



## Construction Chemicals (UK) Ltd

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**Agrément  
Certificate  
No 06/4331**

Designated by Government  
to issue  
European Technical  
Approvals

## CONSTRUCTION CHEMICALS INJECTION CREAM

Couche d'étanchéité pour murs par injection chimique  
Feuchtigkeitssperre im Wandbereich

## Product




- THIS CERTIFICATE RELATES TO CONSTRUCTION CHEMICALS INJECTION CREAM, A PRODUCT FOR FORMING A DAMP-PROOF COURSE IN EXISTING WALLS.

- Installation is carried out in accordance with BS 6576 : 2005 and the British Wood Preserving and Damp-proofing Association (BWPDA) Code of Practice COP3 : 1997.

- Replastering is necessary to prevent damage to subsequent redecoration. To avoid split responsibility, this should be conducted by the installer or his approved agent.

## Regulations

### 1 The Building Regulations 2000 (as amended) (England and Wales)

 The Secretary of State has agreed with the British Board of Agrément the aspects of performance to be used by the BBA in assessing the compliance of remedial damp-proofing (walls) with the Building Regulations. In the opinion of the BBA, the use of Construction Chemicals Injection Cream, in an existing building is not subject to these Regulations, but action to satisfy Requirement C2(a) and Regulation 7 may be necessary for a 'Material change of use' as defined in Regulation 5(a).

Requirement: C2(a)

Resistance to moisture

Comment:

The product satisfies the BBA rising damp test and adequately resist the passage of moisture.

Requirement: Regulation 7

Materials and workmanship

Comment:

The product is acceptable. See section 9 of this Certificate.

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## 2 The Building (Scotland) Regulations 2004



In the opinion of the BBA, the use of Construction Chemicals Injection Cream, in an existing building is not controlled by these Regulations, but action to satisfy the Regulation and related Mandatory Standards below may be necessary for a 'Conversion' as defined in Regulation 4 of these Regulations.

Regulation:	8	Fitness and durability of materials and workmanship
Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The product can contribute to a construction satisfying this Regulation. See section 9 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards — construction
Standard:	3.3	Flooding and ground water
Standard:	3.4	Moisture from the ground
Standard:	3.10	Precipitation
Comment:		The product satisfies the BBA rising damp test and adequately resist the passage of moisture and can contribute to satisfying these Standards with reference to clauses 3.3.1 <sup>(1)(2)</sup> , 3.4.1 <sup>(1)(2)</sup> , 3.4.5 <sup>(1)(2)</sup> and 3.10.1 <sup>(1)(2)</sup> .
Regulation:	12	Building standards — conversions
Comment:		All comments given for this product under Regulation 9, also apply to this Regulation with reference to clause 0.12.1 <sup>(1)(2)</sup> and Schedule 6 <sup>(1)(2)</sup> . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).

## 3 The Building Regulations (Northern Ireland) 2000



In the opinion of the BBA, the use of Construction Chemicals Injection Cream, in an existing building is not controlled by these Regulations, but action to satisfy Regulations B2 and C4 may be necessary for a 'Material change of use' under Regulation A9.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The product is acceptable. The product does not release solvent for an unreasonable period. See section 9 of this Certificate.
Regulation:	C4	Resistance to ground moisture and weather
Comment:		The product satisfies the BBA rising damp test and adequately resist the passage of moisture.

## 4 Construction (Design and Management) Regulations 1994 (as amended) Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)

Information in this Certificate may assist the client, planning supervisor, designer and contractors to address their obligations under these Regulations.

See sections: *6 Delivery and site handling (6.3).*

## Technical Specification

### 5 Description

5.1 Construction Chemicals Injection Cream is a ready-to-use silane/siloxane emulsion cream, and is manufactured by a controlled, batch-blending process.

5.2 The product is packed in plastic buckets, for insertion by a low-pressure displacement pump, or cartridge gun.

5.3 The process involves delivering a set amount of the product into a series of holes

drilled into the mortar course and the subsequent replastering.

5.4 Quality control is exercised over raw materials, during production and on the final product.

### 6 Delivery and site handling

6.1 The product is supplied in 5 litre buckets and 400 ml and 1 litre cartridges.

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

6.3 The product is not classified under The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP3).

## Design Data

### 7 General

7.1 Construction Chemicals Injection Cream is satisfactory for use to provide a barrier against rising damp where there is no damp-proof course or where the existing damp-proof course has failed.

7.2 The product is for use in accordance with BS 6576 : 2005 in existing:

- solid walls of brickwork, blockwork or masonry, up to 600 mm thick
- walls of conventional cavity construction, or
- walls of rubble-filled construction.

7.3 Replastering is necessary to retain salts in the body of the wall and prevent damage to subsequent redecoration. A renovating plaster covered by a BBA Certificate should be used for this purpose.

### 8 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.

### 9 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 Construction Chemicals Injection Cream process is expected to remain effective for at least 20 years.

## Installation

### 10 General

Installation of the Construction Chemicals Injection Cream should be carried out in accordance with BS 6576 : 2005 and the British Wood Preserving and Damp-proofing Association (BWPDA) Code of Practice COP3 : 1997.

### 11 Action with respect to flooring timbers

11.1 Where a suspended timber floor is independently supported on sleeper walls, with an effective damp-proof course and showing no signs of dampness, these need not be treated (see Figure 1).

11.2 Where a suspended timber floor is supported on joists and/or a wall plate bearing on, or embedded in, the wall, there is a possibility of decay, particularly where concealed timbers are in contact with the damp wall. The condition of these timbers should be ascertained and remedial action taken if necessary (see Figure 2).

Figure 1 Suspended timber floor on sleeper wall

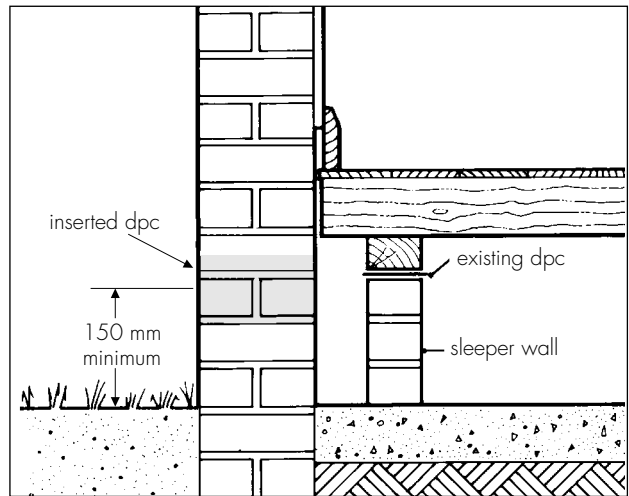
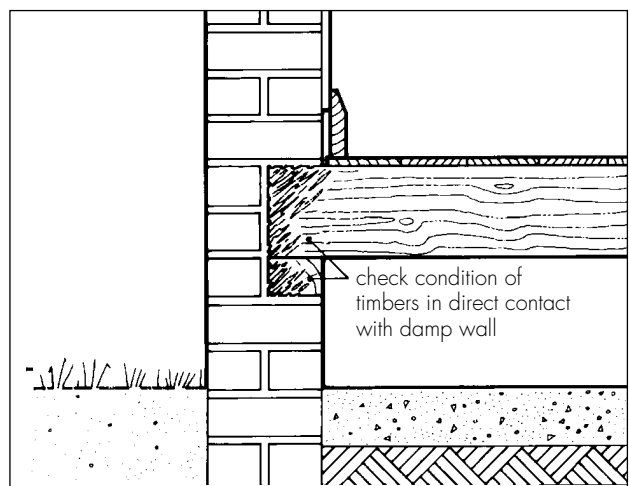
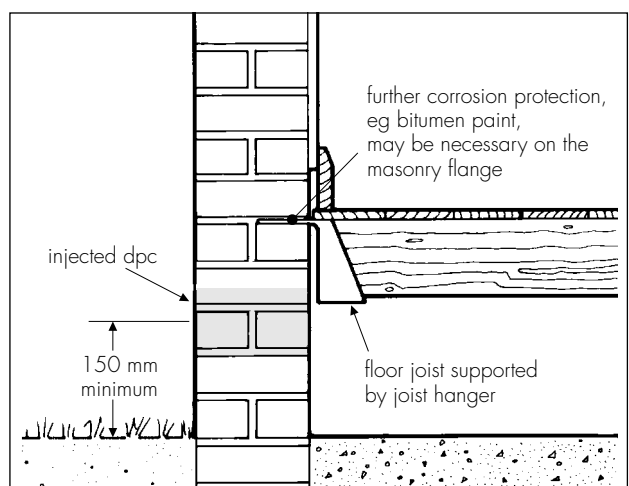


Figure 2 Check embedded timber for decay



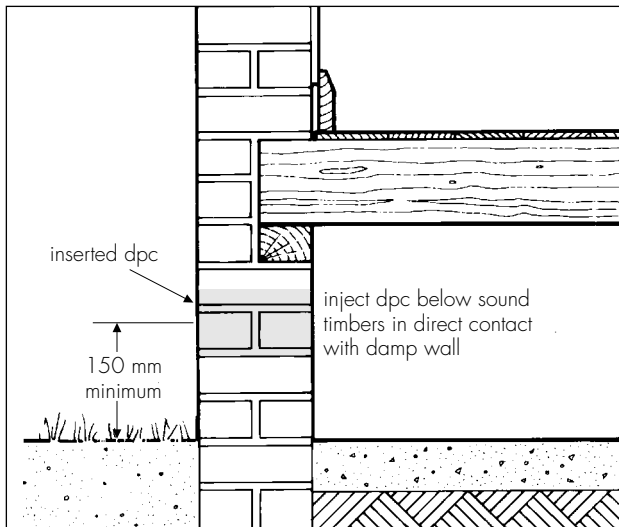
11.3 If damage is limited to the joist ends, the floors may be re-formed, using sleeper walls or joist-hangers, to isolate the timbers from the damp wall (see Figure 3).

Figure 3 Isolation of timber joists from damp wall



11.4 If the timbers are sound, the existing floor may be retained provided the injected damp-proof course is formed below the timber joists and/or wall plate (see Figure 4).

Figure 4 Inject dpc below wall plate



## 12 Preparation

12.1 The course to be injected is chosen so that the position of the horizontal damp-proof course complies, as far as is practicable, with the recommendations of BS 6576 : 2005.

12.2 Internal walls on solid floors are treated as close to the floor as possible.

12.3 Complementary vertical damp-proof courses are positioned, where necessary, to isolate treated walls from the effects of rising damp in adjoining walls or to maintain continuity between horizontal damp-proof courses at different levels.

12.4 Internal plastering affected by hygroscopic salts is removed from the area to be treated to a height of 460 mm above the maximum level of the rising damp. Internal skirtings and flooring are also removed, as necessary, to expose the area for treatment. Externally, the proposed damp-proof course line is exposed, where necessary, by removing any facing material.

## 13 Procedure

13.1 Untreated walls are isolated by the injection of a vertical dpc throughout the thickness of the wall.

13.2 Particular care is taken to avoid bridging the damp-proof course, either internally or externally. Where external rendering has been removed, it is restored, ending in a bell casting above the injected damp-proof course.

13.3 The original survey may have identified other possible causes of dampness, and measures to rectify these are taken as necessary.

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

Table 1 Depth of hole required/application rate

	Wall thickness <sup>(1)</sup>			
	4½" (115 mm)	9" (230 mm)	13½" (345 mm)	18" (460 mm)
Drill hole depth (mm)	100	210	320	430
Application rate per 10 m wall length (litres) <sup>(2)</sup>	0.9	1.9	2.9	3.9

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

(2) Application rates for rubble, porous or highly-absorbent masonry may vary.

13.5 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.

13.6 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.

13.7 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 the product is introduced to the wall.

13.8 The injection process consists of loading the product into the applicator gun or low-pressure pump and inserting the gun delivery tube into the full length of the predrilled hole. Each hole is backfilled fully with the product 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.

13.9 Holes in the external wall surfaces are plugged with sand/cement mortar coloured to match the existing wall surface or with plastic plugs.

13.10 The treated walls are left for a period of at least 14 days to allow initial drying out. Internal plastering is applied using a renovating plaster covered by a BBA Certificate.

## Technical Investigations

The following is a summary of the technical investigations carried out on Construction Chemicals Injection Cream.

### 14 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
- total and active solids content to a BWPDA Damp-proofing DP4, Method 2.1
- specific gravity to BS 3900-A19 : 1998
- substantivity to MOAT No 39, Method 4.3.2
- storage stability.

### 15 Investigations

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

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

15.3 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.

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

15.5 A user-survey of owners of treated sites was carried out to assess the product's performance in use.

15.6 Assessments were made of the presence of odour.

## Bibliography

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

BS 6576 : 2005 *Code of practice for diagnosis of rising damp in walls of buildings and installation of chemical damp-proof courses*

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

BWPDA DP4 *Methods of analysis for Damp-proof Course Fluids*

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

## Conditions of Certification

### 16 Conditions

16.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is granted only to the company, firm or person named on the front page — no other company, firm or person may hold or claim any entitlement to this Certificate
- is valid only within the UK
- has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English law.

16.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or Regulation of the European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, are references to such publication in the form in which it was current at the date of this Certificate.

16.3 This Certificate will remain valid for an unlimited period provided that the product/system and the manufacture and/or fabrication including all related and relevant processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

16.4 In granting this Certificate, the BBA is not responsible for:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- individual installations of the product or system, including the nature, design, methods and workmanship of or related to the installation
- the actual works in which the product/system is installed, used and maintained, including the nature, design, methods and workmanship of such works.

16.5 Any information relating to the manufacture, supply, installation, use and maintenance of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used and maintained. It does not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate or in the future; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the manufacture, supply, installation, use and maintenance of this product/system.



In the opinion of the British Board of Agrément, Construction Chemicals Injection Cream is fit for its intended use provided it is installed, used and maintained as set out in this Certificate. Certificate No 06/4331 is accordingly awarded to Construction Chemicals (UK) Ltd.

On behalf of the British Board of Agrément

Date of issue: 19th September 2006

Chief Executive



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scope, tel: Hotline 01923 665400,  
or check the BBA website.