



CONSTRUCTION MATERIALS ALLIANCE

CMA ADMIX TECHNICAL DATA SHEET

CMA ADMIX®

Crystalline Capillary Waterproofing Admixture

Waterproof  Concrete. For life.

DESCRIPTION

CMA ADMIX is a permanent, crystalline capillary waterproofing admixture. When added to concrete or mortar, insoluble crystals are formed and developed in the water bearing capillaries of the mix, effectively blocking the passage of water and ensuring permanent water tightness for the life of the structure.

BENEFITS OF CMA ADMIX

► WATERPROOF CONCRETE. FOR LIFE.

- Waterproofs for the life of the structure.
- Becomes an integral part of the concrete.
- Does not tear, puncture or delaminate as membranes can.
- Highly resistant to corrosive chemicals.
- Maintenance free. No future re-application.

► EASE OF USE

- **Simple dosage (0.8 kg per m³) avoids mistakes caused by adjusting dosage for varying cement content.**
- Cannot be damaged on site by other trades.
- Simple: CMA Approved Applicators co-ordinate with batch plant.

► ENVIRONMENTALLY FRIENDLY

- Earns LEED points.
- No VOC's.
- Non-toxic. Suitable for potable water.

SUPERIOR TECHNOLOGY

- Protects against water, chloride and sulfate ingress; increases resistance to chemical attack.
- Seals present and future cracks up to 0.4 mm
- Withstands hydrostatic pressure.
- **Effective against both positive and negative water pressure.**
- Suitable for ponding water.
- **Increases compressive strength of concrete.**

► ECONOMICAL

- **Lowers waterproofing costs by up to 40%.**
- Added at batch plant, speeding construction and saving \$\$\$.
- Design flexibility increases footprint of building.
- Permits early backfilling that speeds construction.
- Increases investment return by maximising building footprint.

TYPICAL APPLICATIONS

- Basements
- Below ground parking structures
- Elevator pits and foundations of high-rise buildings
- Sewage and water treatment works
- Canals, reservoirs, swimming pools
- Tunnels
- Core filled blockwork
- Foundation walls
- Slabs
- Footings
- Concrete pipes
- Pre-cast
- Properly designed rooftops and podiums
- Water tanks and towers

HOW CMA ADMIX WORKS

Moisture and free lime within the mix combine with the active chemicals in CMA ADMIX to create a continuous barrier of millions of insoluble crystals in the capillaries of the concrete. This blocks the passage of water through the pores and capillaries of the concrete, but permits the transmission of air and water vapor, thus allowing the structure to breathe.

The rate of crystalline development varies with the variations in the mix design and curing regime of the concrete. Although full waterproofing properties are normally achieved 7-10 days from placement, CMA ADMIX achieves even further performance improvements over subsequent weeks.

After the initial crystallization process has successfully waterproofed the structure, the active chemicals within CMA ADMIX remain dormant in the concrete. Any future contact with water will reactivate the crystals to provide lifetime waterproofing of the concrete. Through a process of osmosis, the crystals actually grow towards water, making CMA ADMIX equally effective against both negative and positive water.

CONCRETE PROTECTION

CMA ADMIX is not only perfect for waterproofing, it is perfect for concrete protection on applications such as marine structures, sewage plants etc., By sealing the cracks in the concrete, CMA ADMIX will prevent the ingress of chloride and harmful chemicals which attack the reinforcement and cause degradation of the concrete.

SUPER-FAST APPLICATION

Because CMA ADMIX is added to the concrete during batching, it speeds construction schedules by not having to waiting for the placement of waterproofing membranes. Additionally, there is no requirement to defer backfilling to wait for a membrane to be applied to external walls.

DOSING

CMA ADMIX may be added to the concrete either at the batching plant or added to the mixer at the job site. It is preferable that CMA ADMIX is added to the dry mix to ensure even distribution prior to the addition of water. If CMA ADMIX is added after the addition of water, mixing must continue for a further 10 minutes prior to placement of the mix.

DOSAGE

0.8 kg per Cubic Metre of Concrete (0.80 kg/m³)

A SYSTEM APPROACH

CMA ADMIX forms part of a complete WATERPROOFING SYSTEM. Delivering a leak free result depends on correct procedures for the entire project, not just waterproofing a concrete slab. Where project requirements, site conditions, concrete quality or other factors necessitate a system approach, CMA will recommend appropriate products to seal volatile or structural cracking, joints, excessive concrete segregation etc.

HYDROSTATIC PRESSURE

CMA ADMIX is suitable for use in areas of high hydrostatic pressure and meets EN Standard EN 12390/8. Refer to Concrete Waterproofing Systems for details.

CONSIDERATIONS

- Concrete: Use only with properly vibrated structural concrete of 20 mpa and above.
- Design Detailing: CMA ADMIX will seal static cracks up to 0.4 mm. It is not suitable for waterproofing structural/ working/dynamic cracks or where segregations and voids are likely, such as design cracks, expansion joints and penetrations. CMA ADMIX should be used in conjunction with an appropriate hydrophilic waterstop or other approved technology. Consult your local distributor for details.
- Workability: CMA ADMIX enhances the workability and plastic properties. As with all crystalline admixtures, it may cause an extension of set times, especially when used in conjunction with water reducing admixtures. Impact upon these properties will vary with mix design, climatic conditions etc. Consideration should be given to the removal of additives that retard.
- Applicable Standards: As concrete admixture: EN 934 - 2 Table 9 (Water Resisting Admixture).

TRIAL MIX


CMA always recommends the use of a trial mix to establish optimum mix design for the specific project.

PACKAGING

CMA ADMIX is supplied in 180kg drums and 12 x 0.8kg packs in a pail.

STORAGE /SHELF LIFE

Store as for cement, in dry, cool conditions. CMA ADMIX has an unlimited shelf life if stored according to manufacturer's instructions in unopened containers.

			
PROPERTIES	STANDARD	OTHER	RESULT
Permeability	EN 12390-8 (DIN 1048)	EN12390-8 DIN 1048	>95% reduction
		NBR 9779 NBR 9778	>70% reduction
		GB 18445 GB 50082	>75% reduction
Potability		NBR 12170/2017	approved
Concrete Hardening State Characteristics	ASTM C 494-S	NBR NM 67	meets or exceeds requirements
		NBR NM 47	
		NBR 5739	
Compressive Strength		GB 8076	+15%
Shrinkage Reduction 28days		GB 8076	15%
Concrete Fresh State Characteristics	ASTM C 494-S	NBR NM 67	meets or exceeds requirements
		NBR NM 47	
		GB 8076	
- Slump retention		NBR NM 67	>+15min
- Water reduction		GB 8076	3.0% on average
- Air entrained		NBR NM 47 GB 8076	unaltered
NonToxicity Environmental	0.0% VOCs		granted
Quality Control manufacture		ISO 9001	granted
		ISO 14001	granted

* results may vary according to design mix

All above results are typical test report data and will vary according to testing methods, site conditions, concrete batching and/or curing procedures and temperature, as well as natural variations in raw materials used. Please anticipate statistical differences in test results. Testing variations may cause deviations between onsite testing and published results.

HEALTH AND SAFETY

Refer to Safety Data Sheet for full details.

WARRANTY

CMA Pty Ltd warrants that the products supplied conform to the formulation standards contained in all components in their proper proportion and are free from material defects. If any of the products are found to be defective, the subsequent liability to CMA Pty Ltd shall be limited only to the replacement of the product proven to be defective and shall not be liable for any other claim or for incidental or any consequential damages that may arise directly or indirectly with the said defective product. The user shall determine the suitability of the product for its intended use and the user assumes all liability in connection therein and CMA Pty Ltd shall not be liable save for terms of this warranty. © 2021 CMA Pty Ltd. All Rights Reserved



Waterproof  Concrete. For life.



CONSTRUCTION MATERIALS ALLIANCE

Construction Material Alliance Pty Ltd ACN 600 898 137

Unit 4/92 Bryant Street Padstow NSW 2211 Australia phone: +61 2 9771 0011

Email: admin@swppl.com.au

www.cmapl.com.au