



MICSHIELD™



Shieldproof CW273

Two-component, Acrylic, Polymer-modified, Flexible, High-Performance Cement-based Waterproof Coating

Description

Shieldproof CW273 is a two-component, flexible and non-toxic waterproof cement-based protective coating, designed to protect concrete structures from water and vapor pressure and to provide impervious barrier against chloride and carbon gases intrusion.

Shieldproof CW273 is supplied as dry powdered blend of cements, polymers, selected fillers, and silica sands in the powder form which is simply mixed on site with the liquid acrylic co-polymers and wetting agents blend to give a ready-to-use mix for application.

Uses

- Wet areas such as toilets, kitchens, pipes, and basements.
- As marble and granite backing material to prevent the ingress of moisture.
- 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 pressure situations.
- Can be used as 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.
- Durable, excellent resistance to UV and long-term weathering conditions.
- Color stable.
- High flexibility with crack bridging capability.
- Breathable, allows water vapor to escape the structure.

Standard Compliance

- EN 1504-2: Principle PI-1.3 (C) and Principle MC-2.2 (C)
- BS 6920

Typical Properties

Color / Appearance	: Colored powder with white liquid
Mixed Density (@23 °C)	: ~1.80 g/ml
Pot Life	: 80 minutes @25 °C 50 minutes @35 °C
Adhesion Strength (EN 1542)	: ≥ 1.0 MPa
Resistance to Positive Water Pressure (DIN 1048)	: Up to 7 bars
Resistance to Negative Water Pressure (DIN 1048)	: Up to 3 bars
Permeability to Water Vapor (EN ISO 7783-1)	: S _D < 5 m (Class 1)
Tensile Strength (ASTM D412)	: ≥ 1.5 MPa
Water Penetration Under Pressure (EN 12390-8) after 72 hours at 5.0 bars	: No penetration
Static Crack Accommodation	: > 1.0 mm
Dynamic Crack Accommodation	: > 0.3 mm

Application Instructions

1. Application Conditions

Substrate:

Temperature	: 10°C to +35°C and ≥ 3°C above dew point
Moisture Content	: ≤ 4% (preferable, but can be applied on green concrete)
Compressive Strength	: ≥ 25.0 MPa
Pull-off Strength	: ≥ 1.50 MPa

Ambient Air:

Temperature	: 10°C to +35°C and ≥ 3°C above dew point
Relative Humidity	: ≤ 80%



2. Surface Preparation

The substrate must be sound, clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc. Concrete substrates should be prepared mechanically using grinders or captive blast cleaning to remove cement laitance and achieve an open textured surface. Weak or damaged concrete must be removed and surface defects such as blowholes and voids must be repaired using appropriate products from the **Rep, Repflow, Shieldgrout and Shieldrep** ranges.

All dust, loose and friable material must be completely removed from all surfaces preferably by brush or vacuum. We recommend a concrete surface profile (CSP) as defined by the International Concrete Repair Institute in the range of CSP2 to CSP3. 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.

3. 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 mix continuously for 3 – 5 minutes until a smooth, homogenous, lump-free consistency is achieved.

4. 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 applied, each at 1 mm wet film thickness. Care should be taken to ensure 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 dependent on the ambient temperature and relative humidity.

Cracks and Joints:

Fabric reinforcing mesh can be used on cracks and joints. The mesh is bedded into the still wet first coat and immediately encapsulated by applying more **Shieldproof CW273**. This is then allowed to dry before the second coat is applied.

Finishing:

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

5. Cleaning

All mixing and application equipment should be cleaned immediately with clean water. Hardened material should be mechanically removed.

6. 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.

Packaging

Shieldproof CW273 is supplied in 20 kg packs (5 kg polymer, 15 kg powder).

Shelf Life and Storage

Shieldproof CW273 has a shelf life of 12 months when stored in its original unopened packing in cool and dry conditions, protected from direct sunlight, heat and moisture.

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



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Safety Instructions

Shieldproof CW273 contains hydraulic cement and may cause irritation to skin or eyes. Refer to the most recent Material Safety Data Sheet for information and advice on the safe handling, storage and disposal of the product.

Limitations

- Do not apply the product if the ambient temperature is less than 5°C.
- 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, preferably air-conditioned environment (20 – 25°C) prior to mixing.
- Fresh surfaces should be protected from rainfall as this may scour the surface.
- **Shieldproof CW273** may exhibit unsatisfactory handling characteristics when inadequately mixed. This will result in a significantly lower level of performance or possible failure. Ensure fully timed mixing is carried out as detailed.

This Product is Environmentally Friendly

Manaseer Industrial Complex
is a member of US Green Building



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