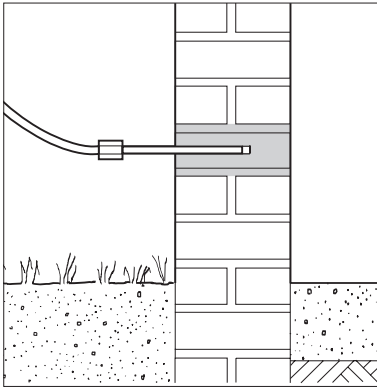


Product



• THIS DETAIL SHEET RELATES TO WYKAMOL SILICONATE K DAMP-PROOFING SYSTEM, AN AQUEOUS SILICONATE SOLUTION IN CONCENTRATED FORM.

• After dilution with water it is installed by pressure injection in accordance with BS 6576 : 1985.

This Detail Sheet must be read in conjunction with the Front Sheets, which give the product's position regarding the Building Regulations, general information relating to the product, and the Conditions of Certification, respectively.

Technical Specification

1 Description

1.1 Wykamol Siliconate K is an aqueous concentrate of potassium methyl silicate, manufactured by a controlled batch blending process. Regular quality control checks are conducted on the final product.

1.2 The concentrate is diluted with tap water (1:6 by volume) at the installer's premises to give the injection fluid.

1.3 The accuracy of dilution can be checked by tests to BWPDA DP4. The minimum values (percentage by weight) that should be achieved are:

| | |
|--------------------|------|
| solids content | 6.00 |
| siliconate content | 3.50 |
| silicon content | 1.46 |

1.4 The installation process involves the saturation of a selected course of brickwork, or an equivalent area of blockwork or stone, with the dpc fluid by pressure injection, and the subsequent replastering.

2 Delivery and site handling

2.1 Wykamol Siliconate K concentrate is supplied in 25 litre drums or in 3.6 litre sealed plastic containers which bear the BBA identification mark incorporating the number of this Certificate.

2.2 Both the concentrate and diluted fluid are alkaline, are classified as 'Corrosive' under the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP3) and carry the appropriate health warning. Precautions are necessary during handling, dilution and injection, to

avoid contact from spilling or leakage. The normal precautions (use of goggles or visor, gloves, protective clothing and the prompt removal of contaminated clothing) should be observed with particular rigour during the handling of the concentrate. Should the fluid come into contact with the skin it must be washed off promptly. If it comes into contact with the eyes they should be flushed with cold water for 10 minutes, and medical attention sought.

2.3 To protect third parties from contact with the alkaline fluid, the working area is coned off from the public highway during treatment (for example, when terraced houses abutting the pavement are treated).

Design Data

3 General

The Wykamol Siliconate K Damp-proofing System has no effect on expanded polystyrene or bitumen.

4 Odour



The diluted fluid is odourless and gives off no harmful vapours.

5 Durability



Silicone surface water repellents for masonry are known to be effective for 12 years. These products are applied to the surface of a wall, but a dpc application saturates the wall in depth. Excluding use in new repair work (where highly alkaline mortars are present), the process is expected to remain effective for at least 20 years.

Installation

6 Precautions

Wykamol Siliconate K Damp-proofing System concentrate and diluted fluid are water-based and present no flammability hazards.

7 Procedure

Mortar — low pressure

7.1 10 mm or 16 mm holes are drilled to predetermined depths along the selected mortar course at spacings of 150 mm to 170 mm along the selected course, avoiding the perpend (percussion drills are not used on half-brick walls). The holes are drilled either horizontally into the mortar joints or angled downwards at 30° to 40°, terminating in a mortar bed joint at the level of the required damp-proof course. Procedures for different types of wall are:

- (1) Walls 115 mm thick — injected from one side only.
- (2) Solid walls 230 mm thick — normally injected from both sides. If access is restricted they may be drilled progressively (using a sequence of drilling, injecting, re-drilling to deepen the hole by 100 mm to 120 mm and reinjecting).
- (3) Solid walls of greater thickness — treated from one or both sides. In each case the progressive injection technique is used.
- (4) Cavity walls — normally treated from both sides, but if the thickness of the individual leaves permits, the progressive injection technique is used from one side.

7.2 The siliconate solution is injected at nominal pressure of 300 kPa. Nozzles fitted with pressure-tight seals are inserted into the drilled holes and injection is continued until the required volume has been injected. Normally the treatment of brickwork 230 mm thick will require 2 to 4 litres of fluid per metre run. The nozzles are removed and subsequent holes are similarly injected.

Stone walls

7.3 In solid or cavity walls of conventional construction in blockwork or stone the drilling and injection procedure is adjusted to accommodate

variations in the density, porosity and structure, but in each case the procedure chosen ensures a continuous unbroken treatment along the length of the wall.

Rubble-filled stone walls

7.4 In stone walls with a rubble-filled cavity, the two skins are first injected using the techniques appropriate to the substrate, then:

- (1) In walls 450 mm thick — holes in one leaf are re-drilled to the centre of the wall (into the rubble infill) and injected singly until fluid exudes from mortar joints below the injection level.
- (2) In walls of between 450 mm and 900 mm thick — holes in both walls are re-drilled to the centre of the wall and injected singly until fluid exudes from the mortar joints below the injection level.

7.5 Normally the treatment of the rubble core of a 450 mm thick wall will require 4 to 5 litres of fluid per metre run (increased pro rata for thicker walls).

Flint walls

7.6 In flint walls, holes are drilled into the mortar joint, either horizontally or at an angle, to the mid-point of the wall, at 75 mm intervals. Injection is carried out at 300 kPa until the required volume has been injected.

Technical Investigations

The following is a summary of the technical investigations carried out on the Wykamol Siliconate K Damp-Proofing System.

8 Investigations

A re-examination was made of the existing data and investigations held on the product. The original conclusions remain valid.

Bibliography

BS 6576 : 1985 *Code of practice for installation of chemical damp-proof courses*

BWPDA DP4 *Methods of analysis for damp-proof fluids*



On behalf of the British Board of Agrément

Date of issue: 4th December 2002


Chief Executive