

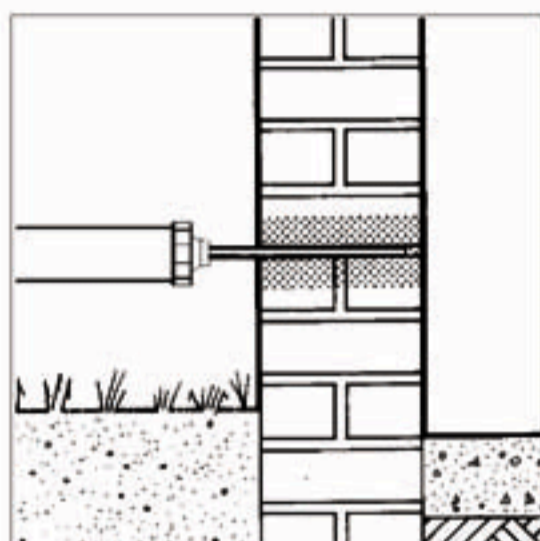


Safeguard Chemicals Ltd

Certificate No 97/3363

DETAIL SHEET 5

DRYZONE



• THIS DETAIL SHEET RELATES TO DRYZONE, A CONCENTRATED SILANE-SILOXANE CREAM FOR INSERTION INTO MORTAR COURSES TO FORM A REMEDIAL DAMP-PROOF COURSE IN EXISTING WALLS.

• Installation of Dryzone is carried out 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.

1 Description

1.1 Dryzone is a concentrated viscous silane/siloxane emulsion cream, and is manufactured by a controlled batch-blending process. Regular quality control checks are carried out on the final product.

1.2 The Dryzone cream is packed in a foil cartridge, for insertion into the Safeguard Dryzone applicator gun.

1.3 The process involves delivering a set amount of Safeguard Dryzone cream via the applicator gun into a series of holes drilled into the mortar course and the subsequent replastering.

2 Delivery and site handling

2.1 Dryzone is supplied in 600 ml foil cartridges.

2.2 The product should be stored in a cool, dry place and protected from frost.

2.3 The product is classified as Irritant under the Chemicals (Hazard Information and Packaging for Supply) Regulations 1994.

3 General

3.1 Dryzone is satisfactory for use in accordance with BS 6576 : 1985, in existing:

- (a) solid walls of brickwork, blockwork or masonry, up to 600 mm thick
- (b) walls of conventional cavity construction, or
- (c) walls of rubble-filled construction


to provide a barrier against rising damp where there is no damp-proof course or where the existing damp-proof course has failed.

3.2 Replastering is necessary to retain salts in the body of the wall to prevent damage to subsequent redecoration. Safeguard Chemicals' Replastering Specification (see Detail Sheet 4) is satisfactory for this purpose.

4 Drying time

After treatment, a 230 mm solid brick wall previously affected by rising damp should normally dry out in 6 to 12 months, provided normal heating is used during the winter months. A thicker wall may take longer. Where hygroscopic salts are present, the wall may not dry out completely but the replastering system will prevent damage to internal decorations.

5 Durability

 Silicone masonry 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. The Dryzone process is expected to remain effective for at least 20 years.

6 Procedure

6.1 Holes 12 mm in diameter are drilled at the base of perpend and at intervals of 120 mm or less along the selected mortar course, to depths for various wall thicknesses as shown in Table 1.

6.2 Solid walls of brick or stone should be drilled/treated from one side only in a single operation. The selected mortar course is drilled at the prescribed centres to the appropriate depth, (see Table 1). Where this is not possible advice should be sought from the Certificate holder.

Table 1 Depth of hole required

Wall thickness ⁽¹⁾	4½"	9"	13½"	18"
	(115 mm)	(230 mm)	(345 mm)	(460 mm)
Depth of hole	100 mm	190 mm	310 mm	430 mm

(1) For thicker walls the depth of hole should be to within 40 mm of the opposite face.

6.3 For preference, cavity walls should be treated from both sides but, if the thickness of the individual leaves permits, may be treated from one side. When undertaking treatment from one side, the drill must pass completely through the selected mortar course, then across the cavity and to a depth of 100 mm in the other leaf. The cavity must be clear before treatment.

6.4 If possible, in random stone and rubble infill walls, the mortar course should be followed at the appropriate selected level, or drillings may be made into porous stone. Where the variable thickness of stone walls and the possibility of rubble infill dropping and blocking injection holes causes difficulties, it may be necessary to drill to 50% of the wall thickness, from both sides at a corresponding height. Alternatively, additional holes should be drilled adjacent to obstructed holes to ensure that an adequate volume of Dryzone is introduced to the wall. Drill holes can be capped with Dryzone Injection Plugs.

6.5 The injection process consists of loading the Dryzone cartridge into the applicator gun and inserting the gun delivery tube into the full length of the predrilled hole. Each hole is backfilled fully with Dryzone to within 10 mm of the surface by slowly squeezing the gun trigger. When treating cavity walls from one side it is essential that the holes in each leaf are filled.

The following is a summary of the technical investigations carried out on Dryzone.

7 Tests

Tests were carried out by the BBA to determine:
effectiveness against rising damp to MOAT No 39 : 1988, Method 4.3.1.4⁽¹⁾
effectiveness against rising damp to a BBA/Safeguard Chemicals Limited method

total and active solids content to a BBA test specification

specific gravity to BS 3900-A19 : 1998

flashpoint to BS 3900-A9 : 1986.

(1) Method 4.3.1.4 test procedure : the small scale pillar test was set up as shown in Figure 7 of MOAT No 39 with the exception that the water level was raised above the untreated mortar line. The test samples were subjected to the following procedure:

Day	Test procedure
0	base separated from pillar, treated and allowed to cure
2	Base replaced under pillar
21	Dwell period introduced — water removed from trough
28	Dwell period ended. Trough refilled with water

8 Investigations

8.1 The manufacturing process was examined, and the raw material specifications, formulation and quality control procedures were established.

8.2 Existing data on the effectiveness of silicone-based products as a chemical dpc were examined.

8.3 Existing data on the effectiveness and durability of similar materials used as external surface water repellents were examined and an assessment was made of the durability of the injection material.

8.4 A visit was made to a site in progress to assess the practicability of installation.

BS 3900-A9 : 1986 *Methods of test for paints — Tests on liquid paints — Determination of flashpoint (closed cup equilibrium method)*

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



On behalf of the British Board of Agrément

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Chief Executive