

MaxProof® 450

Flexible, cement-based waterproofing coat

Description

MaxProof 450 is two component, cement-based, acrylic polymer modified waterproofing coat for concrete and masonry.

MaxProof 450 forms a flexible, durable, hardwearing, seamless, waterproof coating.

Features and benefits

- Non-toxic. Suitable for use in contact with potable water.
- Remain flexible when submerged in water.
- Can be applied to damp substrates.
- Breathable.
- Excellent bond to porous and non-porous surfaces.
- Resist occasional foot traffic.

Recommended for

MaxProof 450 is suitable for waterproofing concrete and masonry substrates against positive water pressure. This includes:

- Water retaining structures such as water tanks, swimming pools, potable water tanks, waste water treatment plants and sea water channels.
- Water excluding structures such as basements, tunnels, sea defense walls.
- Foundations and retaining walls.
- Wet areas such as showers, bathrooms, toilets, kitchens, balconies and roofs.

MaxProof 450 is also suitable for protecting reinforced concrete elements against carbonation and chloride attack.

Composition

MaxProof 450 Powder is blend of high strength Portland cement, well-graded sands and modifying agents.

MaxProof 450 Liquid is based on acrylic polymer emulsion.

Packaging

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

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
Colors	Grey - white

Surface preparation

Substrates to be waterproofed should be clean, sound, and free from any contamination. Remove any traces of curing compound, laitance, organic growth or any other loose materials. This is best obtained by using high pressure water or light grit blasting. Honeycombing, damaged or deteriorated concrete exists, the substrate should be repaired using suitable low permeability repair mortar from ACC repair systems before commencing the coating. Ensure that the substrate to be waterproofed is leveled and as flat as possible. Wall to floor intersection should be cut 20 X 20 mm along the junction and filled with sand / cement mortar modified with **UniBond LX** and round out to 40 mm

minimum radius. Wash the substrate with clean water.

Ensure that the substrate to be treated is damp but not wet at the time of application.

Mixing

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

To ensure proper mixing, a mechanically powered mixer or slow speed drill fitted with suitable paddle should be used.

Add the **MaxProof 450** Liquid component into clean container, and then add the **MaxProof 450** Powder component slowly while mixing. Mixing time should be continued for 3 minutes until a uniform consistency is obtained. MIX AND USE. Mix material that can be applied within 60 minutes (pot life). Partial small amounts may be mixed manually using suitable hand tools.

Application

Apply the first coat of **MaxProof 450** uniformly at application rate of 1.00 - 1.25 kg/m² using stiff brush onto the prepared substrate. The mixed material should be brushed well into the surface. Strike off with the brush in one direction. Care must be taken not to spread the material too thin. Leave the first coat overnight to cure before applying the second coat. If the first coat is left for more than one day or if it is very dry, pre-soaking with clean water is needed before applying the second coat.

The second coat shall be applied by brush in a similar way to the first coat but preferably at right angle to the previous coat to ensure good bond and coverage.

For spray application, a maximum of 1 liter of water may be added to the mix -if needed- depending on the type of spray machine.

Curing

Air-dry circumstance is recommended for curing **MaxProof 450**. In hot weather, provide suitable protection against weather conditions while setting. In cold, humid or unventilated areas, it may be necessary to leave the application for a longer curing period or to provide adequate ventilation. Never use curing compounds or de-humidifiers.

Finishing

In case that paints will be applied on top of **MaxProof 450**, it should be left to cure for at least 7 days. Do not use solvent base paints. Where sand-cement plaster finish is required, it is essential to apply a rough coat (spatter dash coat) of sand / cement mortar modified with **UniBond LX** onto the final coat of **MaxProof 450** while it is still tacky. In areas where ceramic tiles will be installed on top of **MaxProof 450** such as wet areas, use **UniFix 303** or **UniFix 308**.

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.

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- 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

If stored unopened in a dry place at a temperature between +5°C and +30°C away from sources of heat and moisture, shelf life is 12 months from the date of manufacture printed on the pack.

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.

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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.