

MaxProof® 450

Flexible, cement-based waterproofing coat

Description

MaxProof 450 is a high-performance, two-component, cement-based, acrylic modified waterproofing coating for superior durability. It provides exceptional protection for concrete, masonry, and a wide range of construction materials.

Easily applied with a stiff brush, roller, or trowel, **MaxProof 450** forms a seamless, hardwearing, and flexible waterproof barrier. It effectively shields surfaces from waterborne salts and atmospheric gases, ensuring long-lasting protection.

Features and benefits

- Non-toxic. Safe for use in contact with potable water, ensuring environmental compatibility.
- Seawater resistance. Provides a durable coating for seawater channels, preventing erosion.
- Protection against brackish water. Offers long-lasting waterproofing in harsh marine environments.
- Flexible. Adapts to substrate movements, preventing cracks and damage.
- Maintains its flexibility even when fully submerged in water.
- Can be applied to damp surfaces, eliminating the need for a completely dry substrate before application.
- Exceptional adhesion. Bonds seamlessly to both porous and non-porous surfaces.
- Durable. Suitable for light pedestrian use, making it ideal for various applications.
- Protect reinforced concrete elements against carbonation and chloride attack.

Recommended for

MaxProof 450 is an ideal waterproofing solution designed to protect concrete and masonry substrates from positive water pressure.

Its advanced formulation makes it ideal for various applications, including:

- Wet Areas. Provides reliable protection in showers, bathrooms, toilets and kitchens.
- Structural waterproofing: Provides robust protection for foundations and retaining walls, preventing water and moisture infiltration.
- Waterproof lining: Ideal for water-retaining structures such as tanks, pools, and reservoirs.
- Roofs & balconies waterproofing. Creates a seamless, weather-resistant barrier, ensuring long-term performance.

Coverage

Damp-proofing: 1.8 kg/m² (one coat only).

Waterproofing: 2.25 kg/m²/two coats.

Depending on the condition of the surface and method of application.

Note:

Coverage rate takes no account of wastage and may vary according to surface condition and application method.

Technical data

Wet density	1.8 kg/liter
Water permeability (EN 12390-8)	3 bar (No leakage - positive pressure)
Bond strength to concrete (ASTM C882)	>2.0 N/mm ²
Pot life	60 minutes at 20°C.
Flexural strength (ASTM C348)	9.19 N/mm ²
Compressive strength (ASTM C109)	>27.00 N/mm ²
Time between coats	6 hours minimum @ 20°C
VOC SCAQMD Rule 1113	Pass
Colors	Grey - white

Composition

ACC Construction Chemicals, L.L.C.

Headquarters & factory: Plot (8), Block (32), 2nd. Industrial Zone, Borg Al Arab City, Egypt.

Tel./fax: 035226004 – Customer service: 01288593311 – email: contact@acc.com.eg

MaxProof 450 powder is a specialized blend of high-quality cements, fine silica sand, and reactive fillers in powder form. This dry mixture is paired with **MaxProof 450** liquid component. It is formulated with advanced acrylic copolymers and optimized wetting agents.

Packaging

MaxProof 450 is available in 25 kg double pack (20 kg/bag powder + 5 kg/jerrycan liquid).

Surface preparation

- Ensure surfaces are free from grease, oil, dust, curing compounds, mould release agents, or any substances that could impair adhesion. Preferably removed using light sweep blasting or hydro jetting for a clean substrate.
- Mechanical wire brushing may be suitable for localized surface cleaning.
- Cut back spalled concrete to sound material and restore it using a suitable cementitious repair mortar.
- Ensure the substrate is leveled and as flat as possible before waterproofing application.
- Wall-to-floor junction treatment: Cut a 20 x 20 mm groove along the intersection, then fill it with sand/cement mortar modified with **UniBond LX**, rounding it out to a minimum radius of 40 mm.
- Wash the substrate thoroughly with clean water to remove dust and impurities. Ensure the substrate is damp but not wet at the time of application for optimal adhesion.

Mixing

	Slurry consistency	Trowelable consistency
MaxProof 450 Powder	20 kg	20 kg
MaxProof 450 Liquid	5 kg	4.5 kg

- A mechanically powered mixer or a slow-speed drill fitted with a suitable paddle is recommended for uniform blending.
- Pour the liquid component into a clean container, then gradually add the powder component while continuously mixing.
- Continue mixing for 3 minutes until a smooth and homogeneous mixture is obtained.
- Prepare only the amount that can be applied within 60 minutes (pot life) to avoid material waste.
- Small portions can be mixed manually using appropriate hand tools for convenience.

Application

First Coat

- Apply **MaxProof 450** uniformly at a rate of 1.00 - 1.25 kg/m² using a stiff brush on the prepared substrate.
- Brush the mixed material thoroughly into the surface to ensure proper adhesion.
- Strike off the brush in one direction for a consistent finish.
- Avoid spreading the material too thin to maintain its effectiveness.
- Allow the first coat to cure overnight before applying the second coat.
- If the first coat is left for more than one day or appears very dry, pre-soaking with clean water is required before applying the second coat.

Second Coat Application

- Apply the second coat using a brush in the same manner as the first coat.
- For optimal coverage and adhesion, apply it at a right angle to the first coat.

Spray Application

If spraying application technique will be used, up to 1 liter of water may be added to the mix if needed, depending on the type of spray machine used.

Curing

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- Air-dry conditions are recommended for curing **MaxProof 450**.
- In hot weather, provide suitable protection against extreme conditions while the material sets.
- In cold, humid, or unventilated areas, allow a longer curing period or ensure adequate ventilation to facilitate proper drying.
- Never use curing compounds or dehumidifiers during the curing process.

Finishing

Paint Application:

- If paint will be applied over **MaxProof 460**, allow it to cure for at least 7 days before painting.
- Do not use solvent-based paints.

Sand-Cement Plaster Finish:

- When a sand-cement plaster finish is required, apply a rough coat (spatter dash) using **UniBond LX**-modified sand/cement mortar.
- Ensure the rough coat is applied while the final **MaxProof 450** coat is still tacky for proper adhesion.

Ceramic Tile Installation:

- For ceramic tiles, use **UniFix 303** or **UniFix 308** to securely adhere them to **MaxProof 450**.

Important notes

- The quantity of mixing liquid may vary slightly depending on mixing method and weather conditions.
- When the material begins to drag, do not add any water, but dampen the surface again.
- The maximum application thickness is 2 mm/coat.
- In areas of excessive water pressure, increase the overall coverage to 3.6 kg/m² for two coats application.
- If spray application should take place, spray through a 3 - 4 mm nozzle at 3 - 5 bar pressure. Apply the first layer in circular

motion with the spray nozzle. Keep the nozzle at 90° angle to the substrate. Apply the second coat while the first coat is still damp but firm. The final layer can be left as a spray finish or treated to achieve the required finish.

- Do not apply **MaxProof 450** in direct sunlight or if the ambient temperature is below 5°C.
- When rain is anticipated within 24 hours after application, the surface should be protected.
- Setting time/strength may be accelerated at higher temperatures or retarded at lower temperatures
- In closed areas and deep pits, suitable air circulation should be provided for 24 hours after application.
- For underground structures, backfilling can be carried out 3 days after completion of the **MaxProof 450** treatment.
- Filling water retaining structures with water can take place usually not less than 14 days after application. If earlier filling is required, filling may be considered after not less than 7 days ensuring that the surface is thoroughly checked for hardness.
- For water retaining structures, careful cleaning and disinfection is essential prior to the first operation. Follow national laws and regulations.

Cleaning

Clean tools with water immediately after use. Hardened materials should be cleaned mechanically

Storage and shelf life

To maintain its quality and suitability for use, the product should be stored in its unopened packaging, off the ground on pallets or similar structures, in a cool and dry environment. When stored under these recommended conditions, the product remains suitable for

use for 12 months from the manufacturing date stated on the packaging.

Health and Safety

MaxProof 450 Powder contains cement. When it comes in contact with sweat or other body fluids causes irritant alkaline reaction and allergic reactions to those predisposed. It can cause damage to eyes. In case of contact with eyes or skin wash immediately with plenty of water and seek medical attention.

MaxProof 450 Liquid is not considered dangerous according to the current regulation regarding the classification of mixtures. It is recommended to wear gloves and goggles and to take the usual precautions taken for the handling of chemicals. Keep product out of reach of children.

For further information, please ask for Safety Data Sheet for this product.

The most up-to-date TDS can be obtained from ACC Customer Service Department, or downloaded from our website: www.acc.com.eg.

More from ACC

A wide range of construction chemicals, specialty mortars and specialized building materials are manufactured by ACC which include:

- Waterproofing.
- Flooring.
- Tile Adhesives & Grouts.
- Concrete Repair.
- Non-Shrink Grouts.
- Bonding Agents.
- Exterior Façade Coatings.
- Premixed Fairing Coats, Renders & Mortars.
- Putties (stucco).
- Sealers & Emulsion Paints.