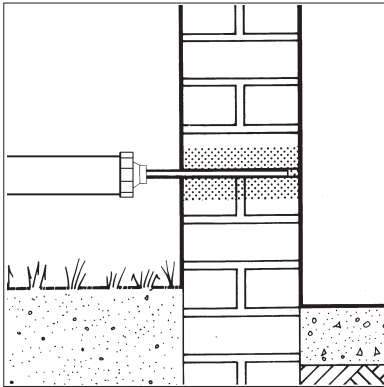


**TRI-GEL DPC SYSTEM****Product**

• THIS DETAIL SHEET RELATES TO THE TRI-GEL DPC SYSTEM, AN AQUEOUS SILICONATE GEL FOR INSERTION INTO MORTAR COURSES TO FORM A REMEDIAL DAMP-PROOF COURSE IN EXISTING WALLS.

• Installation of Tri-Gel is carried out in accordance with BS 6576 : 1985 and the British Wood Preserving and Damp-proofing Association (BWVPA) Code of Practice COP3 : 1997.

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 The Tri-Gel DPC System is an aqueous gel of potassium methyl silicate, manufactured by a controlled batch blending process. Quality control is exercised over raw materials, during production and on the final product.

1.2 The installation process involves delivering a set amount of Tri-Gel via the application gun or compression pump into a series of holes drilled into the mortar course and the subsequent replastering.

1.3 Trimix 1 Replastering Additive, (the subject of Detail Sheet 5) is incorporated into a sand/cement mortar and used to plug injection holes.

**2 Delivery and site handling**

2.1 Tri-Gel is supplied in 1 litre cartridges or 5 litre tubs, which should be stored in a cool, dry place and protected from frost.

2.2 The product is alkaline and classified as 'Corrosive' under the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP3). 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 product. Should it 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 at least 15 minutes, and medical attention sought.

2.3 To protect third parties from contact with the product, the working area is tightly screened off from the public highway during treatment (for example, when treating terraced houses abutting the pavement).

**Design Data****3 General**

The product has no effect on expanded polystyrene or bitumen.

**4 Odour**

The product is odourless and does not give off 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 Procedure

6.1 Holes 12 mm in diameter are drilled horizontally at the perpend joint, mortar bed junction at 100 mm to 120 mm centres into the selected mortar course.

6.2 Solid walls should be drilled to within 20 mm to 40 mm of the far face of the wall being treated. Treatment can be carried out from one or both sides of the wall as appropriate and convenient.

6.3 Cavity walls will normally be treated from both sides. Advice should be sought from the Certificate holder regarding treatment from one side only.

6.4 When dry substrates are to be treated, the drilled holes should be thoroughly flushed with clean water, and allowed to soak in before applying the Tri-Gel in the normal manner.

6.5 The injection process consists of:

- (1) loading the cartridge with its reusable nozzle into a skeleton gun and placing the nozzle end two-thirds of the way into the injection hole. The trigger is squeezed and the nozzle withdrawn whilst backfilling the hole to within 10 mm to 20 mm of the front face of the wall. The holes are capped with a plug of sand/cement mortar incorporating Trimix 1 Replastering Additive (see Detail Sheet 5) or with dpc wall plugs. Spillages should be washed away with water before they dry.
- (2) the tub of Tri-Gel is thoroughly stirred before the contents are transferred to the compression pump using a large bore funnel, as necessary. The pump is pressurised, the nozzle inserted into the injection hole and the procedure detailed in section 6.5 (1) followed.

6.6 Typical usage rates are detailed in Table 1.

Table 1 Usage rates

| Wall thickness | Litres/5 m | Litres/10 m |
|----------------|------------|-------------|
| 115 mm (4½")   | 0.5        | 1.0         |
| 230 mm (9")    | 1.0        | 2.0         |
| 345 mm (13½")  | 1.5        | 3.0         |
| 460 mm (18")   | 2.0        | 4.0         |

## Technical Investigations

The following is a summary of the technical investigations carried out on the Tri-Gel DPC System.

### 7 Tests

Tests were carried out by the BBA to determine:

- effectiveness against rising damp, generally to MOAT No 39 : 1988, Method 4.3.1.4
- substantivity of injection treatment to MOAT No 39 : 1988, Method 4.3.2
- total solids contents to BWPDA Damp-proofing 4, Method 2.1
- specific gravity to BS 3900-A19 : 1998.

## Bibliography

BS 3900-A19 : 1998 *Methods of test for paints — Determination of density by the pyknometer method*

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

MOAT No 39 : 1988 *The assessment of damp-proof course systems for existing buildings*

BWPDA DP4 *Method of analysis for damp-course fluids*

BWPDA Code of Practice COP3 : 1997 *Code of Practice for Installation of Chemical Damp-proof Courses*



On behalf of the British Board of Agrément

Date of issue: 21st March 2005

  
Chief Executive