

1. COURSE OF ACTION TO INSTALL THE TECH-DRY DAMP PROOF COURSE WHICH PERMANENTLY STOPS RISING DAMP

Rising Damp in brick / masonry walls is moisture from the ground that migrates up past an original Damp Proof Course (DPC) by a force known as Capillary Action. The moisture drawn up, brings with it contaminants such as salts and minerals from the ground, that migrate to the surface. This then starts the destructive cyclical process of drying and absorbing moisture as it reacts with atmospheric conditions, and starts to deteriorate building materials.

Rising Damp may have several causes - the absence or poor condition of an existing DPC can often be a major factor, so too can bridging from garden beds, concrete slabs, driveways and paths etc.. A correct diagnosis of a particular damp issue is integral to a successful outcome.

Often, the only sure method to stop rising damp, is to install a new DPC to block moisture migrating up a masonry wall.

(a) PROPOSED POSITION OF THE TECH-DRY DPC:

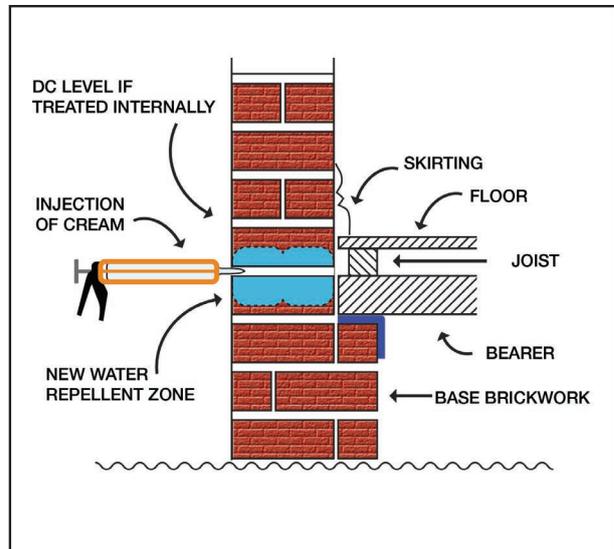
Where possible, TECH-DRY reinstates the new DPC

in the existing Damp Course, or in the first mortar

course above floor level.

(b) DPC cream application

The Tech-Dry DPC cream is an environmentally friendly and safe Damp Course application system which is Australian made and owned - especially designed for Australian conditions. The cream is a water based non drip thixotropic silane/siloxane which has been specifically formulated to install a durable siloxane polymer damp course into brickwork or other masonry walls to permanently stop rising damp.





2. Tech-Dry DPC Cream application system

(a) The successful installation of a new DPC must ensure complete horizontal coverage of a wall with a water repellent product, whether that be a physical barrier or in the form of a silicone impregnation.

The DPC cream is designed to be installed into the mortar bed of masonry walls. Once the DPC cream is injected into the mortar, the thixotropic cream can stay in close contact with the mortar bed and slowly release silane/siloxane into the capillaries of both the mortar bed and masonry wall until the cream is completely absorbed. The silane/siloxane reacts with mortar and bricks forming a permanent polysiloxane damp-course within the treated area to a full depth of the wall and an approximate height of one brick.

(b) The system - step by step:

- Tech-Dry reinstates the new DPC at the level of the existing Damp Course where possible. For internal walls with floors still down, skirting boards are removed, and the installation occurs into the first mortar course above floor level. In most cases, the new DPC can be installed from one side - although in certain scenarios, the installation may require treatment from both sides. *(Please see terms and conditions in relation to removing and reinstating skirting boards).*
- Holes are drilled predominantly into the mortar course at intervals of approximately 80mm apart and at a depth of approx 10-15mm short of the wall's thickness.
- Each hole is thoroughly cleaned out with a vacuum to facilitate clean absorption of the DPC cream.
- A sufficient volume of the DPC cream is injected into each hole to ensure full and comprehensive coverage of the wall. The cream may take between 6 & 12 hours to be absorbed by the brick - this is dependent on the porosity of the masonry product being treated, and the atmospheric conditions. Where necessary, a second injection of cream is undertaken.
- A follow up inspection, and/or a possible top up injection of cream may be required -depending on the type of masonry wall being treated.
- After a successful DPC has been installed, a drying period is required before any follow up work is to take place i.e. re-plastering, re-pointing etc.. Drying times vary due to the severity of the damp, thickness of walls and the type of brick/masonry. A more accurate assessment of the required drying time is made on the day of the installation.
- Should re-plastering be required, Tech-Dry would discuss with the client the logistics of completing this process. *(Please see the specifications on the re-plastering for the process involved).*

Please note: All Tech-Dry Damp Course installations are carried out by Tech-Dry employees. No sub-contractors are used for our DPC installations. This ensures the highest level of workmanship and maintains quality control.

A full 25 year Guarantee is supplied with all DPC installations unless stated otherwise.

For the experienced handyman, we also have the Tech-Dry DPC Cream available in DIY kits.

3. PROGRAM FOR TREATMENT OF A WALL AFTER THE INSTALLATION OF A NEW DPC

(a) DRYING OUT OF A WALL:

After a successful DPC installation, a minimum drying out period of 4-6 weeks is recommended before commencing the next stage of cosmetic rectifications.

During the drying period, the salts from the rising damp may begin to migrate to the surface of the wall. It is recommended that the client wipes off any visible salts in this time, to help reduce the surface salt.

The drying period can vary considerably, due to the severity of the dampness, thickness of walls, the type of brick or masonry product and types of cosmetic finishes.

Please note: For walls affected by rising damp, most moisture meters / detectors do not give an accurate reading to indicate that a wall is dry - they will always read wet due to the residual salt. Moisture meters are a useful tool for preliminary assessments and for indicating where the salt has risen to.

(b) FOR EXTERNAL BRICKWORK, BRICKS EXPOSED, PAINTED WALLS, LIGHT RENDERS i.e. BAGGED OR ACRYLIC COATED:

Even after a successful DPC has been installed, the wall above the damp course will be left with residual salt. This salt will continue to react with atmospheric conditions and may continue to attack new and existing cosmetic features stated above. From this salt, a wall can still give the appearance that it is damp when there is high atmospheric moisture or dry on a warm day with low humidity - thus continuing the cyclical destructive nature of salt attack.

In more severe cases, Tech-Dry can discuss with the client other options in reducing the residual salt, such as sacrificial renders, applying a poultice or possible brick replacement.

Please refer to the articles "Rising Damp and its Treatment" published by The Heritage Council of New South Wales in 1982 and "Conservation and Restoration of Buildings preservation of masonry walls" published by the Australian Council of National Trusts in 1982.

(c) RE-RENDERING AND RE-PLASTERING:

All plaster and render contaminated with salts from the past rising damp will have to be removed back to the bare bricks to a height of 350mm above the last visible signs of dampness. This means the removal of plaster and render above where the damp-course installation was carried out. If the old plaster and render is not removed, surface decorations WILL NOT BE SUCCESSFUL and paintwork will continue to peel off the salt contaminated surface.

Please see Tech-Dry's specifications on the next page



4. SPECIFICATIONS FOR RE-PLASTERING

(a) Remove the existing plaster and render to reveal bare bricks to a height of 350mm above the last visible signs of damp - or as detected by a moisture meter. Prevent the contaminated render from falling down between the wall and the floor.

The client needs to create clear access for the removal of render and re-plastering.

Removing render often creates extreme amounts of dust particles - Tech-Dry helps protect floors & coverings in this process. See Terms and Conditions.

(b) Remove any salts present on any exposed brickwork or masonry wall. Wipe exposed bricks with a damp sponge at two different times to remove this residual salt, and further brush off once dried. Any severely contaminated bricks may need to be replaced before re-plastering. Prevent these salts from falling between the wall and the floor.

(c) Apply a cement render finish approximately 10-15mm thick (1 part cement 3-4 parts sand) containing a stearate based waterproofing admixture. Suitable admixtures are "Tech-Dry Salt Retarder", "Sealwall" and "Lanko 322". **The inclusion of this admixture inhibits the migration of residual salts through the new render.**

(d) Once the render base coat has set - finish with a generic plaster coat.

PLEASE NOTE:

i) DO NOT use plasterboard, as this material has little to no resistance to residual salts in the walls - and if used, it will be at the client's risk.

ii) Should Tech-Dry be undertaking the necessary stage of re-plastering, only experienced qualified hard plasterers are employed to carry out this process.

iii) Fine cracks may appear in the new plaster due to the nature of applying new products to a damp affected wall. This is usually sealed by a simple undercoat. However, if these cracks exceed 2mm, please contact Tech-Dry for further advice.

iv) When Tech-Dry undertakes the re-plastering for textured or acrylic finishes, every effort is made to create as close a match as possible between the existing finish to the new. However, the match will not be exact and the join between the existing and the new finishes may be evident. For acrylic renders, a professional colour match is made, though both the colour and the texture will not exactly match the original.

v) The Tech-Dry Guarantee for re-plastering only applies when Tech-Dry has undertaken this work. It does not apply if a client has employed a third party to complete this stage.

IF YOU HAVE ANY DOUBTS AS TO WHAT TO DO IN RESPECT TO RE-PLASTERING, PLEASE DO NOT HESITATE TO CONTACT US.



TERMS AND CONDITIONS FOR THE INSTALLATION OF A

TECH-DRY DAMP PROOF COURSE AND/OR RE-PLASTERING

1. This quotation is for Damp Coursing and/or re-plastering. It does not include painting, re-skirting or any cosmetic finishes unless specified in writing.
2. Where timber skirting boards must be removed to install the TECH-DRY damp course, no responsibility is accepted for breakage or splintering of such skirting boards. All possible care is exercised, but where skirtings are old and/or rotten, removal intact may be impossible. Skirting boards are to be re-instated by others unless stated in writing.
3. The TECH-DRY damp course permanently stops the capillary rise of moisture up the wall. However, it DOES NOT dry out the wall above the new damp course. It is essential that sufficient time is allowed for the treated wall above the new damp course to dry before any re-plastering and/or decoration is attempted. All salt affected render and plaster MUST BE replaced. (Refer to "PROGRAM FOR TREATMENT OF WALL AFTER INSTALLATION OF TECH-DRY DAMP COURSE" in this document.)
4. In the case where electrical wiring, plumbing fixtures or telephone wires are necessary to be disconnected or removed in order that the work be carried out, this must be done by a qualified contractor according to the regulations of the appropriate authority. Likewise, for the necessary reinstatement - this is to be completed by other relevant services. This cost is NOT included in the quote, and is at the client's expense.
5. No responsibility is accepted for damage to electrical wiring, pipes or telephone wires hidden in walls, unseen to the eye. Repairs by an appropriate contractor are at the client's expense. If the location is known by the client, it is their responsibility to notify TECH-DRY of the presence of wires and/or pipes to avoid any subsequent costs. Again, every care is exercised.
6. No responsibility is accepted for damage to timber floors, floor coverings, tiles, concrete surfaces or plaster during work – this includes any external ground coverings, pathways, paving etc, and in particular to staining. However, every care is exercised. The same conditions apply on the neighbour's side of party wall - the client must notify TECH-DRY of the location of any of the above mentioned.
7. In situations where party walls are affected, the client must notify the other party as to the scope and extent of the work to be carried out. All terms and conditions apply to both sides of the party wall. It is the client's responsibility to collect funds from the other parties involved.
8. In the case of TECH-DRY undertaking the re-plastering – Tech-Dry reserves the right to stop the job at any point to re-quote the re-plastering work, if it is found that conditions for re-plastering have drastically changed. Any additional costs and/or time would be disclosed to the client, and subsequent agreement from both parties would be required before work is resumed.
9. Due to the nature of removing render & re-plastering, severe airborne dust is created. Tech-Dry helps protect floors & coverings, though the client should remove any valuables. Once finished, a final clean-up is carried out - but inevitably there will be some residual dust remaining to be cleaned by others.
10. This quote is valid for 90 days and may be reviewed after this time.
11. Upon completion of work, TECH-DRY will forward an Invoice, for which payment in full is due immediately (unless an alternative time frame has been agreed to). Failure to do so may compromise the Guarantee.

In "Rising Damp and its Treatment" Technical Information Sheet 1 published by The Heritage Council of New South Wales (Technical Advisory Group on Materials Conservation) in 1982 the following excerpt discusses the problem:

Even if the insertion of a new damp proof course is effective in preventing upward movement of moisture, the presence of hygroscopic salts close to the wall surface can result in moisture being absorbed directly from the atmosphere. Changes in temperature and humidity can result in the salts passing through cycles of solution and crystallisation. The dampness may then persist and fretting of the masonry may also continue.

It may then be necessary to reduce the salt content by cyclic treatments of wetting and drying. The wall can be either saturated with fine water sprays and allowed to dry before the wetting is repeated, or it can be wetted and then covered with a moist poultice of absorbent clay which draws the salts into the clay as it dries out.

It may be necessary to repeat these treatments a number of times before an effective reduction in the salt content is obtained. It may not be feasible to use these types of treatment in residential buildings that are occupied.

Continued fretting of exposed brick or stone-work caused by salt damp attack has sometimes been prevented by covering the damaged wall with a sacrificial render coat. The render must be sufficiently porous to allow the walls to breathe. Evaporation of moisture results in salts being deposited in the render rather than in the masonry. The render will slowly deteriorate and

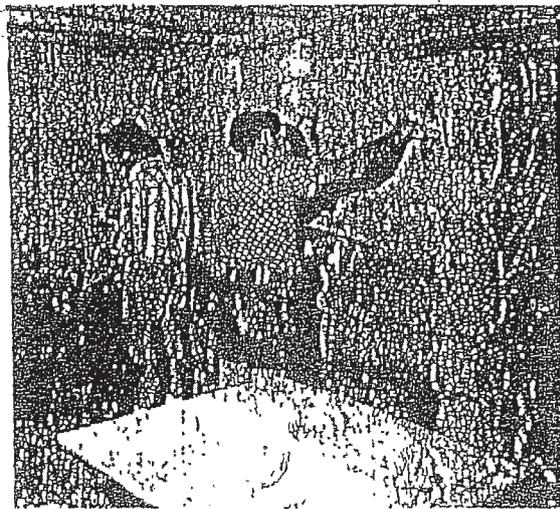
will eventually have to be replaced but the masonry will be protected from attack.

In "Conservation and Restoration of Buildings - preservation of masonry walls" published by the Australian Council of National Trusts in 1982 the following excerpt refers to the problem:

Once the moisture is cut off, the wall above the damp course will begin to dry out. If the wall is salty this will mean that the masonry will start to break down as the salts are brought to the surface unless precautions are taken. A sacrificial coat of plaster is probably best applied to both faces of the wall before the insertion of the damp proof course. The salts are brought to the surface of the plaster and it breaks down. Eventually the plaster can be removed. Such plasters should be a weak mixture of lime and sand, say 1 to 4 or even weaker.

One of the techniques used in South Australia is that of removing the salt affected masonry during the process of building in a damp proof course, washing it thoroughly in clean water and then building it back into the wall.

Whatever happens to the masonry wall, plaster affected by salt damp should be removed, usually to a height of 150mm above the height the damp has reached. When the wall is replastered there is always the risk it will act as another sacrificial plaster and break down in some areas but this cannot be avoided if you wish to make the building habitable quickly.



Plitting sacrificial plaster to salt contaminated walls will draw off the salt. (Cellar walls, Lyndhurst, Sydney.)

To summarise, it is not possible to convert an old wall which has exhibited rising damp for many years to a perfect, as new, salt-free wall without commitment from the owner of the wall to removing the salt and even then the wall will contain residual hygroscopic salt which will attempt to emerge to the surface.



SAMPLE

CERTIFICATE OF GUARANTEE
(FOR DAMP PROOF COURSE INSTALLATION)

For installation of the **TECH-DRY DPC CREAM** Damp Proof Course at:

PROPERTY:

IN THE NAME OF:

DATE OF COMPLETION OF WORK:

QUOTE NO. / INVOICE NO.:

1. TECH-DRY PTY LTD hereby warrants that the chemically bonded polysiloxane damp course installed at the above property will block moisture migration from the ground such that no dampness will rise above the level of the damp course.
2. If there is any apparent failure of the said installation within twenty-five (25) years from the date of completion of the work, TECH-DRY PTY LTD guarantees to return to the installation and rectify such apparent failure free of charge.
3. This guarantee shall not apply where the installation has been damaged or interfered with or where the damp course has been bridged.
4. This guarantee applies only to the proper functioning of the polysiloxane damp course installed by TECH-DRY PTY LTD.
5. This guarantee only becomes operative at the completion of the installation and payment in full of the TECH-DRY PTY LTD account within the terms and conditions of the quote.
6. This guarantee is transferable to any new owner on transfer of the property.

Signed for and on behalf of

TECH-DRY PTY LTD

Date.....



SAMPLE

CERTIFICATE OF GUARANTEE

(FOR RE-PLASTERING COMPLETED BY TECH-DRY PTY LTD)

For re-plastering done by TECH-DRY PTY LTD at:

PROPERTY:

IN THE NAME OF:

DATE OF COMPLETION OF WORK:

QUOTE NO. / INVOICE NO.:

1. TECH-DRY PTY LTD hereby warrants that the re-plastering work will be covered for a period of ten (10) years, if there is any apparent failure relating to salts or residual salts penetrating the new plaster's surface.
2. This guarantee applies to the salt damage only caused by rising damp. It does not include any damage incurred by movement, external damage, or other contributing factors not related to the rising damp.
3. In the unlikely event that the re-plastering needs to be re-done, the guarantee only applies to the plastering, and does not extend to any cosmetic finishes required – i.e painting.
4. This guarantee only becomes operative at the completion of the re-plastering, and payment in full of the TECH-DRY PTY LTD account within the terms and conditions of the quote.
5. This guarantee is transferable to any new owner on transfer of the property.

Signed for and on behalf of

TECH-DRY PTY LTD

Date.....



This document **MUST** be completed and signed by the client and returned to TECH-DRY PTY LTD before any damp course or re-plastering work is to commence.

WORK AUTHORISATION

I authorise TECH-DRY PTY LTD to proceed in the installation of a new Damp Proof Course and/or re-plastering in the property stated below.

I have thoroughly read all the literature attached to this document, especially the **“TERMS AND CONDITIONS FOR THE INSTALLATION OF A TECH-DRY DAMP PROOF COURSE AND/OR RE-PLASTERING”**

I am fully aware of the nature of the damp course work, and the requirements for re-plastering and finishing after the installation of the TECH-DRY damp course.

DATE:

CLIENT'S NAME:

CLIENT'S ADDRESS:

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CONTACT TELEPHONE NUMBERS:

Home: Work: Mobile:

Email:

QUOTE NUMBER:

WORK PROPERTY ADDRESS:

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(If the same as Client's Address, write "As Above")

CLIENT'S SIGNATURE: