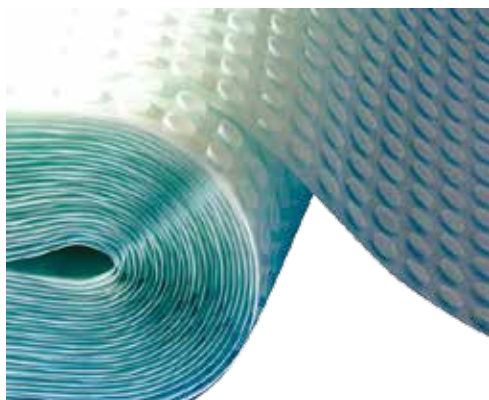




Waterproof membranes

for above and below ground waterproofing applications

The Wykamol Group has been involved in waterproofing applications for over 40 years and was a founder member of the British Wood Preserving and Damp Proofing Association. When it comes to waterproofing applications, the Wykamol Group has a huge range of products, from cement-based tanking powders to specialist epoxy coatings. In recent times however and since the changes to BS8102, cavity drain membranes have fast become the choice for most contractors in the UK marketplace.



CM8

Waterproofing membrane

For use on walls, floors, vaults and tunnels with minimal surface preparation required. Also suitable for external foundation waterproofing and to provide insulated dry lining for walls above ground level that may not be suitable for conventional plaster finishes.

Available sizes:

2x20mtr
2.4x20mtr

Associated products:

Brick Plugs, Double tape, Rope,
Corner detail

Wykamol CM membranes are suitable for use in type 'C' (drained protection) structural concrete constructions in accordance with BS 8102:1990, clause 3.2.4.

Wykamol CM8 is a medium capacity drainage membrane (4 litres/m²) for floors and walls both above and below ground level. When used on basement floors it is recommended that perimeter drainage channels are provided to optimise the flow of ground water towards the sump location (see separate data sheet 'Wykamol Drainage Solutions').

Wykamol CM8 is used in a dry lining application. Various systems can be used in the head of the fixing plug, from timber battens to steel dry lining systems.

This membrane is easy to roll out against wall and floor structures and can be fixed in horizontal lengths or in vertical strips.

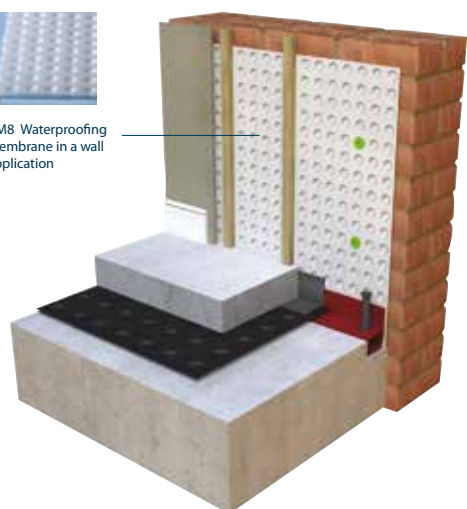
This is our most popular membrane in basement waterproofing due to its universal ease of use.

FIXING

Wykamol CM8 Membrane is installed with studs against the underlying structure. Fixing to walls is carried out with Wykamol Brick Plug in the centre of the stud. Take care when drilling holes to avoid excessive masonry dust falling in to the cavity.



CM8 Waterproofing membrane in a wall application



Key benefits

- Can create a dry habitable living space in areas previously suffering from damp/wet conditions.
- Little to no damage to existing structure.
- Quick to install- minimal preparation needed to wall surfaces, avoiding mess and saving time and money.
- Easy to bend and cut with scissors to form around windows, doors, services etc.
- No delays to decoration as there is no drying process.
- Waterproof, salt resistant, root resistant and contaminant resistant
- Low and high temperature tolerance.

Technical Data

Raw material:
HDPE

Sheet thickness:
nominal 0.50mm

Stud height:
approx. 6.5mm

Construction height:
approx. 7mm

Unit weight:
0.45 kg/m²

Deformation under long term loading: max.
20% (at 50 kN/m²)

Compressive strength:
150 kN/m

Working temperature:
-10° to +60°C

Softening temperature:
+160°C

Linear coefficient of thermal expansion:
0.18 mm/m.°C

Water vapour resistance:
280 m equivalent air layer

Air gap volume:
4.0 l/m²

Drainage capacity:
approx. 3.8 l/sm

No. of studs:
approx. 1640 per m²

Life expectancy:
at least 50 years for defined applications

Colour:
natural



CM20

High Capacity Waterproofing membrane

For use on walls, floors, vaults and tunnels with minimal surface preparation required. Also suitable for external foundation waterproofing and to provide insulated dry lining for walls above ground level that may not be suitable for conventional plaster finishes.

Wykamol CM membranes are suitable for use in type 'C' (drained protection) structural concrete constructions in accordance with BS 8102:1990, clause 3.2.4.

Wykamol CM20 is the highest drainage capacity membrane in the CM range giving a void volume of 14 litres/m². Suitable for use on floors and walls in very wet situations or where the large stud height is desired to maximize insulation values. When used on floors CM20 can normally be installed without the need for perimeter drainage channels and, when overlaid with concrete, the large diameter studs will give high point load resistance capabilities (180 kN/m²) to support load-bearing walls built off the slab.

FIXING

Starting at one side of the room, unroll the membrane with the studs down and cut to fit the room as one would fitting a carpet. The next membrane width is rolled out so that the flanged edge overlaps onto the edge of the previous roll of membrane. Clean both edges. Wykamol tape is then applied to the high flat area between the first two studs at the edge of the previous roll of membrane with the backing paper still intact. Check the two widths for alignment, with the flange covering the backing paper. Starting from the end of the joint, remove the backing paper and press down on the joint, sealing the two sections together.



Available sizes:

CM20 – 2.0 x 20m

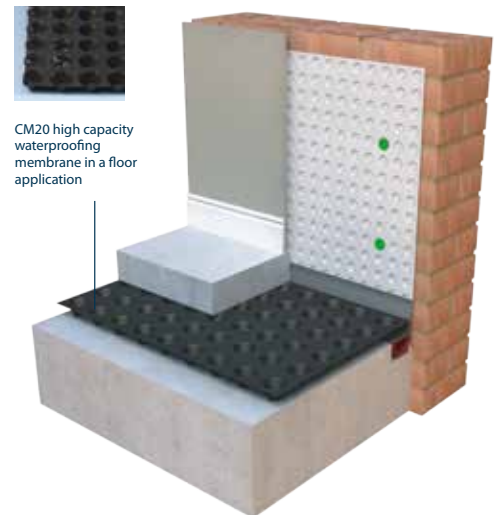
Including flat overlapping edge (flange) without studs, working area approx. 40 m².

Associated products:

Corner strip, Double tape, Rope

- Fast to install and lay
- Internal load bearing walls can be built on the membrane once screed is added
- High water movement capacity
- Various floor finishes can be used on top of the membrane
- Can be used with various drainage systems
- Resistant to all salts and contaminants
- Can be used with all insulation floor systems

Key benefits



CM20 high capacity waterproofing membrane in a floor application

Material:
recycled HDPE

Colour:
black

Area weight:
approx. 1,000 g/m

Thickness:
approx. 0.9 mm

Available widths:
2m and 2.5m

Roll length:
20m

Dimple height:
20mm

Number of dimples:
approx. 400 per m

Void volume between dimples:
approx. 14 l/m

Drainage capacity:
approx. 10 l/s m
approx. 600 l/min m
approx. 36.000 l/h m

Compressive strength:
approx. 240 kN/m
(24 t/m)

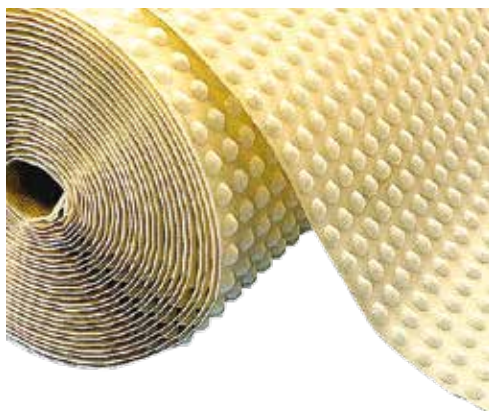
Tensile strength:
approx. 14.5 kN/m
(ENISO 10319)

Elongation at maximum strength:
approx. 68 %

Service temperature range:
-40 °C to +80 °C

Physiological properties:
non-polluting for drinking water

Technical Data



KONTRACT MESH

plaster membrane

Kontract Mesh is suitable for use in accordance with BS 8102:1990 to provide Type 'C' drained protection to structures below ground giving a Grade 3 or 4 dry environment suitable for domestic or commercial use.

Available sizes:

2m x 20m = 40m² (translucent/white)

2m x 10m = 20m² (translucent/white)

Associated products:

Plaster plugs, Double tape, Rope, Corner Strip

Kontract Mesh is a high density polyethylene membrane, incorporating 8 mm studs which allows the isolation of wet walls above and below ground.

It incorporates a tough HDPE mesh lathing welded to the front face to allow the direct application of various plaster finishes or adhesive 'dabs' and plasterboard.

Note: in basements where the walls are particularly wet (running water) we recommend the use of Kontract 8 on walls and floors (see separate data sheet).

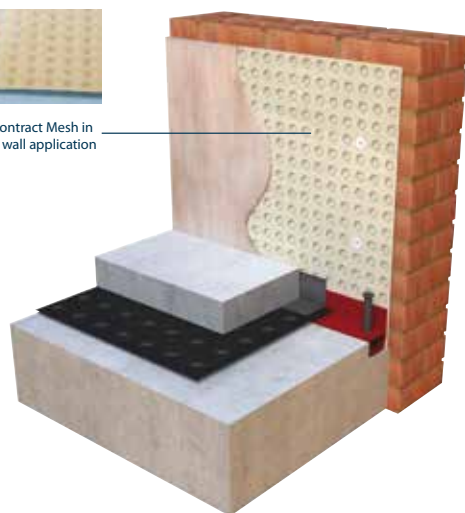
FIXING

Kontract Mesh is fixed to the wall by drilling through the membrane studs to a depth of 50 or 70mm using a 8 mm drill bit, and gently hammering home the Plaster Plugs with seals to form a waterproof seal between the fixing and the membrane surface.

Alternatively, Plaster Plugs with Wykamol Rope around the shaft can be used. Intervals between plug fixings should be no greater than 250mm to ensure a tight fix to the wall. Near lap joints and where the surface is uneven, the centres should be less than 250mm. When fixing the membrane it is essential to keep the sheet tight to the wall surface (no 'bulges') at all times.



Kontract Mesh in a wall application



Key benefits

- Stud height 8 mm, drainage volume 5.5 litres/m²
- Sheet thickness 600 μm, density 0.7 kg/m²
- Excellent low and high temperature stability
- 150 kN/m² load bearing capacity
- High durability and water resistance

Technical Data

Colour:
white

Weight:
(kg) 28.00kg

Raw material:
high density polyethylene

Thickness:
0.60mm

Stud height:
8.00mm

Compressive strength:
N/A

Wall and soffit membrane only

Thermal resistance:
0.078m K/W

Vapour permeability:
0.046g/m² x hr x mmHg

Thermal conductivity:
0.461 W/m K

Air volume between studs:
5.51 l/m² /s

Drainage capacity:
4.61 l/m² /s

CM FLOOR

drainage waterproofing membrane

For use on walls, floors, vaults and tunnels with minimal surface preparation required. Also suitable for external foundation waterproofing and to provide insulated dry lining for walls above ground level that may not be suitable for conventional plaster finishes.

Wykamol CM Floor is a low profile membrane (3 mm studs), specially designed for fast-track sealing of damp concrete at ground floor level. There is no need for the extensive surface preparation normally required with liquid DPM systems (epoxies etc.) and no curing times before floor finishes can be applied. It may also be used on basement floors where the low stud height is critical to maintain ceiling clearance and special measures can be taken to ensure the floor drains freely via drainage channels both around and across the floor.

flange overlap, cut the membrane to the desired length or width of the floor. Repeat this exercise until all the lengths/widths required to cover the floor area have been cut. Roll out the next length/sheet of membrane and position the flange over the studs of the first sheet laid. Thoroughly clean the flange and the studs where the seal is to be made, as previously described for wall application.

Apply sealing tape to the stud area below which the flange will cover, and press home onto the area between the studs.

FIXING

Begin at one side of the room, against the wall membrane with the studs facing down onto the floor. Allowing for the membrane

- Stud height 3mm, drainage volume 1.56 litres/m²
- 300 kN/m² load bearing capacity
- Excellent low and high temperature stability
- High durability and water resistance

Key benefits

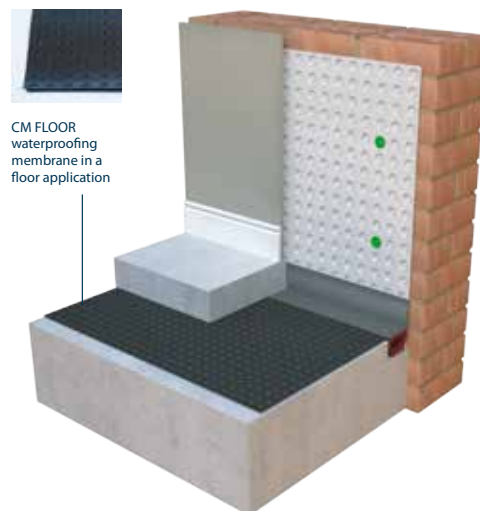


Available sizes:

2m x 20m
including flat overlapping edge (flange)
without studs, working area approx. 40m².

Associated products:

Corner strip, Double tape



CM FLOOR
waterproofing
membrane in a
floor application

Resin:
HDPE

Colour:
black

Area weight:
500 g/m DIN EN 12127

Thickness:
approx. 0.45mm

Dimple height:
3mm

Dimple spacing:
2,500 pcs/m

Air gap (between dimples):
3.6 l/m

Compressive strength:
320 kN/m EN ISO 25619-2

Service temperature range:
-40 to +80 °C

Storage:
protect from UV radiation

Physiological properties:
resistant to a wide range of chemicals,
resistant to fungus and bacteria attack,
impervious to root penetration, inert to
drinking water, rot proof.

Technical Data

YELLOW MESH

Slimline waterproofing membrane

Slimline Mesh is a high density polyethylene membrane incorporating 3mm studs which allows the isolation of wet walls above and below ground. It incorporates a tough HDPE mesh lathing welded to the front face to allow the direct application of various plaster finishes or adhesive 'dabs' and plasterboard.

Slimline Mesh is an ideal product for above ground damp proofing and dry lining. High strength membrane allows for a direct plaster finish but this is also ideal for a dot and dab plaster board finish. Can be used for wet-rooms and can even be laid on floors due to its high strength.

FIXING

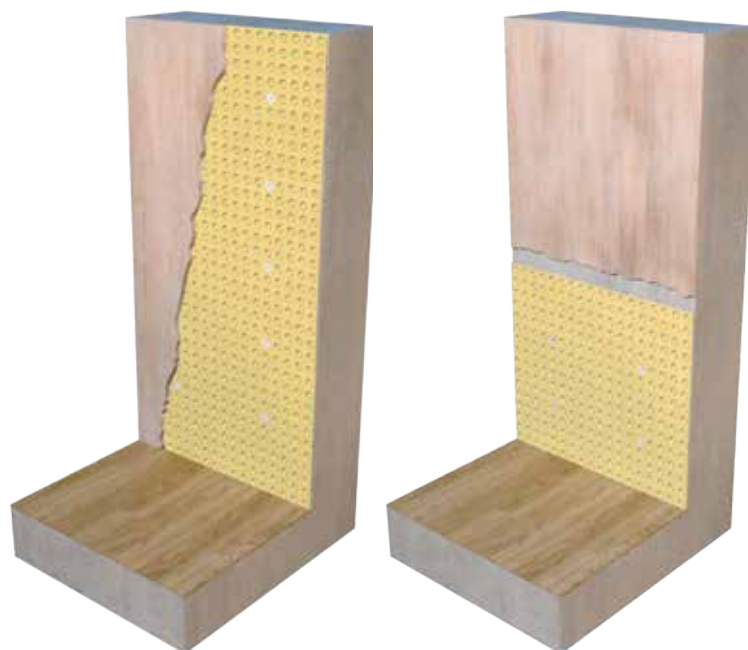
Various fixing options can be used with this product. Contact us for more information.

Available sizes:

1m x 10m = 10m²
1m x 30m = 30m²
2.0 x 30m = 60m² (Yellow)

Associated products:

Plaster Plugs, Fibre tape, Rope



Key benefits

- Can create a dry habitable living space in areas previously suffering from damp/wet conditions. Little to no damage to existing structure.

Technical Data

Core Product: Resin: HDPE

Colour: yellow

Area weight:
500 g/m DIN
EN 12127

Dimple height:
3 mm

Dimple spacing:
2,500/m

Compressive strength:
320 kN/m
EN ISO 25619-2

Mesh:
Resin: PE

Area weight:
45 g/m DIN EN 12127

Tensile strength: 400
N/5 cm EN ISO 13934-1

Elongation:
>10 % EN
ISO 13934-1

Composite:
Area weight:
550 g/m EN ISO 9864
CE certificate yes EN
ISO 13967

Service temperature range: -40 to +80 °C

Storage:
protect from UV
radiation

Physiological properties:
resistant to a wide
range of chemicals,
resistant to fungus
and bacteria attack,
impervious to root
penetration, rot proof.



GEOTEX EXTERNAL

waterproofing membrane

Wykamol Geotex is a twin-layered cavity drain membrane designed to manage ground water to the land drain, relieving pressure from the structure. In below-ground waterproofing applications, the primary function of Wykamol Geotex is to divert water away from the structure. It can also act as a barrier against ground gases, like Radon and methane.

Wykamol Geotex is typically used to isolate and protect the structure from the surrounding soil and relieve hydrostatic pressure by promoting the flow of ground water away from the face of the structure. Wykamol Geotex provides excellent protection from root penetration, and can also increase the structure's thermal insulation. Typical installations include external tanking, retaining walls, podium decks, and green roof applications. Fixing Geotex can be applied vertically or horizontally as required. Ensure overlap joints between sheets of 450 mm vertical and 150 mm horizontal (the geotextile can be pulled back to allow studs to overlap). When fixing

horizontally, place the lower sheet first. Use Wykamol Tape to seal joints at overlaps. Note: taped joints are not designed to be waterproof against standing water; therefore it is important to ensure all overlaps are flat and even, and water in the drainage layer flows freely to the base of the wall. Ensure the membrane extends to, or just below the level of, the Aquadrain pipe, and the pipe is fully encapsulated in a granular infill and placed below footings/internal floor level.

- Suitable for use with all construction types.
- Drains off water before reaching the waterproof coating.
- Combined drainage and protection board.
- Easy handling, rapid installation.
- Rugged, durable construction with thermal insulation benefits.
- Filtration layer prevents silting-up.
- High drainage capacity.
- Allows back-filling with excavated earth.
- Withstands stress and movement in the background.

Key benefits

Material:
layer 1 - HDPE
layer 2 - PP

Weight:
900 g/m² (22.5kg per roll)

Studs:
height 8mm,
spacing 1860 m²

Drainage:
4.6 Lt/sec/m, 276 Lt/
min/m, 16,600 Lt/
hour/m

Permeability:
Geotextile transmission
rate: 100 Lt/m²/sec

Strength Compressive:
250 kN/m²
(25 tonnes/m²)

Temperature service range:
-40°C to +80°C

Safety

Geotex and associated materials are not classified as hazardous according to current labelling regulations but please note that care is required when working below ground in confined spaces and when using drills/hammers etc. in these circumstances.

Technical Data



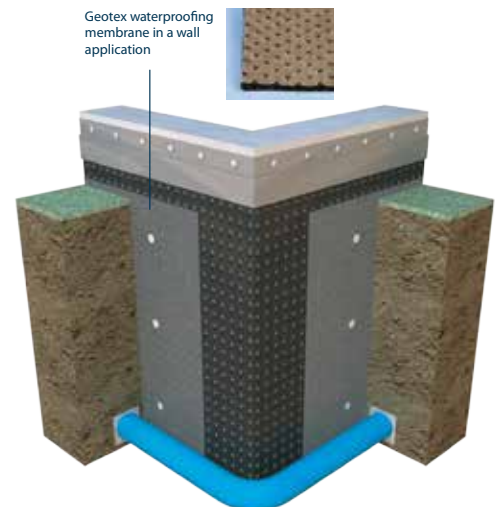
Available sizes:

2m x 20m
including flat overlapping edge (flange)
without studs, working area approx. 40m².

Associated products:

Corner strip, Double tape

Geotex waterproofing membrane in a wall application



Installation system

PLUGS

CM Plaster Plugs

These Plaster Plugs can be used with our mesh membrane systems, they are available in 70mm and 50mm lengths and have a serrated head which can take plaster or dot and dab. They can also be used to secure membranes to walls in systems where a free standing frame is to be used.



CM Plaster Plugs with Seals

These Plaster Plugs can be used with our mesh membrane systems. They are available in 70mm lengths and have the advantage of a seal already attached. They have a serrated head which can take plaster or dot and dab. They can also be used to secure membranes to walls in systems where a free standing frame is to be used.



Surefix Brick Plugs

Wykamol Surefix are 10mm fixings to use with membrane systems. They have a reinforced head for easy use and take a size 10 screw into the head of the plug, for battens or metal framing systems. At 60mm long, these plugs will fit into all substrates.



Surefix Brick Plugs with Seals

Wykamol Surefix plugs are 10mm fixings to use with membrane systems, with the advantage of a rubber seal already attached. They have a reinforced head for easy use and take a size 10 screw into the head of the plug, for battens or metal framing systems. At 60mm long, these plugs will fit into all substrates.



Cob Plugs

These plugs are ideal to use where substrates will not take a normal fixing. They are ideal for cob construction as well as all other masonry types. They have a pin which is driven down the head of the plug to give a secure anchor for membrane systems.



JOINTING

Tape

A high quality butyl double sided tape, 28mm wide. This tape is used in the installation of Wykamol cavity drain membranes and is used to tape 2 sheets of membrane together on walls or floors. Easy to use and very high quality HP600 grade bitumum makes this a long term solution for all membrane work.



Rope

A 10mm bead of butyl rope. This rope is used to either wrap around the head of plugs in membrane installation, or to form a jointing waterproof seal on walls and floor membrane systems. This is a high quality rope and is covered by our BBA Certificate.



Corner

Our biggest selling tape, this 150mm wide tape has many uses, but is mostly used to seal membrane from walls to floors and the channel system. Tacky on one side only, this can also be used to overtape external joints and can also be used on floor oversealing.



Overseal

This is a 75mm overseal tape used to overseal membrane systems, it can be used on walls and floors and forms an overseal detail to form a vapour barrier and waterproof seal on external taped joints. Covered by our BBA Certificate.



Fibre Tape

Wykamol Fibre Tape is used to join plaster membranes together. The unique fibre backing allows for direct plaster or dot-and-dab situations. The fibre also stops any cracking of plaster on these joints.



CHANNELLING

Waterguard

Wykamol Waterguard is a PVC drainage conduit designed for the control of water ingress in below ground situations. Wykamol Waterguard is fitted around the perimeter of the floor at the vulnerable wall/floor junction.



Floor Drain

Floor Drain is a flangeless channel similar to Waterguard, for controlling water movement to a sump chamber or drain. It has the benefits of no upstand which is ideal where stepped foundation footings would cause a problem. The channel can also be used to drain across a floor centrally.



Waterguard Drainage outlet

The drainage outlet can be used to get water from the channels to the sump chamber or existing drain. The angle bend on the underside of the channel takes water through a 32mm connection.



Universal Channel outlet

Newly designed channel outlet to remove water from the channel to the sump. This has the benefit of a 100mm outlet for high water movement or for easier installation into the sump chamber. It also comes with a jetting eye which can be cut down to suit floor finishes. Can be used with floor drain and waterguard channels.



Flexi Jetting Eye

The flexible jetting eye has been designed to allow cleaning of the channel system and also as an inspection port. The unique flexible upstand jetting point can be easily bent to allow the channel to be used in a wall port system. It also has the benefit of allowing slabs to be laid whilst still being easily accessible afterwards.



Waterguard Drain End Left or Right

The drain end connector can be used to take water away through an external wall to lower level drainage, ideal for houses built into a hill side where lower drainage is possible. This comes with either a left return or right return depending on where it is to be sited.





Installation guide

CM8 & KONTRACT 8 - wall application

PREPARATION

Wykamol wall membrane can be installed over a wide range of substrates in varying situations - walls, floors, ceilings, soffits, etc. However, before the System is installed, the area must be assessed to determine what preparation is required:

a) All timber fixtures and other organic material must be removed to prevent risk of fungal or bacterial growth behind the System, e.g. skirting boards, timber plates, old wallpaper etc. Structural repairs or works to remove items likely to puncture the membrane must be carried out. If evidence of rot or mould exists, this should be treated. (Wykamol Microtech Biocide, Wykabor 10 or Mould Clear Concentrate)

b) If the walls are uneven or areas have deteriorated, any large depressions should be levelled and made good to ensure a solid fixing.

c) When assessing floor applications, consideration should be given to the type of finish that is required. The floor must be cleared of oil, loose material and any sharp edges should be levelled out. Any holes or severe depressions should be filled. When a timber floor is preferred, then more consideration should be given to achieve a flat substrate prior to laying the membrane. This will relieve any undue movement when fitting a final floor finish.

d) The design of the drainage system should be agreed, implemented and tested before covering by the membrane. The exception to this is where the Aqua Channel is sat above the slab or raft. Flood tests should be made to check the slab or raft is flat and level prior to the installation of the Aqua Channel, but the system can only be fully tested once the floor membrane and some form of resistance to water pressure is placed above the membrane such as temporary boards with bags of ballast or sand placed above, or the finished floor covering.

e) When fixing the system to flat soffits you must ensure that there is a fall to create proper drainage and prevent ponding. Any sagging of the membrane should not be great enough for ponding to take place.

TOOLS

Minimum Required:

- Good quality 110V SDS hammer drill
- Mallet or club hammer
- Stanley Knife with spare blades
- Cutting shears
- Tape measure
- Long spirit level
- 8mm & 10mm SDS drill bits
- Clean rags
- Trestle staging or scaffold for working at height

Recommended

- Extra lighting
- Hot Air Gun

WALL APPLICATION

The Wykamol wall membrane is fixed with the studs against the wall to create an air/depressurisation gap. The membrane can be fixed either vertically or horizontally. When making this decision, you will need to take into account the size of the area to be lined, and the height of the walls relative to the width of the membrane. Horizontal fixing requires fewer cuts and jointing but the full roll is very heavy at first. Vertical fixing has very much lighter strips to fix, but requires that each

of these is taped back together again. You may find that vertical fixing is easier, but requires more Corner Detail Tape for jointing.

The membrane is fixed to the wall using a Brick Plug fixing. The Brick Plug should have a waterproof seal applied to the collar using a soft rubber sealing washer or Wykamol Rope fitted to the plug for sealing to the wall membrane.

Place the wall membrane in position as level as you can judge by eye. Using a 10mm drill bit, drill through the centre of a stud near the top and edge to a depth greater than the fixing. The fixing is then hammered into the pre-drilled hole until the plug sits flush in the stud. The rubber washer re-seals the hole. Level the membrane using the spirit level or laser level if used, and fix another plug about 2m along at the top of the sheet.

The membrane will now be hanging level to the wall. If you are fixing horizontally, continue fixing every 2m until you have reached the end of the roll or you have covered all of the wall(s) to be treated. It is very important to regularly check the level. If the membrane is not level, you may well find that the membrane is kinked and looks unsightly, it will also dive down when fitted around corners.

If you are fixing vertically, hang each subsequent sheet by the two fixings as described above.

The subsequent sheet should overlap by at



Fixing plugs on CM8 wall membrane



Fixing membrane using plastic plugs

least the width of the flange of the new sheet. You may find it easier to interlock the first stud of the new sheet to the last stud of the last sheet as this helps to keep the new sheet level. The vertical joints have to be sealed with Wykamol Tape. It is easier to apply the tape to the inner surface of the flange of the next sheet. Clean the flange and the face of the last sheet with a clean rag. When you have fixed the new sheet level with the correct overlap, pull off the backing paper from the tape and peel down whilst applying pressure to the flange.

Once all the backing paper has been removed, apply more pressure with the palm of your hand to further seal the whole of the joint. A Hot Air Gun should be used to help sealing in cold or damp conditions.

FIXING CENTRES

Once the Wykamol membrane is hanging off the top fixings the rest of the fixing plugs need to be fixed.

The spacing of these fixings is dependent on the type of wall finish to be used:

- Timber battens 400mm centres vertically and 600mm horizontally. Barrel Vaults require tighter centres.
- Fixed metal track (Gypliner) 600mm centres vertically and 800mm horizontally. Brick or block walls restrained to the retaining wall using ties should have the fixings at centres to provide the correct number of restraints at the correct centres.

Free standing timber and metal frames and free standing block walls do not require specific fixing centres. In these cases use sufficient fixings to ensure the membrane is neat and tidy and reasonably tight to the wall, especially around corners and reveals. When fixing the system to flat soffits you must ensure that enough fixings are used to keep

the membrane tight to the soffits with no sagging. All fixings should be in line both horizontally and vertically.

BATTENS

Battens should be pre-treated and of a minimum dimension of 25mm x 38mm although you may find that 25mm x 50mm offers better fixing at the edge of the plasterboard.

The battens can be fixed into the fixing plugs without piercing the membrane, by using 5mm (size 10) self-tapping screws. The plug will take 30mm of screw, so be sure to purchase the correct length for the thickness of batten.

Over-tightening of over length screws can loosen the plug. Be very careful not to puncture the membrane when drilling and fixing the battens. Battens should be fixed so that all plasterboard edges are supported. Use a timber treated batten or treat with a preservative. (Wykabor Cut End) to protect cut battens.

Once the battens are fitted into position, plasterboard can be fixed to them using clout nails or preferably plasterboard screws. Care should be taken not to exceed the depth of the battens with the screws, and thereby puncture the membrane.

ALTERNATIVE FIXINGS

Other finishes may be employed depending on the requirements of the specifier.

a) FREE STANDING FRAME This method should be employed if the wall is undulating, as with some stone structures or where space loss is a secondary consideration. The frame would be fixed to the soffit and the floor finish with the supplied 'U' channels. With the increasing requirement of insulation to meet Part 'L' of building code, the use of these frames is becoming more popular, the thickness of insulation required is often in excess of the thickness of the frame, and so no wall thickness is lost when using this method. Because the frame is

free standing and has no relationship with the wall membrane, very few fixings are required and so this wall finish above allows for the fastest and most efficient method of fixing membrane to the wall.

b) PROPRIETARY FIXING SYSTEMS Fixing systems such as Gypliner or Lafarge can be used with Wykamol membrane. It is also possible to use metal profile systems when constructing new internal walls. These can be fixed without bridging the membrane.

c) INTERNAL BLOCK WALLS If preferred the system can provide a water and vapour proof barrier, and then be lined with a block or brick inner skin.

SERVICES

If there are any services through the wall and floor, the membrane can be cut and trimmed around them and the gap filled and sealed using Wykamol Rope and Corner Detail Tape.

If necessary, a patch of membrane or plain DPC (PVC) is laid over and sealed to the service with Wykamol Rope and around its perimeter with Corner Detail Tape. It should be noted that protrusions through the floor slab/raft should be avoided wherever possible as they create weaknesses that allow unnecessary water ingress. The specified floor finish can now be laid directly over the floor membrane, which must not be punctured by any fixings through the floor. When a timber floor finish is preferred you must allow an expansion gap around the wall edge. Speak to the supplier of the floor finish to confirm the correct size of this expansion gap.

GENERAL

Occasionally, service pipes and other intrusions will interrupt a continuous application of the membrane. In this instance the membrane should be trimmed neatly around the service and sealed using the Wykamol Rope or Corner Detail Tape, or if necessary a combination of both.

CM8 & KONTRACT 8 - floor application

PREPARATION

Please refer to our section on preparation and attend to any preparatory work prior to installation. Always clean both edges of the membrane before making a seal.

DRAINAGE REQUIREMENT

If CM8 or Kontract 8 is to be used in a full or part earth-retaining situation, the membrane system must be drained. To comply with BS8102, you must assume that the structure will be subjected to water ingress at some time. CM8 and Kontract 8 can also be used on the floor in above ground situations to provide isolation from damp floors either as the primary DPM or above green concrete to accelerate the contract program. The concrete will continue to cure below the dry membrane surface allowing for floor finishes to be laid above the membrane much quicker than normal.

METHODS OF DRAINAGE FOR CM8 & KONTRACT 8 TO THE FLOOR

The drainage must effectively remove all water from below the membrane and take the water to a point of discharge such as a sump chamber or a form of safe natural drainage. Standing water can block the membrane with silt or lime scale so it is important for water to flow uninterrupted to the drainage point.

AQUA DRAIN & AQUA CHANNEL Aqua Drain & Aqua Channel sits in at the wall/floor junction and collects water from behind the wall membrane and receives water at the wall / floor junction. They are a designed method of removing water as it can interface with sump chambers, stack pipes, gullies, waste pipes etc. Aqua Channel can be



Laying out floor membrane

served by inserting jetting eyes into the system.

CENTRAL DRAINAGE When a new slab is being laid this presents the opportunity to install a Central Drainage system. A network of 100mm pipe work laid to evacuate water from the slab to a groundwater sump chamber. Please refer to our Technical Drawings guide. A silification treatment should be applied to new slabs. This will lock in free limes present within the slab. (Wykamol Microseal)

INSTALLATION OF CM8 & KONTRACT 8 TO THE FLOOR

Starting at one side of the room, unroll the membrane with the studs down and cut to fit the room as one would a carpet. The next membrane width is rolled out so that the flanged edge overlaps onto the edge of the previous roll of membrane. Clean both edges. Wykamol

Tape is then applied to the edge of previous roll of membrane with the backing paper still intact. Check the two widths for alignment, with the flange covering the backing paper. Starting from the middle of the joint, remove the backing paper and press down on the joint sealing the two sections together. This process is repeated until all areas are covered.

Seal the floor membrane to the wall membrane using Corner Detail Tape. Refer to Technical Drawings guide.

Where the floor membrane is required to be jointed to horizontal DPCs through internal and external walls, these joints should be sealed with Wykamol Corner Detail Tape.

Ensure both surfaces are clean and dry before attempting to make these joints. If there are any services up through the floor, the membrane can be cut and trimmed around them, and the gap filled and sealed using the Wykamol range of tapes. If necessary, a patch of membrane or plain DPC (PVC) is laid over and sealed to the service with Wykamol Rope and around its perimeter with Corner Detail Tape. It should be noted that protrusions through the floor slab should be avoided wherever possible as they create weaknesses that allow unnecessary water ingress.

The specified floor finish can now be laid directly over the floor membrane, which must not be punctured by any fixings through the floor. When a timber floor finish is preferred you must allow an expansion gap around the wall edge. Speak to the supplier of the floor finish to confirm the correct size of this expansion gap.



Installation of membrane

KONTRACT 20 - INSTALLATION TO THE FLOOR

Where knowledge of the ground conditions including the water table is unclear and condition of the existing slab uncertain, Kontract 20 should be used as either the main floor membrane or as a lost drainage layer with another floor membrane above acting as the vapour control layer.

It is very rare for water to pass through a solid

concrete slab or concrete raft, but where the slab or raft is of questionable quality it is possible for water to pass through cracks in a poorly constructed floor. If the quality of the slab is questionable, Kontract 20 should be used.

In „at risk“ sites and head height allowing, it is highly recommended to install Kontract 20. This

product has an air gap volume equal to 14Ltrs/m² and a greater resistance to hydrostatic pressure. Install Kontract 20 as per installation instructions of CM8 and Kontract 8 across the floor.

Where the Kontract 20 is to be used a lost drainage layer, the membrane is not sealed to the Aquachannel.

SLIMLINE MESH & KONTRACT MESH - INSTALLATION TO THE WALLS

Wykamol mesh membranes are used in both new build and retro fit basements where space is at a premium and or the choice of finish can be render, plaster, or dot and dab plaster board. It is also used to remediate damp walls and offer insulated finishes on cold external walls above ground.

PREPERATION

Please refer to the instructions as set out for CM8 & KONTRACT 8.

FIXINGS

Mesh membranes should be fixed to the walls using Wykamol Plaster Plugs. An 8mm drill bit is

needed and drill to a depth greater than the length of the plug. In below ground environments plug fixings should be sealed around the collar using pre-formed waterproof seals or Wykamol Rope subject to how wet the substrate is.

Above ground and on non soil retaining walls Plug fixings do not necessarily need to be sealed.

Fix in a square at 350mm centres, and then fix a plug in the centre of four fixings so it looks like a 5 on a dice. All fixings will then be a maximum of 250mm from each other.

It is essential fixings are no farther apart than this specification to avoid rippling of the membrane and subsequent cracking of the applied finish.

Where a Dot and Dab finish is being applied centres may be reduced to 350mm centres.

SEALING

Flange to Dimple – Use Wykamol Tape Dimple to Dimple – Use Wykamol Rope Butt to Butt Joint – Use Wykamol Fibre Tape

DRY LINING

In the remediation of a damp wall mesh membrane can be installed in a dry lining finish. To assist with the drying down of the wall it is recommended to introduce air movement behind the membrane. On the dry side of the membrane



Fixing aqua channels

the use of a vapour check plaster board product is recommended to guard against the effects of interstitial condensation.

FINISHES

Wykamol mesh membrane products can be finished by rendering, plastering or applying dot and dab adhesive grout and plaster board. Kon-tract Mesh can be finished in accordance with normal plastering techniques (BS 5492:1990) using proprietary lightweight plasters e.g. Tilcon „Whitewall“, Thistle „Carlite Bonding“, or a 1:1:6 cement:lime:sand render. NB Manufacturers recommended drying times may vary according to atmospheric conditions.

CEMENT BASED RENDERS

For internal cement renders the mix to be six parts clean sharp sand/one part lime or plasticizer/one part cement. A two-coat application is recommended allowing 7-10 day between coats. Drying time is important because shrinkage cracks may appear. Note: All plasters and renders etc. must be to a minimum total depth of 15mm. The under-coat should be applied with firm pressure to the depth of the studs and cover the mesh and be well scratched by means of a wire scratcher. When the scratch coat has set, the floating coat should be applied to a final overall finish of 15mm and lightly scratched to provide a firm key for the final coat, which should be to a minimum thickness of 3mm.

All plasters and renders should be applied strictly in accordance with the manufacturer's instructions, and good plastering/rendering practice as described in BS5492 and BS5262 Code of Practice.

Do not apply decoration until plaster is thoroughly dry. Note: If plasters other than those specified above are used they will not conform to the Wykamol Company specification and will therefore invalidate any guarantee on the material. If any special renders or plasters are to be considered, technical advice must be sought from the Wykamol technical representative.

For dry lining use a conventional bonding plaster in dabs to a minimum thickness of 8 mm and covering at least 50% of the membrane surface area. After the plastered, dry-lined or rendered surface has dried, the surface can be painted or wallpapered using traditional methods and materials without delay.

VENTILATION

Ventilation is an important requirement of the design of habitable building space, and is necessary for providing a healthy environment for all of the building occupants. Part F (2006) of the Building Regulations 2000 deals with ventilation within buildings. Requirement F1 states that: "There shall be adequate means of ventilation provided for people in the building".



Fixing corner tape on floor and wall membranes

Ventilation is required for one or more of the following purposes:

- Provision of outside air for breathing
- Dilution and removal of airborne pollutants, including odours
- Control of excess humidity (arising from water vapour in the indoor air)
- Provision of air for fuel-burning appliances (which is covered under Part J of the Building Regulations).

Ventilation is increasingly more of an issue because of the requirements of Part L of the Building Regulations 2000 to make houses more air-tight so as to prevent heat loss. The two sections of the Building Regulations appear to be almost at odds with each other resulting in

the requirement for mechanical ventilation in most cases. Basements present even more of a problem as natural ventilation, even in older properties not subject to Part L, is a real problem where the living space walls may be earth retaining to all elevations. BS8102 – 1990, the code of practice for the protection of structures against water from the ground, mentions the need for ventilation for Grade 4 structures to be used for the storage of hygroscopic materials such as for the archiving of paper documents. Although BS8102 does categorise Grade 3 habitable areas as being ventilated, unfortunately the British Standard pre-dates the current Part F by some sixteen years, and so is not giving advice that is up-to-date. If BS8102 were to be updated today,

it would include specific guidance for the forced mechanical ventilation of Grade 3 habitable areas, controlling humidity to around 50% RH. It is unlikely that works to waterproof a basement will comply with Part F unless mechanical ventilation is included, and so we recommend that mechanical ventilation is included within the design of all Wykamol Waterproofing Systems.

VENTILATION SYSTEMS FOR BASEMENTS

Part F names 4 methods of ventilation:

- **System 1:** Background ventilators and intermittent extract fans.
- **System 2:** Passive stack ventilation.
- **System 3:** Continuous mechanical extract.
- **System 4:** Continuous mechanical supply and extract with heat recovery.

For a dwelling which includes a basement that is connected to the rest of the dwelling above ground by a large permanent opening (e.g. an open stairway), the whole dwelling including the basement should be ventilated and treated as a multi-storey dwelling. If the basement has only a single exposed façade, while the rest of the dwelling above ground has more than one exposed façade, ventilation systems 3 and 4 are preferred. If systems 1 or 2 are to be used, seek expert advice.

For a dwelling which includes a basement that is not connected to the rest of the dwelling above ground by a large permanent opening the basement should be treated separately as a single-storey dwelling above ground. If the basement has no bedrooms, assume it has one bedroom for the purpose of determining ventilation provisions.

For a dwelling which comprises only a basement it should be treated as a single-storey dwelling above ground.

GENERAL

OVERLAP JOINTS

On walls, CM8 and Kontract 8 can be fixed either vertically or horizontally. The membrane is overlapped either by the flanged edge or by a minimum of three rows of studs.

GENERAL

In all cases ensure that membrane overlaps are made so as to provide continuous drainage behind the membrane. Avoid making laps that would allow water to drain onto or to be trapped by the joints.

REPAIRS TO STUDS

When the wrong stud is drilled in error this can easily be repaired by cleaning out the stud with a clean cloth and plugging it with sealing

rope. This can then be covered with a small patch of Corner Detail Tape or plugged with Wykamol Rope. The same repair can be used where a successful fixing has not been achieved due to drilling into unsound joints or structure. Simply make the repair and re-drill another hole.

WATERPROOFING PLUG FIXINGS

- **ABOVE GROUND NON SOIL RETAINING WALL:** No waterproof seal required.
- **ABOVE GROUND SOIL RETAINING WALL:** Seal with preformed seal or Rope.
- **BELOW GROUND BUT DRY SUBSTRATE:** Use preformed seal.
- **BELOW GROUND DAMP SUBSTRATE:** Use Wykamol Rope.

MATERIAL USAGE

- Order 1 x roll of Wykamol Tape for every roll of membrane.
- If applying battens to Brick plug fixings order enough plugs for 5 every M2 of wall membrane.
- Mesh membrane requires plug fixings equal to 18 per M2 of membrane. Less if dot and dab finish is being applied.
- 1 x roll of Wykamol Rope will seal 100 plug fixings.

(Source and Photos: WYKAMOL)



Leveling floor before installing floor membranes