar.

2.5 CLEANING

- Clean equipment with water while material is not hardened. Once hard, only mechanical cleaning can be used.

- Remove excess mortar on the surfaces with a sponge and clean water. Repeat this step several times to avoid spotting stone surrounding the repair patch.

3- Packaging

- This product is available in 20 kg (44 lb) pails.

4- Storage

- Store in a cool, dry place.
- Shelf life is one year in original, unopened containers.

5- First aid

This product contains material that 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 service

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.

* See section 8

Under this warranty, Daubois' responsibility is limited to either replace or refund the cost of the product proved defective.

8- Certification/ Training

Only Daubois certified applicators can buy and apply Neostone C35. It is possible to consult our customer service representative to know the name of our certified applicators.

Please contact our customer service for any information on the training classes. These classes are generally held during winter time (January to March).