

HydroBloc+Tanking Information Sheet

Description



SkilledBuild HydroBloc+ System is an advanced surface tanking system which forms an impervious moisture barrier. It consists of 3 parts:

1. HydroBloc+ SealPlug (Part 1)
2. HydroBloc+ Tanking (Part 2)
3. HydroBloc+ Junction Fillet (Part 3)

HydroBloc+ SealPlug is a quick setting cementitious based compound which instantly seals water seepage through significant cracks and joints prior to the application of HydroBloc+ Tanking. This generally includes cracks and joints in cellars which allow a flow of ground water to penetrate the area being tanked and cracks which cause significant loss of retained fluids from a tank or pool. The product is also very versatile and may also be used to fix metal stud and fixings into walls prior to the use of HydroBloc+ Tanking, as well as a vast range of small rapid hardening building repairs.

HydroBloc+ Tanking Slurry is a waterproofing membrane. It is supplied as a powder and when it is mixed with water it forms a smooth paste. This paste can be directly applied to concrete, blockwork masonry or cement renders, in areas where general waterproofing is required. The surface can be new, old, internal or external but it needs to be structurally sound and prepared so as to have a capillary open structure. After application, if done correctly, the surface will be water tight for the lifetime of the structure. The surface can easily be decorated after application. Dry lining can also be installed directly onto the second coat of our tanking slurry. Within 48 hours wallpaper, tiles, paint or carpet can be used upon the surface.

Ideally **SkilledBuild HydroBlock+ Fillet Seal** should be used in conjunction with HydroBlock+ Tanking Slurry to ensure a complete waterproof tanking system. This is a rapid curing and non-shrink hydraulic setting power which should be trowel applied to waterproof points which have stress potential, such as a floor and wall junction, to ensure that these sealing problems are tackled.

Areas of Use

- Internal or external application.
- Weatherproofing final render coat.
- Controls lateral damp penetration in masonry walls below ground level (underground cellars for example). The product is for use where the basement is above the level of the water table.
- Swimming pools prior to tiling or painting.
- Concrete drinking water tanks.
- Bathrooms, kitchens etc.
- Car parks and Garages.
- It is not harmful to humans, animals or fish and can be used safely on stable and kennel floors, dairy walls etc. It is also one of the few waterproofing products which can be used safely in fishponds.
- It withstands alkalis and spirits beyond emissions from septic tanks, slurry pits and animal effluence which is perfect for farming situations.
- It can be used on corrugated cement fibre roofing sheets and block and beam roofs for waterproofing and solar reflectivity.

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Key Benefits

- Provides excellent waterproofing properties by becoming an integral part of the structure to which it is applied thus eliminating potential wear de-lamination or peeling.
- Non-toxic.
- Flexible.
- Good adhesion.
- Non-tainting.
- Dual crystalline and surface action.
- Allows the substrate to breath.
- The migratory crystalline action is reactivated should future water contact occur.
- HydroBlock+ Fillet Seal seals vulnerable floor and wall joints and gives a permanent flexible joint.

The problems which exist in the waterproofing of below ground areas are many and varied and all cannot be solved with a simple specification. If in doubt seek technical advice. Always check that any ingress of running water in basements is due to hydrostatic pressure (normal ground water table pressure) and not as a result of burst pipes or leaking drains. Pipe or drain damage must be remedied prior to tanking work.

Please note that SkilledBuild sell an affordable HydroBloc+ System Application Kit which contains the essentials for successful application of these products.

How it Works

SkilledBuild HydroBloc+ System forms an impervious moisture barrier. Unlike previous generation tanking products, the HydroBloc+ system effectively plugs holes, seals corners and edge details. This advance is achieved by chemically sealing micro cracks by the formation of crystalline structures. Silica is absorbed into capillaries and fissures in the substrates of structures. Thousands of particles of silica penetrate up to 50mm and adhere to the capillaries in the structure permanently.

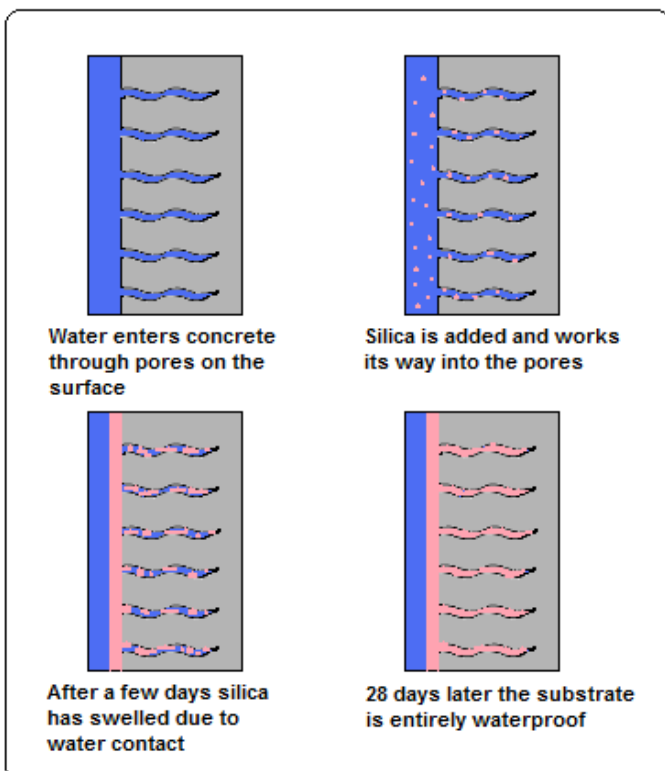
After application the silica grows into crystals by absorbing moisture and ingressing into the build. When no moisture is present the crystals lay dormant; when moisture appears the crystals reactivate and absorb it which keeps mortars and structures completely dry. This is far superior to a standard waterproofer which merely adheres to the substrate.

Directions for use:

PART 1 - HydroBloc+ SealPlug

Preparation

Ensure area to be plugged is clear of dirt and all loose surrounding material is knocked off to a solid surface. Narrow cracks must be opened up to a few millimetres using a chisel or grinder so as to allow the putty to be pressed deeply into the crack.



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Mixing and Application

HydroBloc+ SealPlug sets quickly so only mix in small manageable quantities. Mix SealPlug powder with clean water at a rate of 4:1 and blend until the product takes on a 'putty' like consistency.

Immediately work the putty deep into the crack and hold firmly in place for approximately 60 seconds, whilst the SealPlug firms to the touch and stays in position when released. After a few minutes the SealPlug will begin to cure hard.

Now apply HydroBloc+ Tanking Slurry (Part 2) as detailed below.

Please note, severe leaks with significant hydrostatic pressure may force the plug out of position prior to curing. In such circumstances refer to the SkilledBuild HydroBloc+ SealPlug Information Sheet at www.skilledbuild.co.uk for additional detailed information.

Product Data

Appearance: It is a cementitious compound containing Portland Cement, graded quartz sands, aggregates and chemical additives. It is supplied in powder form.

Coverage: A 2 layer application requires about 3kg/ m² of powder, but this depends on the roughness of the surface.

Packaging: 25kg.

Colour: Grey or White.

Shelf Life: 12 months when stored in unopened containers.

Storage: Store in a dry place and protect from frost.

Application: Brush or spray.

Spillages: Clean spillages promptly. Non-hardened materials may be removed from surfaces or tools with water.

PART 2 - HydroBloc+ Tanking

Preparation

As for most coating treatments, surface preparation is critical and although this can be time consuming it is essential that it is carried out thoroughly. This product is only fully effective if the capillaries in the brickwork, concrete or mortar are sufficiently absorbent to allow penetration of the crystalline chemicals.

1. CLEAN: All surfaces should be cleaned and free from paint systems, oil, loose dust, shutter treatments, curing compounds, surface hardeners and other contaminants. Surface preparation can best be carried out externally using high pressure water jetting, grit blasting or mechanical scabbling. Water jetting has the advantage that complete saturation of the substrate is achieved, but lack of drainage facilities may in some cases preclude its use. Internally, scrape or mechanically scabble off old paints and loose material or consider the application of sand and cement scratch coat trowelled to a flat finish. Mould, fungus and roots must also all be eradicated, for this we suggest you use SkilledBuild Organic Moss and Algae Remover (product code: N13720); or something similar.

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Safety

When freshly mixed our tanking slurry is alkaline, therefore the use of suitable gloves and eye protection is recommended.

Powdered products should be handled to minimise dust formation. In a confined area or if excessive dust is formed then a suitable mask must be worn.

Coverage

The content of a 25kg bucket when mixed at the correct ratio typically enables 16sq/m (170sq/ft) of single coat coverage. First coat coverage area will be reduced when applied to rough surfaces. Therefore as a 2 coat system estimate 7sq/m to 8sq/m per bucket is typical (approx. 80sq/ft).

By Brush: 1kg to 1.5kg per m² per coat.

By Trowel: 2kg to 2.5kg per m² per coat.

By Spray: 1.5kg per m² per coat

(1kg = 2.2lbs)

2. REPAIR: Cracks allowing water seepage should be repaired with HydroBloc+ SealPlug (Part 1) as described previously. Other significant cracks and other defects can be raked out and repaired using 3:1 (builders sand: cement) mortar. Use SkilledBuild Ultimate Pro SBR to prime surfaces and as an additive to the mortar mix.

Unstable masonry must be rebuilt or deep bed re-pointed to regain stability. Repaired areas can be coated with HydroBloc+ Tanking Slurry after 24 hours, but large areas of new brickwork, poured concrete or cement renders should be allowed to cure for at least 3 days before application is considered.

3. REMOVE FIXTURES: It is essential that all timber battens or fixings are removed before treatment commences. In addition, provision for re-fixing of battens etc. should be made in the wall prior to the application of the tanking slurry. Drilling for fixtures should not be carried out after tanking as the holes will breach the integrity of the system and resultant ingress or leakage may occur due to hydrostatic pressures. Metal studs and fixings may be installed with a suitably specified SkilledBuild UltraRez Resin or SealPlug product or SkilledBuild membrane fixings and plugs all suitably sealed with SkilledBuild butyl rope seals (See Dampfix – Damp proofing section on our website).

Application:

1. MIXING: It is important not to mix more material than can be applied within 30 minutes at 20°C (68°F). Working time will be significantly reduced as temperature increases.

The recommended mixing ratio is approximately 5.7 to 6 litres of clean water per 25kg bucket of SkilledBuild HydroBloc+ Tanking.

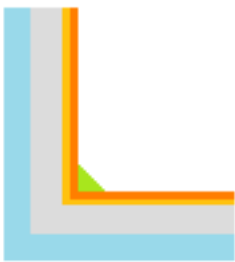
It is recommended that the powder is added slowly to 75% of the water and mixed. Add the remaining water to achieve a smooth lump free consistency. This is best achieved using a plaster's mixer or a SkilledBuild Mixing Paddle in an electric drill.

Note: Once the mixed slurry becomes stiff and unworkable, do not remix with water but discard and mix fresh material.

2.DAMPEN: HydroBloc+ Tanking slurry should be applied to a damp surface. This will ensure that the mixed slurry does not dry too quickly and enable deep formation of the crystalline sealers. Dry surfaces should be saturated with clean water, preferably 24 hours before application of the product and then re-wetted just before application. A few light sprays will achieve a more controllable and consistent result rather than a single drenching. Surfaces should not be 'wet' or display water when the slurry is applied.

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■ water pressure
 ■ first tanking coat
 ■ second tanking coat



Internal treatment against negative water pressure using a fillet seal.



Internal treatment against negative water pressure using a chase.

3. PLACEMENT: Normal problems of damp and water ingress can usually be addressed by the application of two coats of this product over the whole area. If HydroBloc+ Junction Fillet (Part 3) is to be used then this is applied immediately after the application of the first coat of HydroBloc+ Tanking.

The second coat of Tanking Slurry can be applied as soon as the first coat becomes 'touch dry'. The second coat should be applied at right angles to the first coat to ensure complete coverage is achieved. In all cases the second coat must be applied within 24 hours of the first. In hot, dry climates a fine water mist should be sprayed over the surface of the first coat before application of the second.

When applying by brush use a SkilledBuild Block Brush or a medium short, hard bristle type. Trowel application of the second coat can be carried out to provide a dense polished finish, which is ideal if a painted finish is required.

It is important that no less than the minimum amount of mixed slurry per square metre be applied and it is essential that two coats are used. (Dry Powder Weight).

Please note surfaces subject to significant water pressure should receive 2 or 3 coats to a total of 6kg per m².

PART 2 - HydroBloc+ Fillet Seal.

Application

1.Mixing: Do not mix more material than can be applied within 30 minutes at 20°C (68°F). Working time will be significantly reduced as temperature increases.

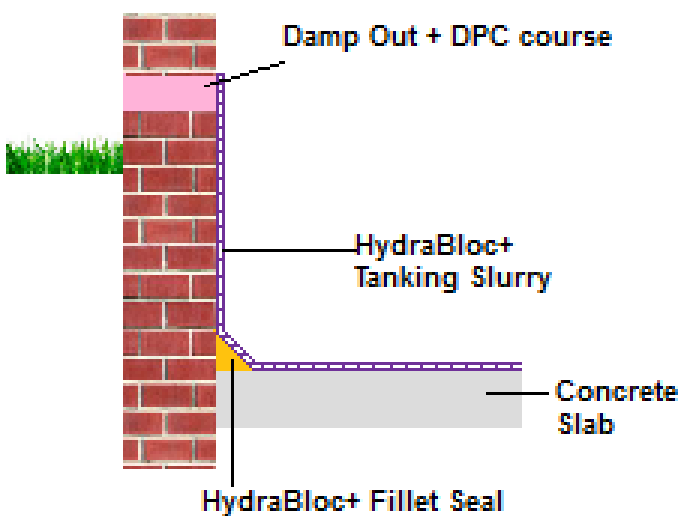
Mix with clean water to form a workable plaster like consistency.

It is recommended that the powder is added slowly to the water and mixed to a smooth lump free consistency. This is best achieved using a plasterer's mixer or a SkilledBuild Mixing Paddle in an electric drill.

Please note, once the mixture becomes stiff and unworkable do not remix with water but discard and mix fresh material.

2.Placement: HydroBloc+ Fillet Seal is best applied after the first coat of HydroBloc+ Tanking has been applied. Fillet Seal must be applied on a damp surface to maximise its effect and ideally when the Tanking slurry is still 'tacky'.

The recommended application is by trowel. The exact shape and size of the fillet is not critical, but the larger and thicker the better. The fillet can be left angled but generally it is curved into the corners and feathered for 50mm to 100mm (2" to 4") along the adjacent surfaces using a radius trowel.



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Achieve a smooth finish to the fillet. Application rates will vary according to site conditions and size of fillet required. A 25kg pack will enable fillet between 10-25 linear metres (typically 17 metres).

If it is impractical to provide a fillet between floor and wall then a less satisfactory alternative is a saw cut in the floor slab (min 20mm deep) as close to the wall as possible. Clean out all dust and debris from the cut and dampen as necessary. The first application of HydroBloc+ Tanking must be allowed to flow into and totally fill the saw cut– the subsequent second coat of slurry should be applied uniformly over the area so that the cut is not evident.

Finishing:

1. Plastering or Rendering: Remedial plaster systems may be used over this product provided an intermediate bonding compound is employed. Dilute SBR with an equal volume of water and apply to the cured tanking slurry. Allow the SBR coat to dry to 'tacky', but not fully dry and plaster immediately.

Where cement rendering is required over the finished tanking system, brush or trowel on a bonding slurry mixed 2 parts sand : 1 part cement : 1 part SBR (by weight). Add water as required and mix. Apply the bonding slurry to the tanking and trowel on the first render coat before the slurry dries.

2. Ventilation and Curing: Dehumidifiers should not be used immediately after the application of this product as this would arrest the curing system – moist conditions are desirable for a period of at least three days, after which time de-humidifiers may be used to control condensation. It is recommended that wherever possible ventilation is provided, as lack of it may cause small condensation beads to form on the surface of the tanking slurry.

Uniform hardening and water tightness cannot be assured if the product is allowed to dry out too rapidly. Protect the coating against excessively fast evaporation in hot conditions or drying winds. If these conditions prevail, cover surfaces with plastic, damp hessian or mist spray regularly.

2. Decoration: A period of at least 6 months should be allowed before permanent decoration directly onto the tanking is considered. The use of permeable emulsion paints may be applied as soon as the tanking has cured and dried.

Important Information

SkilledBuild is committed to development and supply of quality products and may substitute or change product branding or specification or technical data without notice. Always check for latest information.

All information provided is based on practical tests & published data and is intended to guide a competent DIY user or contractor in the typical use of products for minor works but is without guarantee. If a failure of the works will be costly to repair or hazardous then design & execution must be undertaken by competent persons. Further advice should be sought from a suitably qualified advisor. Skilled Build may be able to answer simple product enquiries.

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