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BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

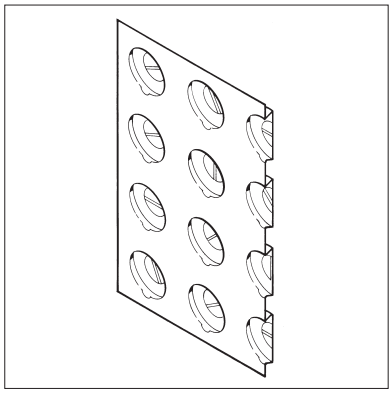
Isola AS, Platon Factory

PLATON PLASTER BASE

Certificate No 01/3823

DETAIL SHEET 4
*Second issue**

Product



- *THIS DETAIL SHEET RELATES TO PLATON PLASTER BASE, A MOULDED HDPE MEMBRANE, INCORPORATING UNDERCUT STUDS IN A DOVETAIL SHAPE WHICH FORM A KEY FOR PLASTER AND RENDER COATS AND FIXING/SEALING MATERIALS.*
- *The membrane is used on internal walls and vaulted ceilings, above or below ground in new or existing buildings over a contaminated or damp background to support a plaster or render coat or dry lining on plaster dabs.*
- *The membrane may also be used in conjunction with Platon Multi and Platon P20 membranes in sealed systems.*
- *The system should be installed by competent contractors.*

This Detail Sheet must be read in conjunction with the Front Sheets, which give the system's position regarding the Building Regulations, general information relating to the product, and the Conditions of Certification.

Technical Specification

1 Description

1.1 Platon Plaster Base is a clear, high-density polyethylene (HDPE) membrane, moulded to form undercut studs, which act as a key to subsequently applied plaster or render (see Figure 1).

1.2 Characteristics of the membrane are:

thickness (mm)	0.5
stud height (mm)	5
weight per unit area (kgm^{-2})	0.48
roll sizes (m)	2.0 x 20
weight of roll (kg)	19 approx
air gap volume (lm^{-2})	4

1.3 Ancillary materials used with the membrane are:

- Platon Plaster Plug — a plastic, pre-drilled plug for fixing membrane to brick or stone (see Figure 2)
- Platon Sealing Rope — butyl rubber beading for sealing the membrane around pipes and openings, and to form a gasket between the plug and the membrane
- Platon Sealer — a butyl rubber sealant for sealing the membrane around pipes and openings and at joints
- Platon Overtape — butyl rubber tape, at least 100 mm wide, backed with non-woven polypropylene for sealing joints in the membrane
- Standard metal edge lathing
- Triton Trimix 1 — a water- and salt-resistant additive for sand and cement renders.

Figure 1 Platon Plaster Base

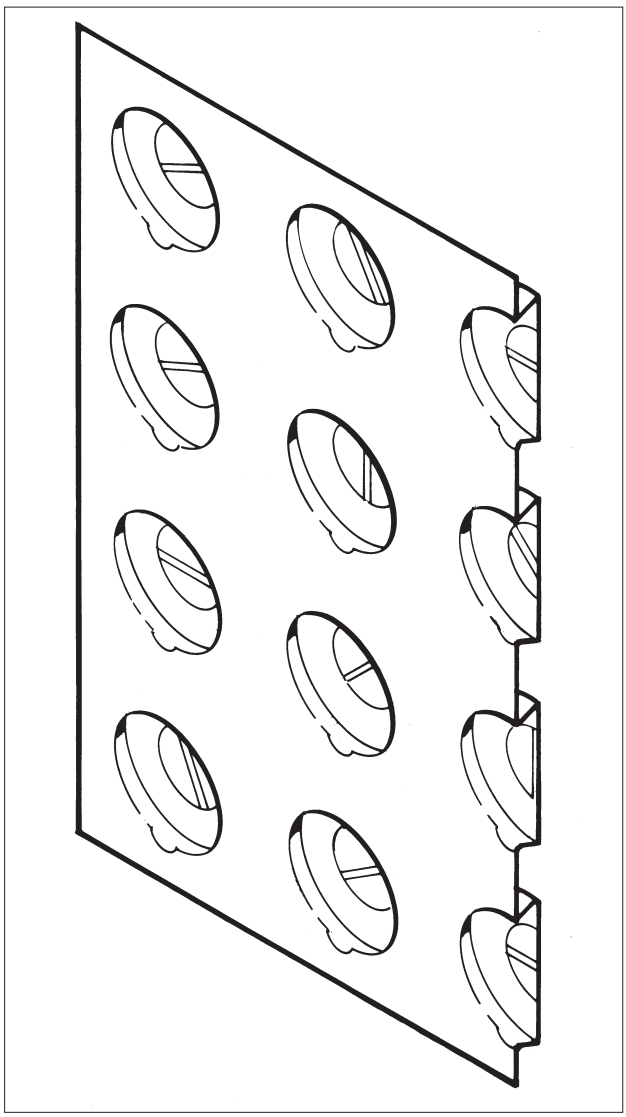
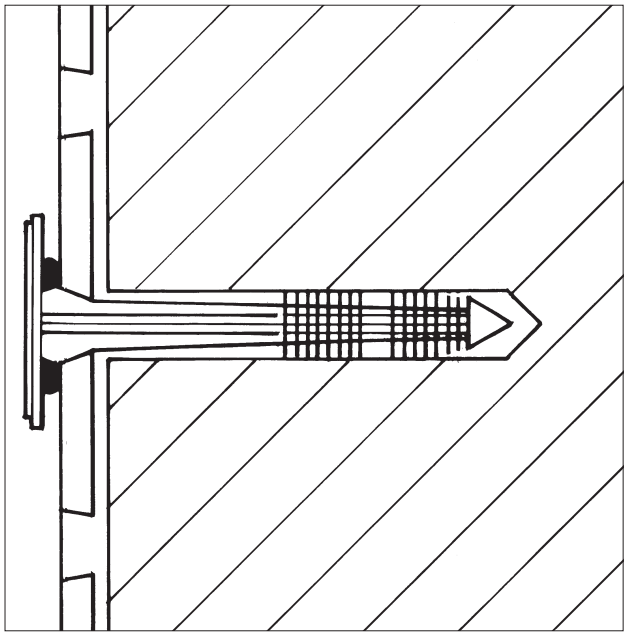


Figure 2 Platon Plaster Plug



Design Data

2 General

2.1 Platon Plaster Base is satisfactory for use as a support for replastering/rendering, or for a dry lining fixing by plaster dabs over internal walls of all types of construction, in the following situations:

- damp walls in underground situations subject to high groundwater levels, and perennial moisture
- on vaulted ceilings of archways or cellars subject to dripping water
- in conjunction with a remedial dpc system where the walls have a high salt content and/or it is necessary to complete the installation immediately without allowing a period for initial drying
- over a wall which has a friable or painted surface, is contaminated with oil or mould, or has a high salt content
- as a waterproofing or 'tanking' in areas subject to vibration.

2.2 Depending on the application required and the site conditions, the membrane may be used as:

- a dry-lining for walls, ventilated into the room via aeration slots at the top and bottom of the wall
- a completely sealed system covering floor, wall and ceiling with provision made for disposing of water build-up behind the membrane via a sump and pump.

2.3 The system is satisfactory for use in Type C (drained protection) structural concrete constructions in accordance with BS 8102 : 1990, Clause 3.2.4.

3 Resistance to water and water vapour

3.1 The membrane is water resistant and has a high resistance to the transmission of water vapour. Consequently, the measures described in the *Installation* part of this Detail Sheet must be followed to ensure that, where the surface is damp, there is a flow of air across it or that the membrane acts as a drainage layer and that there is no excessive build up of water behind the system.

3.2 All joints and fixings must be sealed with Platon sealing products, and drainage channels and gullies, or sumps and pumps should be installed as necessary to disperse excess or standing water.

3.3 Floors should have a drainage outlet point. There should be a fall towards the outlet point or a drainage channel made around the perimeter of the floor, to ensure water can flow to the outlet.

4 Resistance to salt transfer

The system provides an effective barrier to the transmission of salts or other contaminants from the substrate.

5 Impact resistance

The membrane, plastered, rendered or dry-lined, has a satisfactory resistance to soft and hard body impacts.

6 Wall-mounted fittings

Wall-mounted fittings (apart from lightweight items such as framed pictures) should be fixed (using recommended proprietary fixings) through the membrane and lining board, plaster or render to the loadbearing structure behind. Holes made in the membrane should be filled with a flexible sealant before inserting the fixing.

7 Durability

7.1 Under normal conditions of use, the system will provide an effective barrier to the transmission of salts, liquid water and water vapour for the life of the structure in which it is incorporated.

7.2 Regular maintenance of all gullies, sumps and pumps must be conducted to ensure that a build-up of water does not occur behind the membrane.

Installation

8 Survey in damp conditions

8.1 Where conditions are damp, a full survey is necessary by a specialist surveyor to diagnose the cause and to establish if treatment is required.

8.2 If rising damp is found, a remedial treatment is conducted in accordance with the relevant Agrément Certificate, BS 6576 : 1985 and the BWPDA Code of Practice COP3 : 1997.

8.3 Appropriate remedial measures are taken to rectify other causes of damp conditions or water ingress and to repair structural defects.

9 Surface preparation

9.1 Any unsound plaster or render should be removed to expose the substrate which is then cleaned with a stiff brush to remove any loose material, laitance, salt residue, mould or adhesive. If mould is present the substrate should be treated with a fungicidal wash.

9.2 Uneven substrates should be dubbed out with a cement-sand (1:4) render to achieve a flat finish, and allowed to set before fixing the membrane.

10 Walls and ceilings

General

10.1 Power cables, points and light switches preferably should be remounted in front of the membrane.

10.2 The membrane should always be used with the lower sheet placed in front of the higher sheet with a

minimum overlap of two studs. The lap is made secure by the use of Platon Plaster Plugs fixed as close as possible to the edge of the membrane. The overlap is then wiped clean of dust and sealed with 100 mm wide Platon Overtape applying equal overlap areas to each sheet of membrane.

10.3 Fixings are made through the spacing between four studs (not through the studs themselves) into holes drilled through the membrane into the substrate. Platon Plaster Plugs to which Platon Sealing Rope has been applied around the rim, are inserted into the holes and tapped flush with the membrane.

10.4 On difficult substrates the fact that the membrane is clear will allow the contractor to view the substrate through the membrane and choose the optimum site for each fixing.

10.5 Fixings are made at maximum spacings of 300 mm.

Ceilings

10.6 Ceilings to be covered should always have a fall, as per vaulted cellar constructions, to ensure water does not build up against the membrane or a joint. In addition to the requirements given in section 10.8, on ceilings the vertical drop between the ends of the two membrane sheets for horizontal overlaps should be a minimum of two studs.

10.7 The membrane should be adequately supported, to avoid the possibility of ponding.

10.8 At the end walls of vaulted constructions the membrane must be turned down onto the end wall by a minimum 300 mm (ie nine domes). The membrane is mitred as necessary to fit the curve of the ceiling, and the joint sealed with Platon Overtape. The wall membrane should be cut to fit the curve of the ceiling, fixed in front of the ceiling membrane, and the gap sealed with Platon Sealing Tape, Rope or Platon Sealer.

Walls

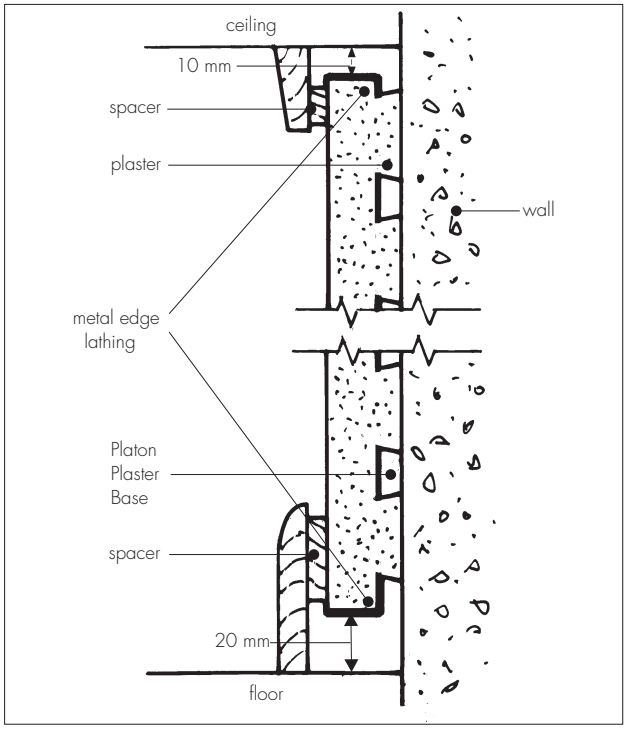
10.9 Installation of the membrane is commenced at the top of the construction. Joints are made by overlapping the membrane by a minimum of two studs.

10.10 The membrane is installed over windows and then cut away to expose them. For doors and other obstructions, the membrane is installed up to the perimeter. In both cases the gaps are sealed with Platon Sealing Rope or Tape.

10.11 For above-ground applications, where the system is not sealed, standard metal edge lathing is fixed at the top and bottom of the membrane to maintain a 10 mm gap at wall/ceiling and a 20 mm gap at wall/floor junctions (see Figure 3).

10.12 Spacers measuring 3 mm by 200 mm are fixed at 600 mm centres behind the skirting board and ceiling coving to ensure a ventilation gap (see Figure 3). Alternatively, a proprietary ventilated skirting board or ceiling coving may be used.

Figure 3 Wall detail with plaster finish



11 Plastering

11.1 Most common lightweight plasters, renovating plasters and one coat plasters can be applied to Platon Plaster Base using the procedures defined in BS 5492 : 1990, BS 8000-10 : 1995, BS EN 13914-2 : 2005 and/or the appropriate Agrément Certificate. When using sand/cement render, a mix of one part cement to six parts sand should be used, incorporating a plasticiser such as Triton Trimix 1 (Trimix 1 is added to the gauging water at the ratio of 1:24). Where appropriate seek a recommendation from the Certificate holder.

11.2 The plaster should be a minimum total depth of 15 mm.

12 Dry lining

12.1 A gypsum-based adhesive is mixed and applied to the membrane in accordance with BS 8212 : 1995. The total area of contact between the adhesive and board surface should not be less than 20% of the board area.

12.2 Gypsum plasterboard to BS 1230-1 : 1985, or similar dry lining boards covered by a current Agrément Certificate, are pressed onto the plaster dabs and jointed in the usual manner. Temporary spacers approximately 20 mm to 25 mm high are positioned under the dry lining to support it during the curing period.

13 Finishing

13.1 When the membrane is installed, the walls can be plastered with conventional gypsum plasters.

13.2 Where the membrane is installed internally and plastered, permanent decoration, such as vinyl papers or oil paint, may be applied. Temporary permeable decoration (necessary when a remedial dpc installation is replastered conventionally) is not necessary.

13.3 Once the plastered, dry-lined or rendered surface has dried, the surface can be painted or wallpapered using traditional methods and materials.

Technical Investigations

The following is a summary of the technical investigations carried out on Platon Plaster Base.

14 Tests

Tests were carried out to determine:

- nail tear resistance
- thickness
- impact resistance of plastered, rendered and dry-lined membrane.

15 Investigations

15.1 The manufacturing process was examined, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

15.2 Trial installations were conducted to assess the practicability of installation of the system and the methods used for plastering, rendering and dry lining.

15.3 An assessment was made of the scope of use and durability of the system in relation to the generic properties of the membrane.

Bibliography

BS 1230-1 : 1985 *Gypsum plasterboard — Specification for plasterboard excluding materials submitted to secondary operations*

BS 5492 : 1990 *Code of practice for internal plastering*

BS 6576 : 1985 *Code of practice for installation of chemical damp-proof courses*

BS 8000-10 : 1995 *Workmanship on building sites — Code of practice for plastering and rendering*

BS 8102 : 1990 *Code of practice for protection of structures against water from the ground*

BS 8212 : 1995 *Code of practice for dry lining and partitioning using gypsum plasterboard*

BS EN 13914-2 : 2005 *Design, preparation and application of external rendering and internal plastering — Design considerations and essential principles for internal plastering*

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

On behalf of the British Board of Agrément

Date of Second issue: 13th December 2005

Chief Executive

**Original Detail Sheet issued 9th October 2001. This amended version includes addition to* Design Data *and* Installation *sections, minor changes to* Plastering *section and reference to revised British Standards.*

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