

CO 81

Silicification fluid

**Silicification fluid
for bore hole injection and surface sealing**

CHARACTERISTICS

- ▶ deep penetration
- ▶ makes surfaces water-repellent
- ▶ prevents capillary rise of moisture
- ▶ reactive
- ▶ increases surface strength

BORE HOLE INJECTION

SCOPE OF USE

For sealing existing brickwork against capillary rise of moisture. Seals capillaries and fine cracks of up to 1 mm. The silicification fluid can be injected with or without pressure. Experience has shown that the greatest effect is achieved with pressure injection. Durable sealing against capillary water absorption, even with later formation of secondary capillaries. Also suitable on damp brickwork.

Please note:

Before start of repair work, preliminary examinations are necessary to ensure the desired result. Particularly important are the extent of moisture penetration in the existing structure and the presence of deleterious salts. As a rule, brickwork can only be durably sealed against moisture if supporting measures are taken (see under "Application: Bore hole injection").

SUBSTRATE PREPARATION

Before or after drilling the bore holes, chip off the damaged plaster for a minimum of 80 mm beyond the visible damp and salt area. Chemical injection is not suitable for gypseous brickwork. Therefore, gypseous mortar or plaster must be completely removed. If necessary, clean the brickwork mechanically.

Pressureless injection:

Pressureless injection is particularly suited for slightly damp or damp brickwork. Drill holes for the silicification fluid with a diameter of 30 mm, an average of approx. 12 cm apart and a slope of at least 30° (not more than 45°).

Pressure injection:

Pressure injection is especially suited for saturated substrates. Drill holes of 12 to 18 mm diameter (depending on the type and size of injection tube used), an average distance of approx. 12 cm and a slope of approx. 30°. At a slope of 30°, the depth of the bore holes should be equivalent to the thick-



ness of the brickwork to ensure that 5 cm of the walls to be treated are not drilled through.

Drill the holes in one or two rows. In the latter case, drill two staggered rows of holes on top of each other, with the holes approx. 8 cm apart. Use an electropneumatic drill or a core drill with as little vibration as possible. Position the holes so that at least one course joint is penetrated.

Walls of more than 60 cm thickness and wall corners must be treated on both sides. Walls with larger cavities or cracks, and walls made of hollow blocks or loosely filled with mortar and stone in the core must be grouted with CR 65 sealing slurry (8 l of water on 25 kg) before injection of the silicification fluid.

After the slurry has hardened, re-drill the holes. After drilling, blow the bore holes free of dust.

APPLICATION

Inject CO 81 without pressure from feed vessels with an infiltration time of at least 24 hours. In the case of pressure injection, use suitable devices and a pressure of 2 to 7 bar. Next day, fill the holes cavity-free with CR sealing slurry (approx. 5 to 6 l of water).

Supporting measures

After producing the horizontal damp course, replace the chipped off plaster by applying a layer of CR 62 repair plaster or CR 63 universal repair plaster (thickness at least 20 mm). Apart from these sealing measures, the external cellar wall sealing must be renewed or repaired where necessary. Any structural defects must be rectified during the overall repair work. If possible, install a drainage system to ensure rapid run-off water.

SURFACE SEALING

SCOPE OF USE

For use on damp substrates, e.g. in the wall/socle area. In combination with CR 65 sealing slurry for waterproofing and producing dry substrates before sealing with CP 43, CP 44, CP 45 or BT 21. For priming dry substrates before coating with CP 43, CP 44 or CP 45. For use on vertical and horizontal surfaces. In combination with CR 65 for waterproofing the external and internal sides of walls.

SUBSTRATE PREPARATION

Before applying CO 81, make sure the substrates are level, solid, load-bearing, clean, gypsum-free and free of substances which may impair adhesion. The surfaces to be sealed must be crack-free.

APPLICATION

CO 81 in combination with CR 65

CO 81 is either brushed or sprayed on. In the case of only slightly absorbent substrates, dilute CO 81 with water at a ratio of 1 : 1. Immediately after the CO 81 coat was soaked up by the substrate, apply a slurry layer wet-on-wet. After the CR 65 layer is sufficiently hard, further slurry layers can be applied. If CP 43, CP 44, CP 45 or BT 21 are to be used for surface sealing, apply these products onto the second slurry layer, after application of a priming coat (varies depending on the product).

CO 81 used for priming

On dry or slightly damp substrates CO 81 is brushed or sprayed on as a priming coat for CP 43, CP 44 and CP 45. After approx. 30 minutes, the respective Ceresit product is applied onto the slightly damp surface.

PLEASE NOTE

Use CO 81 only at temperatures of +5 °C to +35 °C.

Do not mix with other materials.

CO 81 is highly alkaline. Therefore protect eyes and skin. In case of contact rinse thoroughly with water. In case of contact with the eyes seek medical advice immediately. Immediately take off contaminated clothing.

Please refer in particular to the information sheet "Brickwork injection against capillary rise of moisture" issued by the WTA (Scientific-Technical Working Group for the Maintenance and Restoration of Historic Buildings).

Cover off adjoining areas, windows, doors, glass, metals and natural stones. Protect plants. Do not allow the fluid to enter the soil or the sewage system.

Should you need support or advice, please consult our advisory service for architects and craftsmen on the hotline numbers

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TECHNICAL DATA

Base: silicification fluid with hydrophobic additives

Density: 1.18 g/cm³

Application temperature: +5 °C to +35 °C

Amount required:

Injection: approx. 10 to 15 kg/m² wall cross section

Surface sealing:

– slightly absorbent substrates: (dilution 1:1) approx. 0.15 kg/m²

– normally absorbent substrates: approx. 0.4 kg/m²

Colour: yellowish green

Storage: Shelf life approx. 12 months in a frost-free but cool place. Use product in opened containers as soon as possible.

EU VOC limit value for this product (cat A/c):

75 g/l (2007); 40 g/l (2010).

This product contains max. 1 g/l.

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards of the German Standards Institute (DIN). The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23 °C and 50 % relative air humidity unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

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