

TECHNICAL DATA

Premium Liquid Tanking RTU



Code 1101 Grey 10 Litre
1100 Grey 20 Litre

PREMIUM LIQUID TANKING RTU:

Is a single pack system of water-based latex based liquid compounds **principally for basement tanking** (waterproofing), but with many other uses.

USES

- **Basements.** As part of a tanking (waterproofing) system below ground level.
- **Walls.** Under or over render or under plaster as a tanking against hydrostatic water or as a vapour barrier.
- **Floors.** Below or above screeds to provide a damp proof membrane (DPM). Above screeds it must be protected. (See Resistance Properties)
- **Roofs.** As a waterproofing coating. It should be protected from UV.
- **Tiling.** Under tiles in wet areas.

PREPARATION OF SUBSTRATE

Before undertaking tanking it is essential that the different types of substrate (e.g. brick, stone, concrete) be identified, because the type and degree of preparation will vary considerably and therefore the costs involved must be carefully calculated. It cannot be emphasised too greatly that **all waterproof coatings entirely rely on the quality of preparation** for their long-term effectiveness and therefore considerable time and expense must be allowed for this work within the job costing.

- All surfaces to be coated must be initially hacked off to expose the base substrate and joints. Samples of contaminated surface plaster or paint, and joint material, can be sent for laboratory salts analysis. Salts contamination is common in cellars and basements, particularly those used for processing meats, storing coal and previously occupied by animals. Such contamination can damage backing render coatings and 'blow.'
- Embedded timbers and soft or structurally unsound building materials must be removed and areas repaired using suitable brick or blocks and a mortar incorporating **Biokil Crown SBR Bonding Agent**. If the structure is too loose for such repair, consideration should be given to the construction of new inner lining walls made of block or brickwork. Do not attempt to repair and coat severely decayed walls or floors: *tanking systems are only as good as the underlying structure to which they have been applied.*
- Floors must be given the same consideration as walls. Application of a coating to a floor surface causes addition hydrostatic pressure to the structure which is no longer relieved by the free passage of water. Complete confidence in the structural integrity of the floor slab is essential. Sound concrete floors can be used as a base, but may prove unsuitable if the original floor level is to be maintained. In general, it is preferable to remove all floors and relay using concrete. Using an original floor and relying on its in-built membrane is extremely risky, partly because of the difficulty of establishing the state of the membrane and partly because of the problems arising at the floor to wall joint. Making a waterproof joint between a wall coating and an existing sub-floor membrane is difficult and usually results in a series of water leaks at the wall base.
- A temporary submersible pump may be required, if the area is subjected to penetration by running water. If necessary, a small temporary sump can be provided within the concrete floor to allow the pump to operate efficiently. Pressure relief holes should be drilled at the bases of all walls to allow the surfaces to be free of water pressure during preparation and subsequent coating. The relief holes can be sealed using Mapei Lamposilex (water plug).
- The exposed wall material must be mechanically cleaned to remove all contaminants (e.g. paints, plaster remains) and in the majority of cases this can only be achieved by grit blasting or needle gun treatment. The joints must be raked out to a minimum of 25mm, including the horizontal joints between walls and the horizontal joints between walls and floors. Replacement concrete floors, excluding the screeds, should be laid at this stage. Channels for wires and pipes must now be cut and recesses for subsequent fixing grounds provided (e.g. for door frames, heating units etc). All areas to be treated should be thoroughly vacuum cleaned.
- Ensure there is no surface or running water to the area due to hydrostatic pressure penetrating the substrate.
- The cleaned surfaces must be carefully examined with the aid of an illuminated magnifier and further cleaning carried out if any surface contaminants are still visible. The surfaces must now be washed down with fresh flowing water. If the walls or floors are made of concrete, concrete cleaner can be applied to acid etch the wet surfaces, followed by flushing with fresh water. It is essential that all traces of acid be washed off, to avoid long-term damage to coatings.

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- h) Walls should now be treated with **Biokil Crown Antisulphate-Salt Neutraliser**. Except in the case of concrete where acid-etch has been used.
- i) A qualified person must now make a final check that all the floor and wall surfaces have been correctly prepared and that no surface contaminants of any kind remain. It is this inspection, which will largely determine the success or failure of the subsequent coating works.

IMPORTANT

Tanking Coatings cannot be applied successfully to walls or floors where there is any active water seepage or pressure at the time of coating or during the 7 days (minimum) after the final coat has been applied. This warning applies because all materials have a curing period and will not resist water until fully cured. The curing period will be extended if low temperatures or high levels of humidity are maintained, but is generally at least 7 days. It is therefore very important to maintain the pressure relief measures applied in (d) above until curing is complete.

PREPARATION OF JOINTS AND GROUNDS

1. All defects must be repaired with brick or block using a mortar incorporating **Biokil Crown SBR Bonding Agent**, (4 or 5:1 sand/Sulphate resistant cement mix).
2. All defective joints between stones, bricks and concrete blocks must be made good with **Mapegrout Fast-Set**. Weeping defects, particularly in concrete, can be repaired with **Lamposilex**, but this material sets very quickly and is therefore not suitable for large repairs. It will not provide a waterproof plug in very small volumes and should not be used in holes of less than 20mm in diameter. If necessary, holes and cracks must be opened up to at least 20mm across and undercut to provide a key.
3. Assuming that an original membrane does not exist, a floor to wall fillet of **Mapegrout Fast-Set** of not less than 25 x 25mm should be made giving a smooth surface curve for subsequent coating. If an original membrane can be exposed without damage then this fillet should be taken down over the membrane, trapping the membrane material within the fillet.
4. Recesses previously hacked out for 'grounds' should now be filled with **Mapegrout Fast-Set** to a maximum thickness of 20-25 mm per layer and carefully marked on the scale plan.
5. Ducting and pipes intended to penetrate the final coatings should now be sealed using **Lamposilex with a final coat of Biokil Crown MS Polymer**. It is most important that ventilation ducts are provided and consideration given to the permanent plumbing of de-humidifiers.

RENDER BACKING COATS

The type and condition of the exposed substrate needs to be considered before the application of a backing coat. A suitable backing coat would be **Biokil Crown Renovating Render** or alternatively the use of a washed, coarse, sharp, concreting sand (table 5, grade M) as laid down in B.S.882 1983 and fresh Sulphate Resistant Cement, mixed in the ratio 4 or 5:1. The gauging solution must incorporate **Biokil Crown SBR Bonding Agent** in the ratio 4 parts clean water to 1 part SBR. A slurry consisting of 1 part **Biokil Crown SBR Bonding Agent**: 1 part water mixed with fresh sulphate resistant cement to a creamy consistency should be applied by brush and the render coating placed whilst this is still tacky.

Failure to adequately bond the render to the substrate will result in hollowness and cracking. Pre-damping of the substrate may be required if the suction is high: a simple water splash test should be carried out, in order to visually assess suction.

TECHNICAL CHARACTERISTICS

Most wet applied cementitious materials bond well to the dried PREMIUM LIQUID TANKING RTU, particularly if they contain **Biokil Crown Rendermix 3 in 1**. When applying materials such as screed, render or plaster the highest adhesion results are obtained if the material is applied as soon as the PREMIUM LIQUID TANKING RTU is touch dry. Alternatively the surface of the undried PREMIUM LIQUID TANKING RTU can be blinded with clean sharp sand or **Biokil Crown SBR Bonding Agent** slurry as previously detailed applied by a splatter gun to provide some mechanical key to the subsequent coating. Best Tanking results are obtained using PREMIUM LIQUID TANKING RTU in conjunction with **Biokil Crown Renovating Render** which provides maximum consistency of mix.

APPLICATION PROCEDURE

The background surface should be smooth or have a light even texture. Any masonry should be flush pointed and defects in existing surfaces made good. **Freshly rendered surfaces and pointed joints should be left for at least 14 days to cure at above 7°C before application** It is always prudent to use **Biokil Crown Antisulphate Salt Neutraliser** where ground water has penetrated the substrate. To instantly stop water leaks use **Mapei Lamposilex** (water plug)

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The surface needs to be clean, sound and free of dust, loose material or free surface water. The Premium Liquid Tanking RTU should not be applied when the temperature of the background, or the air temperature, is below 7°C. It is sometimes advantageous to pre-wet concrete or masonry backgrounds so that these are damp but free from any water glistening on the surface, to aid the wetting out of the background.

The Premium Liquid Tanking RTU may be applied by brush, roller or airless spray, care should be taken to ensure that the correct dry coat thickness is applied.

The thickness of the dried coating per coat depends on the method of application. For a single dry coat thickness of more than 0.3mm it is recommended that the coating be applied by airless spray. If airless spray is used, single dry coat thicknesses of up to 1mm can be obtained. (Note: A single coat of 0.6mm dry thickness or more will require a greater drying time than for an equivalent multicoat application.)

When two coats are being applied it is recommended that the coats be applied at **right angles to each other**.

Before applying the second coat it is necessary to let the first coat become touch dry. The time required to reach this touch dry condition will vary according to site conditions but will typically be in the order of 1 hour. It is preferable if the second coat is applied within 24 hours of applying the first coat. After all coats have been applied, the Premium Liquid Tanking should be left for at least 4 days before attempting any ponding tests. Under unfavourable drying conditions this period may need to be extended.

In some situations e.g. at high stress points such as wall/floor junctions it is beneficial to use a **Mapegrout Fast-Set** reinforcement before applying the Premium Liquid Tanking RTU.

PROPERTIES

Resistance properties after 7 to 10 days.

Floor Finish-Abrasion resistance on horizontal surfaces

This product is not suitable for use as a finished horizontal surface that will be subjected to traffic (foot or vehicle). It should be protected by the **Mapei Latexplan 2-pack floor levelling system** or carpet, floor tiles or linoleum.

Resistance to positive water penetration

Will resist pressure up to a head of water of **20-metres**

Resistance to negative water penetration

When using the Premium Liquid Tanking RTU in basements the coating should be overcoated with render, (we recommend **Biokil Crown Renovating Render**)

CLEANING

After use wash hands thoroughly with soap and water. Work to a high standard of personal hygiene. Clean all tools etc., with soap and water. See separate Material Safety Data Sheet.

CONSUMPTION

For the final dried coating thickness to be 0.6mm (2 X 3mm) a **coverage rate of 1.2kg/m²** is required. **This corresponds to approximately 1 litre/m².**

PACKAGING

10 Litres and 20 Litres

STORAGE AND HANDLING

Store at an even temperature of between +5°C and +35°C avoiding frost and direct sunlight. Stir product before use. If stored according to these conditions and in the original unopened containers, the product will be stable for **6 months** following delivery. Product should be used as soon as possible after opening.

SAFETY

As some people find this type of product irritant to the skin all users are recommended to use Biokil Crown barrier cream and Biokil Crown protective clothing. See also separate Material Safety Data Sheet.

COMPLIMENTARY PRODUCTS

The following Biokil Crown products are recommended for use with PREMIUM LIQUID TANKING RTU (Ask for Data Sheets) **Biokil Crown Renovating Render, Biokil Crown Rendermix 3 in 1, Biokil Crown SBR Bonding Agent, Biokil Crown Antisulphate Salt Neutraliser, Mapei Mapegrout Fast Set, Latexplan and Lamposilex**

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