

Shieldproof CW273

Premium, Elastomeric, Two-component, Cement-based Waterproofing



MICSHIELD®

Description

Shieldproof CW273 is a two-component, elastomeric, and 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 CW273 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, only mix pre-blended powder and modified acrylic polymer together.
- Non-toxic and can be used in contact with drinking water.
- 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 CW273 is supplied in 20 kg packs (5 kg polymer, 15 kg powder).

Typical Properties

Color/ Appearance	White polymer (Part A) with white or grey powder (Part B)
Mixed Density (@ 23°C)	1.55 ± 0.10 g/ml
Pot Life (@ 23°C)	1 – 2 hours
Overcoating Time (@ 23°C ± 2)	4 – 6 hours
Application Thickness per Coat	1 – 2 mm
Ready for Tiling Works	3 days
Full Cure	7 days
Adhesion Strength (EN 1542)	≥ 1.0 MPa
Resistance to Positive Water Pressure (DIN 1048)	7 bars
Resistance to Negative Water Pressure (DIN 1048)	3 bars
Permeability to Water Vapor (EN ISO 7783-1)	S _D : 0.32 m (Class 1) permeable to water vapor
Permeability to CO ₂ (EN 1062-6)	S _D > 50 m
Elongation at Break (ASTM D412)	> 120%
Tensile Strength (ASTM D412)	≥ 0.75 MPa
Abrasion Resistance (ASTM D4060)	Higher than 40 N concrete
Static Crack Accommodation	≥ 1.60 mm, Class A4
Dynamic Crack Accommodation	Class B4.1 (0 -300- 0 mic) And (200-500-200 mic)
Reaction to Fire (EN 13501-1)	Class A1



Application Instructions

1. Surface Preparation

The substrate must be sound, clean, dry, and free of all contaminants such as dirt, oil, grease, loose materials, 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 – 30 °C.

2. Mixing

Pour the liquid component into a suitably sized (minimum 25 liter) clean mixing bucket. For optimum results, mixing should be performed using a forced action mixing paddle powered by a heavy-duty electric mixing drill. Add **Shieldproof CW273** powder slowly whilst mixing and continue mixing for 3 – 5 minutes until a smooth, homogenous, lump-free consistency is achieved.

3. Application

Application of **Shieldproof CW273** can be carried out by brush, roller, trowel, or wet spray machine dependent 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.

Cracks and Joints:

Fabric-reinforcing mesh 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 CW273**.

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 CW273 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 1.55 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 CW273 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.



Safety Instructions

Shieldproof CW273 contains hydraulic cement and may cause irritation to the skin or eyes. For further information Refer to the Material Safety Data Sheet.

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 CW273** 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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