

THOROSEAL[®] FX100

(Internationally known as MASTERSEAL[®] 588)

Elastomeric Waterproof Coating for Concrete and Masonry In Water Retaining Structures Subject to Movement

APPROVED FOR USE WITH POTABLE WATER

Description of Product

THOROSEAL[®] FX100 powder and liquid when mixed forms a brushable waterproof slurry, which cures to a flexible elastomeric membrane.

Fields of Application

- Water retaining structures which may be subject to movement.
- Retaining water of a low pH or soft quality
- Waterproofing of new structures where movement is expected from drying shrinkage
- To provide anti carbonation protection to concrete

Note: THOROSEAL[®] FX100 is not suitable for prolonged contact with hydrocarbons such as petrol, fuel oil, etc.

Features and Benefits

- Quick and easy brush or spray application
- Applied to a damp surface, no drying out of the substrate required
- Solvent free – safe to handle and use, environmentally friendly
- Will accommodate movement up to 0.5mm
- Internal or external application to concrete and masonry
- Effective method of treating cracks and joints

Technical Data/Typical Properties (a)

Wet Density, kg/m ³	1680
Max particle size, mm	0.6
Water resistance, bar	
Positive pressure	1.5
Negative pressure	1.0
Water vapour permeability, μ	985
CO ₂ permeability, μ	100,000
Or at 2mm is equivalent to 500mm of P35 grade concrete cover	
Resistance to chloride ion penetration, %	0.001
Water absorption (ASTM 642C), %	1.5
Crack/joint movement accommodation, mm	0.5
Reinforced	1.5
Freeze/thaw resistance (ISO/DIS 4846.2)	No scaling after 50 cycles
Tensile strength (28 days), N/mm ²	0.64
Adhesive strength (28 days), N/mm ²	1.00

(a) Typical values at 20°C

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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 upon request.

Application Procedure

Substrate preparation

Remove all surface coatings, defective renders, foreign matter, formwork treatments, laitance, algae and other contaminants that may affect the bond adversely. Suitable methods are blasting or high-pressure water treatment. *Do not* use scabbling or any other aggressive method.

Repair cracks or breaks with THORO® WATERPLUG and/or THORO® STRUCTURITE as required.

Mixing

Provide adequate ventilation when mixing and applying THOROSEAL® FX100 powder and liquid.

Blend 25kg of THOROSEAL® FX100 powder into 10 litres of THOROSEAL® FX100 liquid while stirring with a suitable mixing paddle in a slow speed drill (400 - 600rpm), until lump-free, slightly viscous slurry is obtained. This should be achieved within 2 minutes. *Do not over mix.*

Allow the mixed material to stand for 10 minutes for full saturation to take place. If using spray application add 0.4litre of THOROSEAL® FX100 liquid. Re-mix for 10 - 20 seconds before use.

Application

Note: Do not apply to frozen substrates or if the ambient temperature exceeds 30°C or is below 5°C or expected to fall below 5°C within 24 hours.

Apply the material to a pre-dampened surface within 60 minutes of mixing. High suction substrates will require more dampening than dense substrates.

Apply a first coat of THOROSEAL® FX100 mix at a minimum thickness of 1mm by brush, broom or spray. This coat should be well brushed into the surface. Care should be taken not to spread the material too thinly. Finish by brushing in one direction for a neat appearance.

Spray through a 3-4mm nozzle at a pressure of 3.6 - 5.0 bar (50-70lb/in²).

If the brush begins to drag during application, do not add more liquid but dampen the surface again.

The THOROSEAL® FX100 mix should be allowed to cure for a minimum of 6 hours at 20°C and longer at lower temperatures. Low temperatures and high humidity will delay setting and curing.

If there is condensation on the first coat, this must be removed with a sponge.

Apply the second coat at a minimum thickness of 1mm and finish in one direction.

Note: Condensation may occur after waterproofing basement areas. It could last for a considerable period in poorly ventilated areas and is most likely to form in areas, which were previously damp. The formation of condensation can be alleviated, by increasing the ventilation.

Curing

Damp cure for 24 hours, after which time the THOROSEAL® FX100 must be allowed to thoroughly air-dry. Refer to specific instructions for contact with potable water.

Coverage

A minimum of 1.1kg/m² of powder is required for each layer. One unit (25kg powder, 10ltr liquid) will cover a maximum of 22m²/layer.

Cleaning

Tools, equipment and spillages should be cleaned immediately with clean water. Dried material should be removed as soon as possible with xylene.

Over-painting

Do not over-paint the membrane in basements.

In above ground conditions, Masterseal 367 is recommended.

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Packaging

THOROSEAL® FX100 powder is available in 25kg bags.

THOROSEAL® FX100 liquid is supplied in 10ltr 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.

THOROSEAL® FX100 Degussa Construction Chemicals UK Version 5

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.

Solvent Based Products

Use in well ventilated areas; avoid inhaling. Suitable respiratory equipment may be needed, eg when spraying. Can cause skin, eye irritation. Wear protective eye shields and gloves during use. Do not smoke or allow sparks or naked lights when stored or in 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.

Resin Products

Can cause irritation, dermatitis or allergic reaction. Use protective equipment particularly for skin and eyes. Use only in well ventilated areas.

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.

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