TamSil 190

Silane – Siloxane DPC Injection System

Description

TamSil 190 is a low viscosity, silane-siloxane injection system for replacement DPC, which prevents rising damp through capillary action in masonry, brickwork and stonework structures. TamSil 190 penetrates deeply into porous substrates to allow for a bonded hydrophobic lining to the pores. This treatment significantly reduces absorption of water and waterborne salts. The solution does not produce any discoloration of the substrate and has excellent resistance to weathering.

Key Benefits

- Provides an invisible water repellent surface
- Allows the wall to breathe
- Reduces efflorescence and surface salts
- Solvent based: will not dilute
- Acts as a replacement DPC

Technical Data

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Appearance	Clear Liquid
Viscosity	6 - 10cps
Solids	6 - 8% Active
Flash point	65°C
Application temperature	5°C - 40°C

All technical data stated herein is based on tests carried out under laboratory conditions.

Application Guidelines

Choosing the DPC level

The horizontal damp-proof-course should be chosen to comply with the recommendations in BS Code of Practice 102:1973 or the equivalent in other countries (Protection of Buildings against Water from the Ground). In the case of suspended timber floors which are not independently supported on steeper walls, an effective solution would be to position the damp-proof course below the timber joints or wall plate and above the exterior ground level.

Complementary vertical damp-proof courses are necessary to isolate treated walls from the effects of rising damp in adjoining walls (e.g. in semi-detached, terraced houses and basements).

Drilling Angle

In above ground structures without basements, position the DPC approx. 150mm above the outside ground level but below the internal floor level.

To prevent ground moisture from penetrating the wall below the DPC level, the inside surface of the basement wall should be treated.

Alternatively, the soil can be excavated in order for the external surface to be treated. This should be carried out if there is ground water pressure. After the surface has been treated, apply TamSil 190 from the inside just above the basement floor level.

Selection of Drilling Points
Once the DPC level has been determined, choose the starting point for the drilling operation. This will vary according to thickness of walls and the type of building materials. Normally the holes are drilled at a 30° angle in order to penetrate the centre of the wall and become the damp-proof course.

In 225mm and 340mm thick brick walls, start the drilling one mortar bed joint higher than the chosen DPC level and at an angle of approx. 30°.

Drilling continued
For walls constructed of materials other than brick or thicker in depth than 340 mm, vary the angle of drilling and the height above the selected DPC to ensure the DPC mortar bed joint is penetrated as near to the centre as possible. Walls with only half a brick in thickness 115mm should be drilled with extreme care.

Drilling specification
Drilling is normally made from one side only. Drilling should stop 50mm from the other side of the wall. Under certain circumstances it may be advantageous to drill from both sides (e.g. in random stonework with rubble infill).

Where the weakness of a structure will not allow drilling at 112mm centres, one side can be drilled at 225mm centres, injected, then filled with mortar and allowed to set before the same process is carried out from the other side of the wall. In walls greater than 600mm in depth, consult your local Tam International representative for the specification. The size of the drilled holes should be 13 mm or 16mm in diameter.

In one-sided drilling, drill the holes at 112mm intervals. When drilling from both sides, holes should be 225mm apart on each side but staggered so the wall is actually penetrated every 112 mm.

Application Methods
There are 3 main methods for installation:

1. Gravity feeding is very common and is carried out using angular cartridges. The holes are drilled and a cartridge is inserted into the hole then the TamSil 190 is filled to the top of the cartridges. These are left to slowly diffuse into the substrate and are topped up as required until the substrate is saturated.
2. Low-pressure injection is carried out using a hand sprayer specially modified for use. The TamSil 190 is forced into the hole and is pressurised into the substrate until it is saturated.
3. High-pressure injection enables multiple holes to be treated at once. Utilising a manifold system several holes can be injected at once.

Consumption

225mm	0.40 litre per hole
340mm	0.60 litre per hole
450mm	0.85 litre per hole

The above is based on average porosity. Increase by 30% for more porous and decrease by 20% for less porous conditions.

Storage

TamSil 190 should be stored at room temperature (min 10°C and max 38°C), kept dry and out of direct sunlight. If these conditions are maintained and the product packaging is unopened, then a shelf life of 1 year can be expected.

Health & Safety

TamSil 190 should only be used as directed. We always recommend that the Health & Safety data sheet is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal protection. The Health & Safety data sheet is available upon request from your local TAM International representative.

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