

THOROSEAL[®]

Waterproof Coating for Concrete and Masonry

BBA CERTIFICATED



BS 476 FIRE RATING DWI APPROVED FOR USE WITH POTABLE WATER

Description of Product

THOROSEAL[®], when mixed with water or a THORO[®] ACRYL 60/ water blend, provides a waterproof coating to concrete and masonry above and below ground level. It is applied to a minimum thickness of 2mm in two coats by stiff brush, broom or spray.

Fields of Application

- Tanking of basements
- Water reservoirs
- Tunnels
- Swimming pools
- Lift pits
- Concrete pipes
- Shower walls and floors prior to tiling

Note: THOROSEAL[®] is NOT suitable for retaining water with a low calcium hardness or pH of less than 7.2 (refer to THOROSEAL[®] FX100 for such applications) or for application to horizontal substrates which may be subject to freeze thaw cycles or vehicular traffic.

Features and Benefits

- DWI approved for use with potable water
- Labour saving, simple and rapid application
- Water vapour permeable
- Allows substrate to dry out
- Is applied to damp substrates
- Applied by brush or spray
- Bonds with concrete and masonry, becoming an integral part of the substrate thereby overcoming hydrostatic pressure
- Solvent free

Typical Properties/ Technical Data ^(a)

Wet Density, kg/m ³	2080
Compressive strength (28 days), N/mm ²	55.0
Tensile strength (28 days), N/mm ²	3.7
Flexural strength (28 days), N/mm ²	7.6
Adhesive strength (28 days), N/mm ²	2.5
Water vapour permeability, μ	86 - 120
Maximum particle size, mm	0.8
Resistance to negative pressure, bar	4

^(a) Typical values at 20°C

Colours

Available in Grey and White

Tests and approvals

Approved by the Secretary of State for the Environment under Regulation 25 (1)(a) for use in contact with potable water. Specific instruction for use available on request.

Awarded British Board of Agrément Certificate No. 89/2138/ fourth issue.

BS 476:Part6:1981 *Methods of test for fire propagation of products* I = 1.5

BS476:Part7:1971 *Surface spread of flame tests for material* Class 1 – Nil spread of flame.

Conforms to class 0 rating as defined in Building Regulations 1991 for England and Wales, approved Document B, Appendix A12.



The Chemical Company

Application Procedure

For tanking applications refer to the Thoro Basement Waterproofing Guide.

Substrate quality

Substrates to be treated must be completely clean, structurally sound and mechanically keyed. All surface coatings, defective renders, foreign matter, formwork treatments and other contaminants that may affect the bond adversely should be removed

Substrate Preparation

Substrates should be prepared by abrasive blasting or high-pressure water treatment. *Do not* use scabbling or any other aggressive method.

All mortar joints to be flush-pointed.

Repair with WATERPLUG and/or THORO[®] STRUCTURITE as required.

All wall/floor intersections to be prepared by cutting a 20mm by 20mm chase along the junctions and filling with WATERPLUG, finishing in an angle fillet to "round out" the junction.

Water infiltration through the substrate to be treated should be either diverted by drainage or concentrated at weepholes, which will be plugged with WATERPLUG after the application of the final coat of THOROSEAL[®]

Basements in areas containing high levels of soil or ground water sulphates may require a pre-treatment render. Consult BASF Construction Chemicals (UK) for details.

Mixing

Liquid Content

THOROSEAL[®] mixed with THORO[®] ACRYL 60 (diluted 1 part THORO[®] ACRYL 60 to 3 Parts clean water): 4.8 – 5.6 litres of liquid per 25 kg bag.

THOROSEAL[®] mixed with water:
4.8 – 6.1 litres per 25 kg bag.

The quantity may vary slightly depending upon the ambient conditions. In all instances, it is important that the material is mixed to the correct consistency.

In applications where the THOROSEAL[®] is expected to be in contact with hydrocarbons (such as diesel oil, petrol etc.) potable water only should be used as the mixing liquid.

Mechanical Mixing

Blend the powder into the mixing liquid. Use a suitable mixing paddle in a slow speed drill (400 - 600rpm). Let the mix stand for 10 minutes to allow full saturation to

take place. Re-mix adding a small amount of liquid if required to obtain the correct consistency.

Hand Mixing

Add the liquid to the powder whilst stirring with a trowel or paddle. Let the THOROSEAL[®] mix stand for 20 minutes to allow full saturation to take place. Re-mix adding a small amount of liquid if necessary to obtain the correct consistency.

Consistency

Do not exceed the maximum liquid requirement.

The material should be mixed to a thick, creamy, lump-free consistency that will just support the weight of the stiff brush.

Mixed material must be used within 60 minutes from the start of mixing, or less under hot weather conditions.

Do not re-temper the mix.

Application

Note: Do not apply THOROSEAL[®] to frozen substrates or if the ambient temperature is below 5°C or expected to drop below 5°C within 24 hours.

Always apply to a pre-dampened substrate. High-suction substrates will require more dampening than dense substrates. Ensure there is no free standing water on the substrate prior to application. The nominal thickness per coat must be between 1.0 and 1.5mm.

Application methods

THOROSEAL[®] can be applied by *THORO BRUSH, broom or spray. **THOROSEAL[®] must not be applied by trowel.**

* A suitable brush will be 6" (150mm) in width and have a short pile comprising stiff nylon bristles of 3" (80mm) in length.

The first coat **MUST** be worked into the substrate with a stiff brush, while still wet, to ensure an intimate bond to the substrate, even when applied by spray.

First coat

Apply a first coat of THOROSEAL[®] at a minimum thickness of 1 mm by brush, broom or spray. Work the mix firmly onto the pre-dampened, prepared substrate by brush or broom. After completing 2 or 3m², strike off with the brush or broom in one direction for a neat appearance and to provide a mechanical key for the second coat.

Care must be taken not to spread the material too thinly. When the material begins to drag or "ball", do not add more water, but dampen the substrate again. When applying by spray use a 3-4mm nozzle at a pressure of 3.6 - 5.0 bar (50-70lb/in²).

Allow at least an overnight cure before applying a second coat. Apply the second coat when the first coat is sound enough to receive it without damage.



The Chemical Company

Second coat

Dampen the first coat and remove excess moisture. Brush, broom or spray the second coat of THOROSEAL® at a minimum thickness of 1mm, onto the substrate (as above) and finish at right angles to the previous coat.

To aid proper coverage the second coat should be a different colour, for example, white on grey.

If the second coat is to be the final finish, it may be finished with a brush or sponge float to give a uniform surface.

If a cementitious plaster or render is to be applied then finish the THOROSEAL® with horizontal brush strokes to give more grip. In most situations, these can be applied the next day. If this is likely to be delayed for some time, then the THOROSEAL® should be sand dashed immediately after application to aid adhesion.

Never use a gypsum based plaster to cover THOROSEAL® in a tanking application

Curing

Damp cure for 24 hours after which time the THOROSEAL® must be allowed to air dry. In cold, humid or unventilated areas it may be necessary to leave the application for a longer curing period or to introduce forced air movement.

NEVER use dehumidifiers during curing periods.

Clean up and spillages

Tools, equipment and spillages should be cleaned immediately with clean water

Additional Information

THOROSEAL® stops running water but remains vapour permeable throughout its life. Only vapour permeable coatings and finishes can be applied on to the substrate. In above ground conditions, MASTERSEAL F1131 is recommended.

All closed areas such as basements or cellars must have adequate ventilation or condensation on the walls will occur. It is most likely to form in areas, which were previously damp. Increasing the ventilation and/or plastering the walls with a lightweight, **cement-based** plaster can alleviate the formation of condensation.

If THOROSEAL® is used to waterproof fish tanks or swimming pools, it should be washed down after curing is complete with salt water and rinsed with clean water. Repeat the rinsing until the required pH conditions are obtained. Failure to do this and to monitor the pH of the water until stable can lead to the death of fish.

Coverage

Approximately 15m² per bag at 1mm thickness in one coat.

Apply two coats.

Coverage is influenced by the roughness of the substrate. On rough substrates the quantities required will increase significantly.

Packaging

THOROSEAL® is available in 25kg bags or pails.

THORO® ACRYL 60 is available in 5 and 20 litre plastic containers.

Storage

All materials should be stored under cover, clear of the ground and stacked not more than 6 bags high. Protect the materials from all sources of moisture and frost.

Shelf Life

Rotate stock in order not to exceed the shelf life of 6 months for THOROSEAL® and 12 months for THORO® ACRYL 60.

BASF Construction Chemicals (UK) Ltd

PO Box 4

Earl Road

Cheadle Hulme

Cheadle

Cheshire

SK8 6QG

Tel: +44 (0) 161 485 6222

Fax +44 (0) 161 488 5220

www.basf-cc.co.uk



The Chemical Company

THOROSEAL BASF Construction Chemicals (UK) Ltd Version 8 – July 2007

Health and Safety

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Powder Products

Should be handled to minimise dust formation; use light mask if excessive dust unavoidable. Cement powders when wet or moistened can cause burns to skin and eyes, which should be protected during use.

Spillage

Chemical products can cause damage; clean spillage immediately.

Disclaimer:

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.