

MEMBRANES



# ALDERSPRUFE

## WATERPROOFING MEMBRANES



### Features

Self adhesive, Torch applied and bonded systems to waterproof structures in traditional build applications to the most exposed and rigorous demands of modern day construction requirements.

Factory controlled thickness to ensure full coverage to specification.

Self adhesive and weldable jointing systems.

All systems compatible with other Aldersprufe products to form totally integrated waterproofing systems.

Full application QA product warranty on designed systems.

# ALDERBURGH

Alderburgh Limited specialises in the manufacturing and marketing of high quality products for complete structural protection, encompassing membrane systems, liquid systems, expansion joint

fillers, ventilation products and drainage systems. We have available a wide range of expertise and are constantly reviewing products to provide up to date solutions for today's construction problems.

## Waterproofing Membranes

- Alderprufe Tuflex
- Alderprufe 15K
- Alderprufe 20K
- Alderprufe 30K
- Alderprufe 30K HD
- Alderprufe Aqua System
- Alderprufe Nu-Life

## Gas Barriers

- Alderprufe Tuflex
- Tuflex CO2
- Alderprufe MR
- Alderprufe MR50
- Alderprufe GRA
- Alderprufe GRM
- Preformed Details

## Damp Proof course and Cavity Tray Systems

- Aldercourse Century 2000
- Aldercourse Excell Hy-Grip
- Aldercourse GRA
- Aldercourse Tuflex DPC
- Aldercourse Cavity Trays
- Aldercourse Thermal Block
- Aldercourse Thermal Stop
- Higrade DPC

## Aldervent Ventilation Systems

- Aldervent Geo-Grid and Geo-Grid 25
- Aldervent Geo-Void 12/25/52/100
- Through Wall Ventilation Systems
- Aldervent Vent Bollard
- Gas Sump
- Ground Level Vent Units
- AVSS
- AVRT
- AVRTR
- AVOF

## Expansion Joints and Protection Boards

- Foamflex 1, 2, 3
- Corkflex - B
- Fibreflex
- Backerboard 501 - A
- Angle Fillet
- Multistick

## Waterstops and Drainage Systems

- Centrally Placed Water Stops
- Caviduct 20
- Externally Placed Water Stops
- Aqua Drain
- Nu-Life

## Liquid Compounds

- LD10 Liquid Waterproofer
- Black Bitumen Paint - type II
- Weatherprufe Waterproofing Compounds
- Bitumen Mastic
- Alderprufe Tac Primer
- Solar Reflective Paint
- Felt Adhesive
- Alderseal 810
- Alderseal 850
- Gritting Solution
- Aluminium Flashing Tape

## Water Management Systems

- Alderburgh Geo Void Cell 30/100
- Alderburgh Geo Void 80/100
- Alderburgh Geo Cell Tank
- Surface Water Re-cycling Systems
- Atlantis Stormwater Purification Unit

## Geo-Textiles

- Stabilisation & Filter
- Alderway
- Geotex
- Protection & Filter

# Introduction

## Background

Since the introduction of BS 8102:1990 the options available to the designer and constructor have been increased significantly to suit the degree of risk. The new Code of Practice has defined more clearly the level of protection and form of construction related to the basement usage and should not be confused with the structural forms defined in CP 102. The changes call for an assessment of the structure's construction and its inherent water resistant qualities to determine its integrity and long term performance. This has led to a radical and more practical approach in allowing permutations of construction and waterproofing techniques to achieve the level of performance demanded.

## Implications

BS 8102:1990 has been expanded to include four new internal environmental grades of basement usage in addition to the identification of three basic water resisting forms of construction and are described briefly as follows:-

### Internal Environment

Grade 1 - Car parking and plant rooms (excluding electrical equipment) and workshops

**- some seepage and damp patches tolerable**

Grade 2 - Workshop and plant rooms, requiring drier environment and retail storage areas

**- no water penetration but moisture vapour tolerable**

Grade 3 - Ventilated residential and working areas, including offices, restaurant and leisure centres

**- dry environment**

Grade 4 - Archives and stores, computers, requiring a controlled environment

**- totally dry environment**

### Forms of Construction as defined in BS 8102

Type A - Tanked Protection Constructed from concrete or masonry and offering no protection against the ingress of water and water vapour by the nature of its design. Protection is therefore totally dependent on a continuous barrier system applied to the structure.

Type B - Structural Integral Protection Designed and constructed in reinforced or

pre stressed concrete either to BS 8110 (to minimise water penetration) or to BS 8007 (to prevent water penetration) dependent on the chosen grade of basement use.

Transmission of water vapour may not be wholly prevented.

Type C - Drained Protection Constructed from structural concrete (including diaphragm walls) or masonry to minimise the ingress of water Any moisture which does find its way into the basement is channelled, collected and discharged within the cavity created through the addition of an inner skin to both walls and floor. Vapour transmission may be prevented by ventilation of the cavity and by providing an effective damp proof membrane over the under drained floor. For those seeking maximum assurance this combination of construction and waterproofing is considered the most effective and trouble free.

## Waterproofing Options

The various forms of construction dictate the structure's in-built integrity and the waterproofing options available and can be summarised as follows:

Type A - **Totally dependent on a waterproof and vapour proof membrane**

- External tanking plus drainage
- Reverse tanking plus drainage
- Sandwich tanking plus drainage

Type B - **All in watertight construction**

- Water resistant concrete plus drainage
- Water resistant concrete plus damp proof barrier
- Water resistant concrete plus tanking

Type C - **Drained cavity protection**

- Drained cavity
- Drained cavity plus water resistant concrete
- Drained cavity plus moisture barrier
- Drained cavity plus tanking

## Sub Surface Drainage

Drainage plays a critical role in the design and construction of both Type A and Type B sub-structures. Lack of proper drainage may result in a build-up of temporary hydrostatic pressures due to surface water run-off or burst water mains. Subsequent leakage may occur through the structural elements, which may be

# Introduction

concrete or masonry, or an ineffective tanking membrane.

Water can be kept from prolonged contact with basement slabs or walls with a combination of drainage aggregates and filter fabrics. Serious consideration should be given to the use of geo composite drainage systems such as Alderprufe Aquadrain, which combine an open core structure, pre-wrapped with filter fabric. Thereby reducing the requirement for costly selected imported drainage aggregates.

The combined installation of vertical, geocomposite sheet drains with horizontal fin drains, serves not only to collect and deflect water away from the building structure, but will create a positive air gap between the structure and surrounding soil to enhance the basement's thermal insulation.

Any existing system of land drains should be carefully preserved and sub-surface drainage systems should be graded to storm water drains, or open outlets on the downside of the building to divert water away from the structure.

## *Solution*

By understanding and appreciating the limitations of the various forms of construction, it is possible to assess the emphasis and importance of the waterproofing components, so that an economical and buildable design is used to suit the ground conditions. It is essential that the basement construction is capable of taking the imposed loadings from the structure, ground and hydrostatic pressures, but its form can vary from masonry to water resistant reinforced concrete.

The options for the waterproofing and drainage elements also acknowledge that traditional external tanking is not the only method of preventing water from entering the structure. By varying the construction, increasing the performance and accepting that water can enter the structure, arrangements can be made to safely deflect, collect and remove it by pumping from the basement.

## *Summary Evaluation*

### **TYPE A STRUCTURES**

#### **Tanked Protection**

These structures have been redefined in BS 8102 where it is emphasised that new Type A structures are without integral protection and rely totally on the effective integrity of the waterproofing barrier.

The introduction of Alderprufe Aquadrain to DRAIN and DEFLECT water away from the structure, will place less dependency on the performance requirement of the water/vapour proofing membrane and should be considered an essential requirement for domestic basements.

Remove the hydrostatic pressure with effective drainage and minimise the risk of failure.

### **TYPE B STRUCTURES**

#### **Structurally Integral Protection**

Designed in water resistant concrete to minimise or prevent water penetration. Originally these structures were designed to exclude visible water only, but the performance of this type of structure can now be upgraded by combining integral protection with Alderprufe membranes, to achieve the highest level of protection required from conventional tanking systems.

### **TYPE C STRUCTURES**

#### **Drained Protection**

The fail safe solution to basement design; the preferred option Not originally included within CP 102, but covered in C.I.R.I.A Guide 5. A system designed to collect any water ingress and discharge through formed cavity walls and floors to collection points. The inclusion of an internal cavity drain system such as Caviduct 20 will achieve significant savings in construction costs, plus an increased return of potential rental income will accrue through the reduced width of the wall cavity combined with enhanced performance.

## *Guide Levels*

By assessing the design risk, the perceived performance and attendant risk in choosing to design a Type A, B or C structure can be evaluated in respect to the chosen internal environment. Subject to buildability, a balance should be achieved between the required performance level and budgeted cost plan for the development.

# Alderprufe Membrane 20K

2mm thick

Easy application

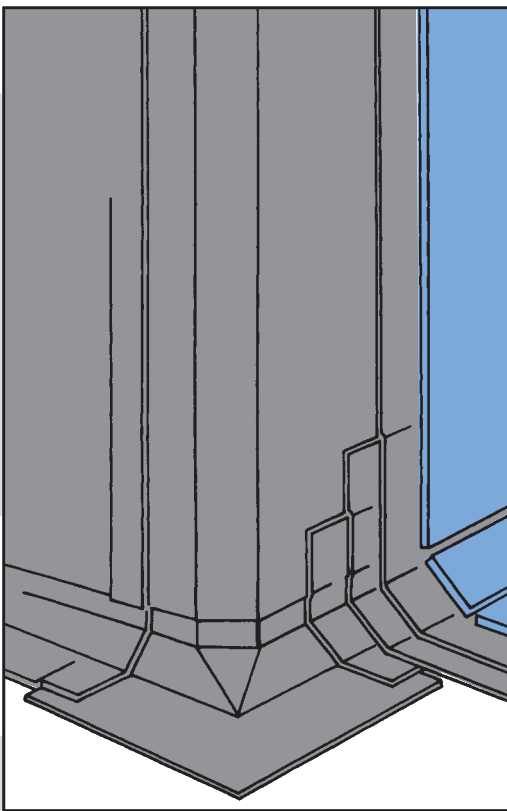
High elasticity

Factory controlled thickness

5 ply sandwich construction

Weldable laps for greater security

Totally integrated waterproof system



## Description

Alderprufe Membrane 20K Self Adhesive consists of a central polyethylene core coated on both sides with 1.0mm of self adhesive elastomer bitumen compound. The upper bitumen surface is protected by a thin polyethylene film, the lower bitumen surface is protected by a water resistant siliconised release sheet

## Uses

Alderprufe Membrane 20K is recommended for use as a self adhesive waterproofing membrane for both vertical and horizontal work in tanking applications. Also for use as a waterproofing membrane on concrete decks, including roof garden systems.

## Technical Details

|                             |                   |
|-----------------------------|-------------------|
| Bitumen thickness           | 2.00mm            |
| Polyethylene core thickness | 0.09mm            |
| Elongation at break         | in excess of 600% |
| Roll width                  | 1000mm            |
| Roll length                 | 15m               |
| Roll weight                 | 33kg              |
| Overlap                     | 100mm             |

### MECHANICAL PROPERTIES

Tensile strength of joints tested to MOAT 27.

|                 |       |
|-----------------|-------|
| Unaged membrane | 110   |
| Heat aged       | 85    |
| Water soak      | 100mm |

Water vapour transmission rate and transmission resistance at 75% Rh and 25°C are as follows:

|                        |   |
|------------------------|---|
| W.V. Transmission rate | 0.30 (GM <sup>2</sup> d <sup>-1</sup> ) |
| W.V. Resistance        | 684 (MNsg <sup>1</sup> )                |
| Puncture resistance    | 122                                     |

(Max load INJ )

Tested to ASTM E154

Durability: At least the life of the building in which it is installed.

## Storage

Alderprufe Membrane 20K must be stored in dry conditions under cover at a minimum temperature of 5°C and a maximum temperature of 30°C. Rolls must be stored on their sides, stacked no more than 5 high.

## Surface Preparation

All surfaces should be smooth, clean and dry. Loosely adhering material or sharp protrusions should be removed by mechanical means. Vertical brickwork must be skimmed with sand/cement to provide an even surface. Concrete and render should be completely cured and dry.

## Priming

All areas must be primed with Alderprufe Self Adhesive Tac Primer as below:

- (i) Roll container well before use.
- (ii) Apply at the rate of approximately 4-6 sq m per litre. Only apply to those areas to be covered with Alderprufe membrane within the next 4 hours. Allow to dry completely for a minimum of 1 hour. Keep free from dust.
- (iii) On very porous surfaces use two coats.

## Alderprufe Membrane 20K

### *Application*

#### OVERLAPS

All overlaps must be 100mm. All angles and corners should be provided with a suitable fillet or splay and reinforced with a 300mm wide strip of Alderprufe Membrane equidistant across the previously primed area. When angles have been reinforced as above, the membrane should be applied as follows:

### *Horizontal application*

Starting at the lowest point, unroll the first roll of membrane, one operator progressively removing the release sheet whilst another presses the membrane onto the surface with a broom, ensuring that no air is trapped between the membrane and the substrate. Before laying the next roll, lightly torch the upper polythene of the first sheet using a propane gas torch to expose the upper bitumen surface width of 100mm. Apply the subsequent rolls as described above. Where a vertical substrate already exists, turn the horizontal membrane up to a height of 200mm ready for linking to the vertical membrane. Ensure all joints are staggered. Roll overlaps to ensure good bonding. The horizontal membrane must be protected immediately after laying with a 25mm screed or other adequate protective system such as Backerboard 501.



### *Vertical application*

Cut the membrane to the appropriate length, then, starting at the top, remove about 200mm of release sheet and bond the membrane firmly to the substrate. Remove the release sheet progressively pressing the membrane onto the primed surface. As with the horizontal membrane, lightly torch the upper surface of the laid sheet at overlaps to expose the bitumen before applying the next sheet. The vertical membrane must overlap the horizontal by a minimum 200mm. Roll all overlaps for good bonding. The upper edge of the membrane must be turned into a 20mm x 20mm chase and sealed with a suitable bitumen sealant. The membrane must be protected by a concrete or brick skin or adequate protection board as soon as possible prior to any backfilling .

### *Precautions*

Alderprufe Membrane and Alderprufe Primer must not be applied when surface temperatures go below 5°C. When a brick skin is applied to the face of the vertical Alderprufe Membrane, care must be taken not to damage the membrane and a gap of 12mm should be left which is filled with sand/ cement mortar as work proceeds. Only sufficient Alderprufe Membrane should be laid as can be adequately protected as work proceeds. When edges of Alderprufe Membrane are left exposed for any length of time ensure that all edges are held in place by battens.

### *Overlaps*

Alderprufe 20K allows all overlaps and joints to be heat welded for maximum security. This is only possible because of the membranes unique sandwich construction and should be referred to when considering specification.

### *Typical Specification*

Waterproofing membrane shall be Alderprufe 20K, minimum thickness 2mm with a puncture resistance of 122N. All laps fully heat welded. Fixed strictly in accordance with manufacturers instructions as supplied. Alderburgh Ltd, Sladen Mill, Halifax Rd. Littleborough. 01706 374416.

# Alderprufe Aquadrain System

**Total impermeable waterproofing and drainage system for the protection of structures below ground**

**Two technically advanced products singularly**

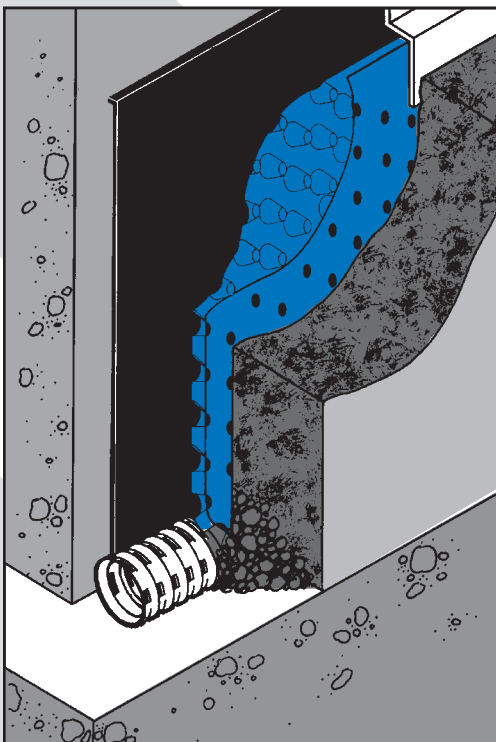
**Combined, provides a unique three stage system without compromise**

**Simple, quick installation**

**Isolates structure from surrounding ground conditions**

**Unique fixing method allows for any subsequent backfill settlement without danger of damage to waterproofing layer**

**Drainage system replaces need for protection boards reducing material cost more efficient use of labour**



There are many systems available for waterproofing structures and controlling drainage.

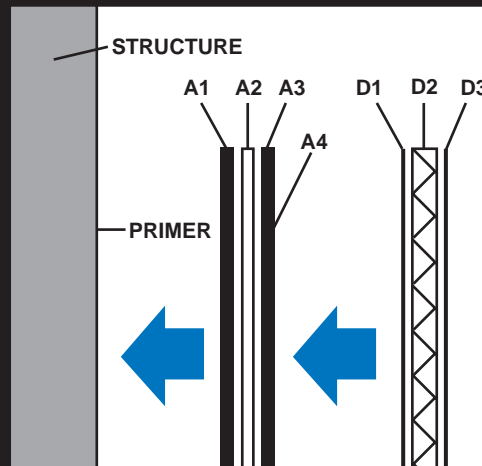
The Alderprufe Aquadrain system solves both these problems in joint application in a unique way. Combining technically improved waterproofing, protection and drainage capacity. Isolating structures from surrounding ground conditions in a single joint application without compromising on installation.

Alderprufe 20K and Alderprufe Aquadrain are both technically advanced products

designed to solve specific problems and are independently specified.

For full individual product data please refer to relevant data sheet.

When combined they provide the ideal solution to a specification requiring waterproofing and drainage control. A unique system giving the best of both fields.



**Alderprufe Membrane 20K is a waterproofing membrane with unique properties because of its sandwich construction.**

- A1** - 1mm thick Self-Adhesive compound protected by a siliconised release paper prior to application.
- A2** - Cross-Laminated rubberised polyethylene waterproof membrane.
- A3** - 1mm thick Adhesive compound.
- A4** - Thin polyethylene film protecting A3, heat removed to expose A3 prior to lapping membrane and applying Alderprufe Aqua-Geo-Drain.

**Alderprufe Aquadrain - A two layer sheet drainage system - high impact resistance high drainage capacity.**

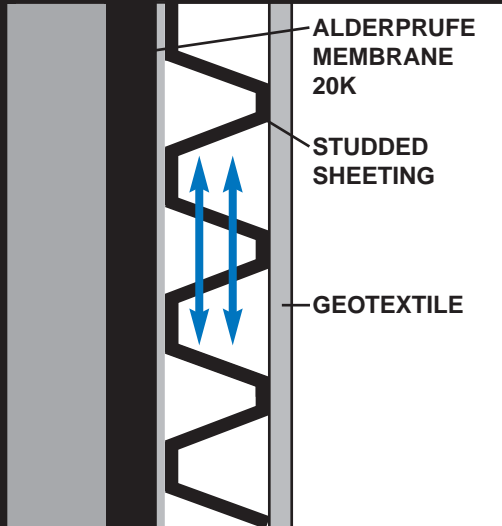
- D1** - Studded sheet providing drainage channel
- D2** - Non-woven Geo textile membrane forming filter layer to prevent clogging of drain channels

## Application

Alderprufe Membrane 20K is applied as per instructions - see separate data sheet.

The Alderprufe Aquadrain is cut to length - to be applied vertically in 1 metre wide strips.

## Alderprufe Aquadrain System



With the gentle application of heat either from a gas torch or hot air gun the protective layer of polyethylene A4 on the outer surface of the membrane 20K is removed in a 1 Metre wide strip vertically.

This exposes the top layer of modified adhesive bitumen compound A3.

The first strip of **Alderprufe Aquadrain** is then applied to this adhesive surface and pressed firmly in place.

The second 1 metre wide strip of Alderprufe is then exposed and the **Alderprufe Aquadrain** is then applied in exactly the same way, taking care to tightly butt joint the core and overlap of the geotextile.

If terminating the **Alderprufe Aquadrain** before ground level care must be taken when applying the Aqua profile strip. Multi-stick double sided tape applied between the profile and the membrane 20K top surface being the ideal solution. If terminating above membrane, mechanically fix at top edge and finish with Aqua profile.

The **Alderprufe Aquadrain** must terminate over the top of the land drainage pipe installed in a suitable filter bed to allow water to be discharged into the drainage system.

Once in place backfilling with excavated material can be carried out, saving on graded material.

The **Alderprufe Aquadrain** acts as a protective layer when backfilling and minor settlement is accommodated by the unique sliding film allowing the drainage system to move with the settlement without fear of drag on the waterproofing membrane.

Two technically advanced products working independently and in perfect harmony to create possibly the best water control system available to isolate structures below ground.

### *Specification*

Waterproofing and drainage control to be **Alderprufe Aquadrain System** applied and fixed strictly in accordance with manufacturers instructions as supplied by Alderburgh Ltd., Sladen Mill, Halifax Rd., Littleborough. Tel: 01706 374416

### *Health and Safety*

There are no known safety hazards associated with the products used in this system. For further information please refer to separate Health and Safety Data.

### *Technical Service*

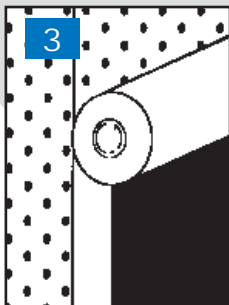
Technical Staff are available to advise and assist the use of these products from drawing stage to site application. A list of approved applicators is also available from our sales office.

# Alderprufe Aquadrain System

## Precautions

If the system once applied is to be left exposed for any length of time before backfilling, the whole system must be temporarily supported.

Only expose enough of the top layer (A3 in diagram) of adhesive compound as you intend covering with the Alderprufe Aquadrain in the same work period.



- 1 Applying membrane 20K as per specification sheet
- 2 Aquadrain applied to exposed top surface of membrane 20K
- 3 This procedure is repeated overlapping Aquadrain on the 14cm flat edge.



## Membrane 20K

SELF ADHESIVE WATERPROOF MEMBRANE

### Technical Data

|                             |                   |
|-----------------------------|-------------------|
| Bitumen thickness           | 2.00mm            |
| Polyethylene core thickness | 0.09mm            |
| Elongation at break         | in excess of 600° |
| Roll width                  | 1mt               |
| Roll length                 | 15mt              |
| Roll weight                 | 36kg              |
| Overlap                     | 100mm             |

### Mechanical Properties

|   |     |
|---|-----|
| Tensile strength of joints tested to MOAT 27. |     |
| Unaged membrane                               | 110 |
| Heat aged                                     | 85  |
| Water soak                                    | 100 |

Water vapour transmission rate and transmission resistance at 75% RH and 25°C are as follows:

|  |   |
|--|---|
| W.V. Transmission rate                                   | 0.30 (GM <sup>2</sup> d <sup>-1</sup> ) |
| W.V. Resistance  | 684 (MNsg <sup>1</sup> )                |
| Puncture resistance (Max load [N])                       | 122                                     |
| Durability:  | Tested to ASTM E154                     |
| At least the life of the building in which is installed. |   |

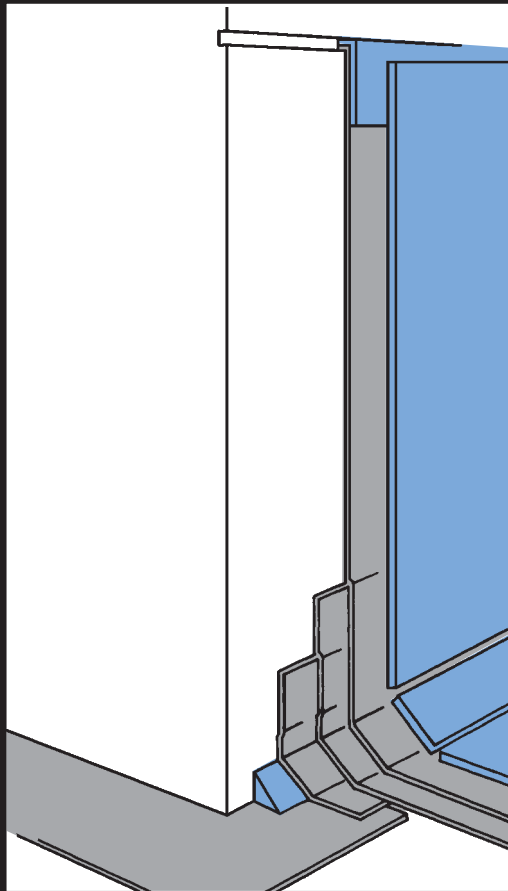
## Aquadrain

DRAINAGE SYSTEM

|                               |  |
|-------------------------------|--|
| Product Description:          | Aquadrain  |
| Material Of Studded Sheeting: | High density Polyethylene  |
| Material Of Geotextile:       | Polypropylene  |
| Stud Height:                  | app. 10mm  |
| Roll size:                    | 1mt x 25 mts   |
| Pressure Resistance:          | app. 400 KN/m <sup>2</sup>   |
| Drainage-capacity:            | app. 7lts/m <sup>2</sup> /sec  |
| Air Volume between studs:     | app. 7.9 l/m <sup>2</sup> /sec   |
| Temperature resistance:       | -30°C to + 80°C  |
| Chemical properties:          | resistant to chemicals<br>resistant against root penetration,<br>rot proof neutral to ground water |

# Alderprufe Membrane 15K

Factory controlled  
1.5mm thickness  
Easy application  
High impact resistant carrier  
Traditional construction  
Economical



## Description

Alderprufe 15K waterproofing membrane consists of a self bonding polymer modified bitumen which is covered on one side by a tough two ply cross laminated high density polythene film and protected on the other side by a release sheet which is removed prior to the bonding of the material on to a suitably primed substrate. Once the release sheet has been removed the membrane can be easily applied by roller pressure.

## Uses

Alderprufe 15K is intended for use as a self bonding vertical or horizontal damp proof membrane in tanking ground structures

## Technical Data

|                           |                      |
|---------------------------|----------------------|
| <b>Backing Thickness</b>  | 0.10mm               |
| <b>Backing Type</b>       | HDPE                 |
| <b>Adhesive Thickness</b> | 1.40mm               |
| <b>Total Thickness</b>    | 1.50mm               |
| <b>Width</b>              | 1000mm               |
| <b>Length</b>             | 15mts                |
| <b>Weight</b>             | 1.7kg/m <sup>2</sup> |
| <b>Carton Size</b>        | 260x260x1080mm       |
| <b>Carton Weight</b>      | 27kg                 |

### Mechanical Properties

|                             |                              |
|-----------------------------|------------------------------|
| <b>Membrane Strength</b>    | BS 2782 Method 56N/cm<br>320 |
| <b>Elongation</b>           | BS2782 Method 200%<br>320    |
| <b>Puncture Resistance</b>  | ASTM E154 300N               |
| <b>Adhesion (1800 Peel)</b> | ASTM D1000 40N/cm            |

### Functional Data

|                                  |                               |             |
|----------------------------------|-------------------------------|-------------|
| <b>Water Vapour Permeability</b> | BS 3177 g/m <sup>2</sup> /24h | 0.23        |
| <b>Vapour Resistance</b>         | MN/s/g                        | 892         |
| <b>Water Penetration</b>         | MOAT 5.1.4                    | Nil         |
| <b>% Joint</b>                   |                               |             |
| <b>Dimensional Stability</b>     | MOAT %                        | 5.1.6(70°C) |
| <b>Longitudinal</b>              |                               | -0.1        |
| <b>Lateral</b>                   |                               | -0.2        |

## Surface Preparation

All surfaces should be smooth, clean and dry. Loosely adhering material and sharp protrusions should be removed by mechanical means.

## Priming

All vertical surfaces should be primed using Membrane Primer. Priming should be carried out as follows:

- (i) Roll can well before use.
- (ii) apply at the rate of approximately 7m<sup>2</sup>/L. Allow to dry for at least 1 hour until touch dry. Keep free from dust.
- (iii) On very porous surfaces, use two coats of primer.

## Application

**Internal** angles must always be provided with an Alderprufe fillet then after priming as previously described a 300mm wide reinforced strip of Alderprufe 15K must be applied with

# Alderprufe Membrane 15K

150mm on either side of the centre of the fillet. **External** angles or corners must be provided with a 25mm x 25mm splay and this covered with a 300mm wide strip of Alderprufe applied equidistant from the centre of the splay.

The first strip should be laid such that the selvedge is placed to accept the edge of the following strip, with each subsequent strip laid in the same way. The protection paper should be removed from the selvedge before bonding the overlap joint.

**Horizontal membrane** should preferably be laid prior to the application of the vertical membrane, adequately protected from damage by a minimum 25mm screed, with the membrane bonded to the vertical surface at least 200mm above the top of the screed so that the vertical Alderprufe can be overlaid.

If it is not possible to apply the screed over the DPM before the application of the vertical membrane, full and adequate protection must be given to the horizontal membrane to prevent damage.

**Vertical membrane** - cut off the appropriate length of membrane, then starting at the top of the area to be waterproofed, peel off at least 200mm of release sheet and bond the Alderprufe firmly to the surface, tucking the end of the material into the appropriate DPC or chase. Gradually peel off the remainder of the release sheet downwards, at the same time rolling the material against the surface until the bottom of the wall is reached. At the base, the vertical membrane must overlap the horizontal membrane by at least 100mm.

All subsequent sheets must overlap the preceding sheet by 50mm at the edges onto the selvedge strip and by 100mm at ends. Overlaps must be thoroughly rolled to ensure adequate bonding.

**Backfilling** on vertical applications where an abrasive backfill is to be used the Alderprufe membrane should be protected by a concrete outer skin, brick skin or Backerboard 501 protection board, the latter being held in place by multi-stik adhesive tape.

## Precautions

Alderprufe 15K and membrane Tac Primer must not be applied when surface temperature of the substrate falls below 5°C.



When a brick-skin is applied to the face of the vertical Alderprufe 15K, care must be taken not to damage the membrane and a gap of 12mm should be left which is filled with sand/cement mortar as work proceeds.

Only sufficient Alderprufe 15K should be laid which can be protected as work proceeds.

When areas of Alderprufe 15K are left exposed for any length of time ensure that all edges are held in place by battens.

## Alderprufe 15K

Alderprufe 15K employs a unique feature of a selvedge. This consists of a 50mm wide strip of a high performance bitumen polymer adhesive on one side of the membrane. This is protected by a release coated plastic which is removed immediately prior to application of the overlapping sheet.

The selvedge provides a clear indicator of the minimum overlap that must be achieved to ensure effective sealing of the joints and ensures by virtue of the adhesive to adhesive contact a very high performance seal.

## Specification

Waterproofing membrane shall be Alderprufe 15K. Fixed strictly in accordance with manufacturers instructions as supplied. Alderburgh Ltd., Sladen Mill, Halifax Rd., Littleborough. 01706 374416.

## Alderprufe Membrane 30K

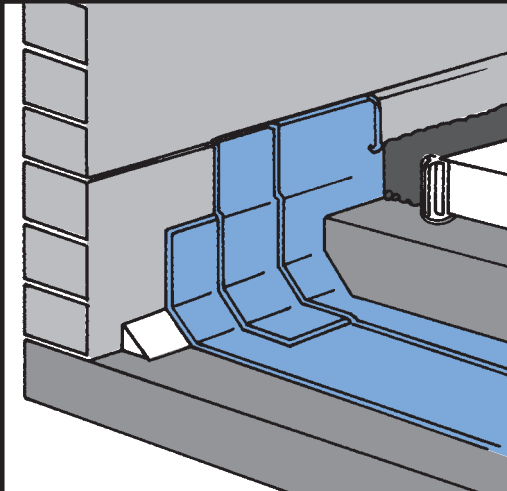
3mm thickness

High elasticity

Heavy duty water retaining applications

Waterproof for roof gardens and podiums

5 ply sandwich construction



### Description

Alderprufe 30K consists of a central polyester core coated on both sides with 1.5mm of modified bitumen which is, in turn, protected by a thin plastic film.

### Uses

Alderprufe 30K is intended for use as a horizontal loose laid damp proof membrane generally welded to the substrate only at the perimeter. All overlaps are torch welded to provide an integral waterproof barrier. It is recommended for use in conjunction with other Alderprufe products in sub-ground tanking applications and also for use in waterproofing floors, podiums, roof gardens and swimming pools.

### Technical Data

|                         |                   |
|-------------------------|-------------------|
| Bitumen thickness       | 4mm               |
| Polyester central core  | 0.09mm            |
| Elongation at break     | in excess of 300% |
| Roll width              | 1000mm            |
| Roll length             | 8 metres          |
| Roll weight             | 36kg              |
| Overlap                 | 100mm             |
| Water Penetration/Joint | Nil %             |

Puncture Resistance: 125 (max Load [N]) ASTM E154.

### Surface Preparation

All surfaces should be smooth, clean and dry. Loosely adhering material or sharp protrusions should be removed by mechanical means. Vertical brickwork must be skimmed with sand/cement to provide an even surface. Concrete and renders should be completely cured and dry.

### Priming

When loose laying only those areas to which Alderprufe 30K is to be torch welded must be primed as below.

### Application

Overlaps. All overlaps must be 100mm. All angles and corners should be provided with a suitable fillet or splay and reinforced by torch welding a 300mm reinforcing strip equi-distant across the previously primed area and apply pre-formed details in corners. When the angles have been reinforced as above, the horizontal membrane should be laid as follows:

#### HORIZONTAL APPLICATION

- (i) Unroll the Alderprufe 30K. Set out first roll as required. End and side laps to be torch welded to reinforcing strip and carried up to the top of the fillet.
- (ii) subsequent rolls should be set out with staggered end laps. Each roll should be rolled back half way, then rolled forward, torch welding the overlap. Then repeat for second half of the roll.



# Alderprufe Membrane 30K

- (iii) As work proceeds each free end of the roll should be torched to the substrate.
- (iv) The vertical surfaces should then be covered with Alderprufe 30K to a height of 200mm above the intended screed level ensuring that the membrane is fully torch welded to the primed surface. The membrane should overlap the horizontal membrane by at least 100mm. Again all overlapping joints should be torch welded and 100mm wide.
- (v) When the vertical areas have been so covered a protective sand/cement or concrete screed should be laid, after which work on the vertical faces using Alderprufe 20K can commence as described in the data sheet.  
**Note:** Where all overlaps are formed Alderprufe 30K should be torched to remove the outer plastic film before applying the Alderprufe20K.

## Durability

Alderprufe 30K, when fully protected and subjected to normal service conditions, will provide an effective barrier to the transmission

of water and water vapour for the lifetime of the structure in which they are incorporated. Properly applied, these membranes achieve archive status in accordance with BS 8102.

## Precautions

Alderprufe bitumen membranes and Tac Primer must not be applied where surface temperature of substrate falls below 5°C. Only sufficient Alderprufe membrane should be laid that can be protected as work proceeds. Great care should be taken during torch welding not to damage the membrane by over-torching.

## Health and Safety

A separate Health & Safety Data sheet is available upon request.

## Specification

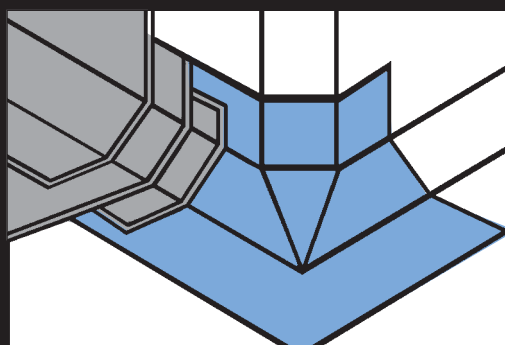
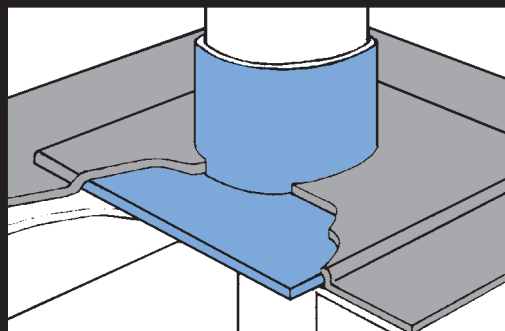
Waterproofing membrane shall be Alderprufe 30K. Fixed strictly in accordance with manufacturers instructions as supplied. Alderburgh Ltd., Sladen Mill, Halifax Rd. Littleborough. 01706 374416.

## Factory Formed Details

The use of factory formed details is always recommended in line with good building practice. If the puncture of the membrane system by service entries or steelworks cannot be avoided, these areas should be sealed with propriety factory formed units specified by name in the bill pages.

### Features:

- Factory formed for security
- Guaranteed Waterproof
- Ease of application
- Completely compatible with all membranes
- No risk in application
- Avoids relying on skilled applicator
- Electronically tested welded joints
- Massive labour savings in application



## Membrane 30K HD

**3mm thickness**

**Heavy duty water retaining applications**

**Polyester mat factory bonded to membrane**

**No need for protection boards**

**Extremely high puncture resistance 3900KN/M<sup>2</sup>**

**5 ply sandwich construction**

**Economical**

### Description

Alderprufe 30K Heavy Duty (HD) consists of a central polyethylene core coated on both sides with 1.5mm of modified bitumen. The underside is protected by a torch removable polyethylene film. The top surface is protected by a 1m wide heavy gauge non-woven mat, leaving a bitumen selvedge exposed for forming overlaps.

### Uses

Alderprufe 30K HD is intended for use as a torch applied or loose laid waterproof membrane for vertical and horizontal tanking applications. The outer mat provides protection against site damage and will permit selected backfilling without the need for additional protection boards or screeds. It is particularly suitable for waterproofing retaining walls.

### Technical Data

|                                  |   |
|----------------------------------|---|
| <b>Bitumen thickness</b>         | 3mm   |
| <b>Polyethylene central core</b> | 0.09mm  |
| <b>Elongation at break</b>       | 260% (to core failure)                              |
| <b>Roll width</b>                | 1000mm  |
| <b>Roll length</b>               | 8 metres  |
| <b>Roll weight</b>               | 30kg  |
| <b>Overlap</b>                   | 100mm   |
| <b>Puncture strength</b>         | (ASTM E154) 1600N<br>(BS3137) 3900KN/m <sup>2</sup> |

### Surface Preparation

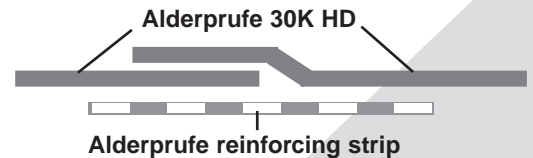
All surfaces should be smooth, clean and dry. Loosely adhering material or sharp protrusions should be skimmed by mechanical means. Vertical brickwork must be skimmed with sand/cement to provide an even surface. Concrete and renders should be completely cured and dry.

### Priming

If loose laying, only prime those areas to which Alderprufe is to be torched—if fully bonding prime all areas.

### Applications

Overlaps. All overlaps must be 100mm. All angles and corners should be provided with a suitable fillet or splay and reinforced with Alderprufe reinforcing strip torch applied equidistant across the previous primed angle. When angles have been reinforced as above the membrane should be applied as follows:



#### HORIZONTAL APPLICATION

- (i) Unroll the membrane and set out as required. Re-roll to half way and torch, using a propane torch, to the primed surface. When in contact with angles torch half way across the reinforced area.
- (ii) Subsequent rolls should be set out with staggered end laps. Each roll should be rolled back half way, then rolled towards, torch welding the overlap. Then repeat for second half of roll.
- (iii) End laps should be formed using Alderprufe reinforcing strip underneath the membrane as shown above.

#### VERTICAL APPLICATION

- (i) Cut to the length required and re-roll.
- (ii) Using two operators - torch weld the top of the sheet to the surface then gradually work down the wall torching from below as work proceeds. At the base link the membrane to the Alderprufe reinforcing strip and slightly overlap the horizontal sheet.
- (iii) To ease application the top edge of the membrane can be held in place by mechanical means providing this is done at a point above ground level.
- (iv) The membrane should be finished off above ground level by tucking into a suitable chase or sealing using

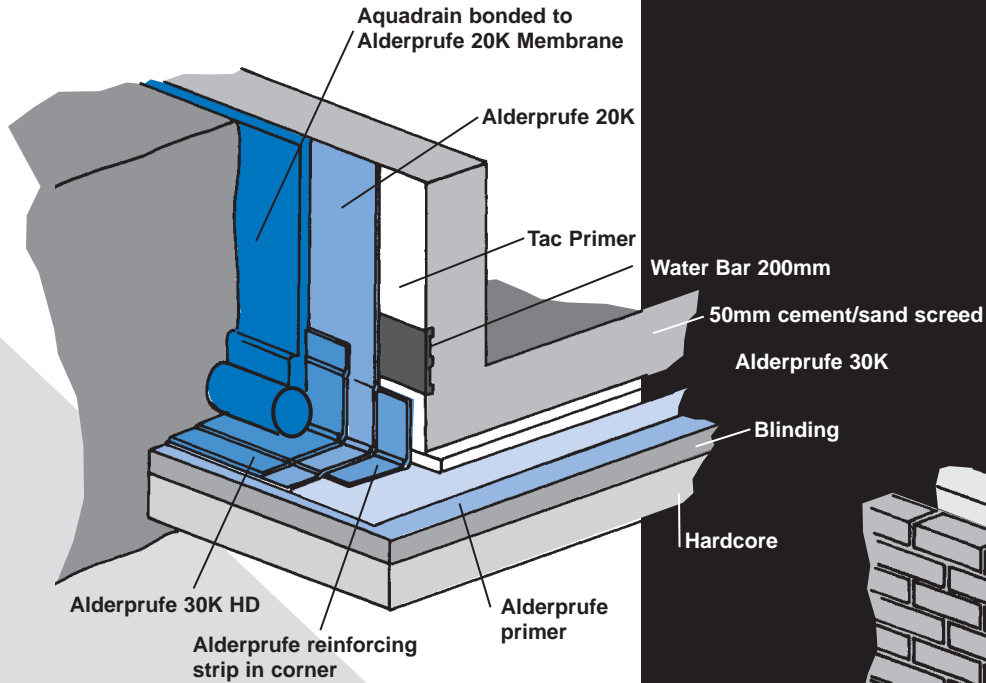
General details are given on a separate sheet.

### Health and Safety

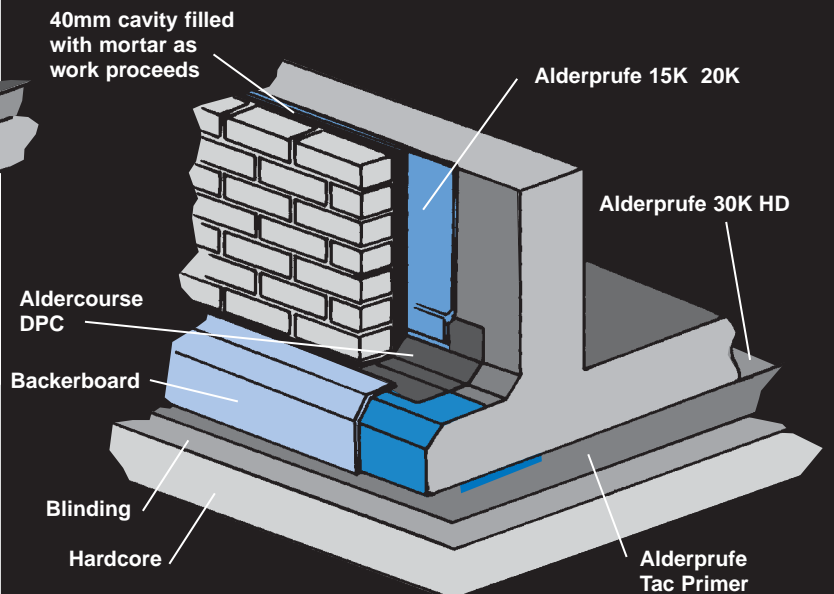
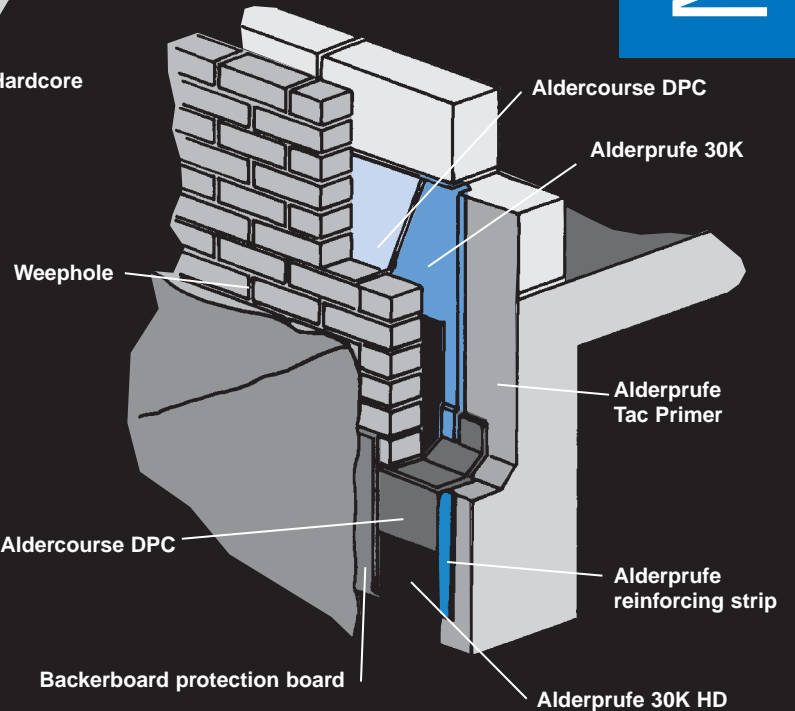
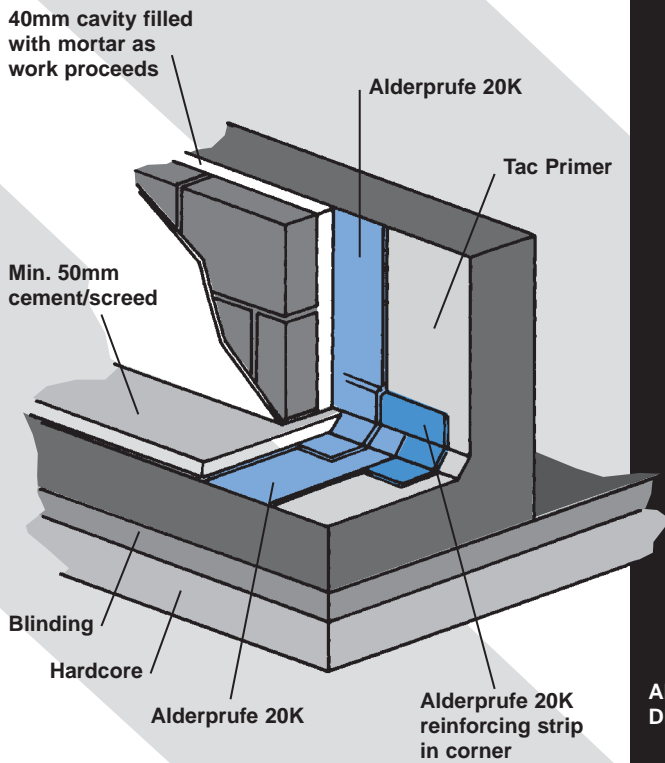
A separate Health & Safety Data sheet is available upon request.

# Typical Details

## External tanking with Aquadrain



## Internal tanking floor wall junction



All Alderburgh products are manufactured to the highest quality, being subject to rigid quality control. However, the company cannot control conditions of application and use of its products, thus any warranty, written or implied, is given in good faith for materials only. Alderburgh Ltd will not accept any responsibility for damage or injury arising from storage handling, misapplication or misuse of its products. All transactions are subject to our standard condition of sale, copies of which are available on request.



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