MICROTECH PRESSURE INJECTION FLUID

- **A concentrated solvent - free microemulsion DPC system**
- **Advanced silicone micoremulsion technology**
- **Fast injection rates (low surface tension)**
- **Rapid curing**
- **Virtually odourless**

DESCRIPTION

Microtech PIF is a self emulsifying silane / alkylalkoxy siloxane blended concentrate which produces a silicone microemulsion (particle size ca. 50 nm) on dilution with water. Suitable for use by pressure injection for the control of rising damp in masonry above ground level provided that walls are not heavily impregnated with hygroscopic salts.

All treatments should be in accordance with BS 6576 : 1985 (Code of Practice for the Installation of Chemical Damp Proof Courses). In particular the inserted DPC should be below the level of timber floor unless prevented by structural considerations (such floors should also be inspected due to the risk of fungal decay).

SITE WORK

Preparation
Check and overhaul rainwater goods and soakaways to ensure that they are in good order and clean, repair or install drains to carry away surface water. If the internal floor level is at or below external ground level, form trenches along the external face of the walls to at least 150mm (6") below the proposed DPC level. Do not excavate below footing level or affect the structural stability of the wall. If this approach is not possible, see the Wykamol Replastering Specification Data Sheets ('tanking').

Carry out any repairs or repointing and leave to cure (minimum 6 weeks) before installing the DPC. Remove skirtings, fixings and plaster to expose the line of the proposed DPC. Plaster which may be affected by hygroscopic salts should be removed to not less than 300mm (12") above the last visible signs of dampness or 1 m above the proposed line of the DPC, which ever is the higher. Check the removed skirtings and, if required, put sound items to one side for reinstatement. Inspect other associated joinery and flooring timbers and if fungal decay is located take the appropriate remedial measures (see seperate Data Sheets). Ensure wall cavities are clear of debris.

Remove external render to expose the line of the proposed DPC. If it is suspected that the render is contaminated by hygroscopic salts and/or is physically unsound, it should be removed to an appropriate height (see above).
In the case of a semi-detached/terraced houses etc. inform occupants of adjoining properties before treatments commence. The drilling of party walls in particular may cause disturbance to decorations/ornaments.

Cavity fill materials such as urea formaldehyde, polystyrene and mineral wool will not be affected but the fluid may damage/strain certain types of floor coverings and adhesives and present a contact hazard to unprotected persons. In case of spillage wipe up immediately. Rinse with water and detergent. Do not allow fluids to come in contact with glass.

Dilution of Concentrate

In a labelled clean plastic drum add 1.25 litres of concentrate to 23.75 litres of water to make 25 litres of ready-to use injection fluid (never add water to concentrate). To avoid excessive foaming add concentrate to half the required water then top up rinsing the concentrate container several times prior to disposal. **Use diluted fluid within 24 hours of mixing**. Before and after use, ensure pump equipment is thoroughly washed out with clean water.

INSTALLATION

General : Select the course to be treated. This should be at least 150mm (6") above external ground level.Where suspended timbers are present, the DPC should be formed below joist/wall plate level wherever possible. In the case of

solid floors, the DPC should be inserted as close to the floor as possible.

Vertical DPC's should be installed to connect staggered DPC levels and to isolate untreated wall areas, eg. adjoining properties, fireplaces not treated due to lack of access and abutting garden walls. The vertical DPC should extend to at least 1200mm above DPC level If very high levels of hygroscopic ground salts (chlorides, nitrates) are present in the property, (eg. in areas of brackish water), the Wykamol Technical Department should be consulted regarding suitable methods of treatment and reinstatement.

Brickwork - Drill the selected course at spacings 120 - 150 mm apart (2 per stretcher, 1 per header) to an average depth of 75mm. The diameter of the holes should be between 10 - 15mm dependant on the injector rods used. Single skin (115mm) walls are drilled from one side (avoid percussion drills). Solid walls (230mm or more) should, where possible, be treated from both sides. If access is restricted injection can be carried out from one side. The first brick is treated normally. A hole is then drilled through into the next brick skin and injection undertaken using the time taken for successful treatment of the first brick as a guideline. Walls of greater thicknesses may be similarly treated in an incremental manner.

Treatment may be carried out into the mortar course if required using a similar driling pattern (150mm spacings). The course selected should allow reasonable pressure retention during injection and a lower pressure and longer injection times used to achieve good continuity of treatment (see "Injection below"). A combination of mortar joints and brickwork can be treated by using the brick drilling pattern above but drilling at an angle to end in a mortar joint at the level of the propsed DPC.

Stonework - Treatment of solid stonework should be carried out in a similar manner to "Brickwork" with adjustments being made to the drilling pattern to take account of the construction.

Rubble Infill Walls - Both solid external skins should be treated in a similar manner to "Brickwork". One set of drill holes can then be drilled through into the centre of the wall and the rubble infill treated.

Injection - Injection is carried out by inserting injector rods into the drilled holes and forming a seal. The DPC material is then injected at pressure of approx 500 kPa (70 lbs/ in_2) until a continuous band of treatment is visible on the face of the wall. If treatment is being carried out into the mortar joints the pressure should be reduced to 350 kPa (50 lbs/ in_2). In saturated walls, lower pressures (ca. 100 kPa) over longer periods of time are likely to be most successful or consider the use of gravity feed techniques (**Siliconate K** – see seperate data sheet). In all cases, care needs to be taken to ensure the recommended levels are achieved (see 'Product Data' below).

NB : It is essential that fluid loss is kept to a minimum to ensure continuity of the injected DPC. If a pressure drop is experienced or a poor seal suspected, injection should stop and a fresh hole drilled nearby before attempting treatment once more.

REINSTATEMENT

Replastering : Ideally, replastering should be deferred as long as possible to encourage drying but a minimum of 14 days between treatment and replastering should be allowed. Replastering work must be carried out in accordance with Wykamol replastering Specifications (see separate Data Sheets). All replaced skirtings etc. should be either pre-treated or treated with a suitable preservative, e. g. Microtech Dual Purpose or Wykabor 10.

Drying time/redecoration : After the insertion of a DPC, the residual water in the wall must evaporate before normal dry conditions are achieved. The time will vary according to the amount of water present and the thickness of the wall but one month per 25mm (1") thickness of wall is quoted as a guideline. Redecoration should be regarded as being temporary until the wall has dried out.

External works :Where appropriate, external renders should comply with the requirements of BS 5262 : 1991 and terminate with a bell mouth just above the DPC level. External drill holes should be filled with a suitably coloured sand/ cement mix, or brick plugs.

PRODUCT DATA

Coverage: Approximately 3.5 litres per metre run of 225mm (9") wall depending on the porosity and nature of the substrate. Consumption in walls of a greater thickness should be calculated pro rata (rubble infill walls may be regarded as solid structures).

Appearance: Clear, pale yellow liquid (concentrate) ; milky white once diluted. Drying / Curing The speed of DPC formation will depend on factors such as wall thickness, alkalinity and moisture content but generally curing should take place within 2 weeks.

Shelf Life / Storge: Concentrate - 6 months. Store below 30°C in a dry, well ventilated area free from sources of ignition (Flash point 25°C) and out of direct sunlight. Store in a **FROST FREE** environment. Mix in a clean plastic drum. After dilution use within 5 days.

**** After dilution use within 24 hours.**

Cleaning: Concentrate spillages should be removed using white spirit or similar. Pumps and other equipment should be washed thoroughly before and after use with clean water. Dispose of safely.

Pack Size 1 and 1.25 litre plastic bottles.

Safety: Concentrate classified - ' Flammable ' and ' Irritant'. (Once diluted the injection fluid poses no flammability hazard). Instructions for the safe use of **Microtech PIF** are given on the product label. More detailed information for hazard assessment, emergency procedures, etc. are available in the **Microtech PIF** Material Safety Data Sheet.

TECHNICAL INFORMATION

This product is intended for use by professional contractors/ specifiers and this data sheet is complied accordingly. Further information and advice is available from the Technical Department at The Wykamol Group. The information contained here supersedes all previous datasheets.

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