

Shieldproof CW270



MICSHIELD®

Two-component, Elastomeric, Cement-based Waterproofing

Description

Shieldproof CW270 is a two-component, polymer-modified, cement-based waterproof coating, designed to protect concrete structures from water and water vapor and to provide an impervious barrier against chloride and carbon gas intrusion. **Shieldproof CW270** consists of a blend of cement, polymers, selected fillers, and silica sand in the powder form in addition to acrylic co-polymers and wetting agents in the liquid form.

Uses

- Wet areas such as toilets, kitchens, pipes, and basements.
- To provide concrete protection from water, vapor, chloride ions, and acids.
- Suitable for water retention areas such as swimming pools, ponds, and reservoirs.
- High resistance to positive and negative hydrostatic pressure situations.
- Can be used as a lining for water-containing structures in wet areas and swimming pools.

Characteristics / Advantages

- Factory controlled, just mix pre-blended powder and modified acrylic polymer together.
- Non-toxic and can be used in contact with drinking water.
- Durable, excellent resistance to UV and long-term weathering conditions.
- High flexibility with crack bridging capability.
- Breathable, allows water vapor to escape the structure.
- Color stable.

Standard Compliance

- EN 1504-2: Principle 1.3, 2.2, 8.2
- BS 6920
- DIN 1048

Packaging

Shieldproof CW270 is supplied in 23 kg packs (5 kg polymer, 18 kg powder).

Safety Instructions

Shieldproof CW270 contains hydraulic cement and may cause irritation to the skin or eyes. For further information Refer to the Material Safety Data Sheet.

Typical Properties

Color/ Appearance	White liquid polymer (A) with white/grey powder (B)
Mixed Density (@ 23°C)	1.65 ± 0.10 g/ml
Working Time (@ 23°C)	30 minutes
Overcoating Time (@ 23°C ± 2)	4 – 6 hours
Application Thickness	1 – 2 mm
Ready for Tiling Works	3 days
Full Cure	7 days
Resistance to Positive Water Pressure (DIN 1048)	7 bars
Resistance to Negative Water Pressure (DIN 1048)	3 bar
Elongation at Break (ASTM D412) @ 2mm thickness	> 75%
Tensile Strength at Break (ASTM D412) @ 2mm thickness	0.85 MPa
Static Crack Bridging (EN 1062-7)	> 1.6 mm
Dynamic Crack Bridging (EN 1062-7) Method B	Class B 4.1 (0 – 300 - 0 microns)
Permeability to Water Vapor (EN ISO 7783-1)	Requirement: $S_D < 5 \text{ m}$ 0.5 m (Class 1)
Liquid Water Permeability (EN 1062-1)	Requirement: $< 0.1 \text{ kKg/m}^2\text{-h}$ $0.09 \text{ Kg/m}^2\text{-h}$ 0.5
Permeability to CO ₂ (EN 1062-6)	$S_D > 50 \text{ m}$
Adhesion Strength (EN 1542)	$\geq 1.1 \text{ MPa}$



Application Instructions

1. Surface Preparation

The substrate must be sound, clean, dry and free of all contaminants such as dirt, oil, grease, loose coatings and surface treatments, etc.

Concrete substrates should be prepared mechanically using grinders or captive blast cleaning to remove cement laitance. Weak or damaged concrete must be removed, and surface defects such as blowholes and voids must be repaired using the appropriate concrete repair products range.

Thoroughly saturate the surface of the concrete to provide a saturated surface dry condition (SSD). Poor-quality concrete may require soaking for a significant length of time. Any surface water should be removed using an oil-free compressed air jet. The application temperature is 5 – 35°C.

2. Mixing

Add the powder part (18 kg) to the liquid part (5 kg) gradually and mix using a low-speed mixing drill fitted with a suitable mixing paddle. Continue mixing for 3 – 5 minutes until a smooth, homogenous, lump-free consistency is achieved.

3. Application

Application of **Shieldproof CW270** can be carried out by brush, roller, trowel, or wet spray machine depending upon the area to be covered.

General Application:

Two coats are necessary for better performance, each at 1 mm wet film thickness. Care should be taken to ensure that any imperfections, such as blowholes, are filled during application whilst the material is still wet using a dry sponge. A second coat can be applied once the first coat has dried (within the recoat window or overcoating time, within 4 – 6 hours), and perpendicular to the first coat to secure the membrane interlock and to provide an impervious barrier.

When it is preferable to apply a third coat, it is recommended to embed mesh between coats to obtain reinforced build-ups.

Fabric Reinforcement:

Where required, **Shieldproof CW270** can be reinforced using a suitable fabric reinforcement or can be used on cracks and joints. The mesh is embedded into the first coat while still wet and immediately encapsulated by applying more **Shieldproof CW270**.

Finishing:

Finishing must be done immediately after application to achieve a smooth finish. Alternatively, a repair for film defects using a steel float or dry hard sponge can be done as well. Do not use water in finishing the surface as this will cause white streaking of the polymer on the surface.

4. Cleaning

Tools should be cleaned immediately with clean water. Hardened material should be removed mechanically.

5. Curing

Shieldproof CW270 is self-cured, but as with all cementitious products, freshly applied material should be protected from rain. In hot weather, take adequate measures to protect from exposure to direct sunlight and hot winds. Do not use water spray or liquid membrane curing compounds.

Consumption

Approximately 1.65 kg per m² per coat for 1 mm wet film thickness.

Note: This coverage is theoretical and may vary due to site wastage and substrate porosity and texture.

Shelf Life and Storage

Shieldproof CW270 has a shelf life of 12 months when stored in its original unopened packaging in cool and dry conditions, protected from direct sunlight, heat, and moisture.

Shelf life may be reduced if the recommended storage conditions are not followed.



Limitations

- Do not apply the product if the ambient temperature is less than 5°C.
- Do not change the mixing ratio and ensure fully timed mixing is carried out as detailed.
- If the surface is very weak or deteriorated, two scratch coats of **Shieldproof CW270** are needed to hide all imperfections before starting the application.
- Hot weather practices should be adopted during application and curing if the temperature is above 35°C. In hot conditions, store the material in a cool environment prior to mixing.
- In the case of large areas, the application process must be done continuously to avoid the separation between coats and to ensure that thicknesses are even.
- Fresh surfaces should be protected from rainfall to prevent surface scouring

Technical Support

Refer to technical information, method statement, or contact technical support team for any inquiry.

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