

Contec C1



Crystallising Concrete Waterproofing Compound

Waterproofing new concrete and negative repairs to existing structures such as: Pools, Water Tanks, Basements, Car Parks, Panel walls and masonry structures

CRYSTALLINE GROWTH PRINCIPLE

Contec crystallising waterproofing compound is an intelligent, self-sealing waterproofing system that transforms porous concrete into a permanent, water-resistant barrier. The system provides a structural defence against water damage and steel reinforcement corrosion. When Contec crystallising waterproofing compound is combined with water and concrete, it reacts with the un-hydrated cement particles to form millions of needle-like crystals. Over a period of weeks and months, these crystals grow, filling the naturally occurring pores and voids in concrete, and permanently blocking the pathways for water and waterborne contaminants.

Contec C1 is a cementitious powder compound used to waterproof concrete. **Contec C1** contains chemicals which react with concrete, forming a waterproofing crystalline structure within the pores of the concrete.



Regular Concrete



Crystallised Concrete



Add Mix / Internal Membrane



Adding Contec C1 to the concrete mix is a sound defence strategy for new concrete structures. The crystalline growth enhances the water tightness of concrete when water is present, potentially making the concrete waterproof.

Add 5kg of Contec **C1** per cubic meter of concrete. Due to the plasticising effect, reduction of the mix water may be required to attain desired slump or workability. Alternately, Contec **C1** can be applied to freshly poured concrete as a dry-shake treatment during the finishing process.

Using crystalline growth in new structures provides many benefits:
DURABILITY; RESISTS HYDROSTATIC PRESSURE; CHEMICAL RESISTANCE; PERMANENT SELF HEALING



WATERPROOFING



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Add Mix Application

Water used in the concrete mix **MUST** be reduced by approximately 12½ % for a normal concrete or shotcrete mix design to gain a similar slump. No other additive should be used unless specifically designed and approved for special applications.

C1 concrete will pump more easily and allow easy finishing and cleaning up. **C1** normal usage is 1½ % by weight of the cement content of the mix (include fly-ash and silica fume) to a maximum of 6kg per cubic metre of concrete.

- **C1 ADDED AT THE SITE:** The pre-weighed powder should be added slowly and mixed for a minimum of 10 minutes in the transit truck bowl or concrete mixer. Ensure water content had been adjusted as above.
- **BLOCK FILL:** **C1** can be used as an additive to a block fill mix to assist waterproofing where an external membrane is not used. Ensure the cavity is clean, keep the cavity moist prior to filling and ensure entrapped air is expelled from all sections, particularly at the base.

Broadcast or dry shake

Adding permanent self healing to freshly poured concrete

Ensure the applied Contec C1 powder becomes an integral part of the surface of the concrete by broadcasting the C1 immediately following the initial screed (see photo). The bleed water is sufficient to wet out the Contec C1 and a bull-float should be used to ensure the C1 becomes in contact with the concrete surface while bleed water is present.

COVERAGE: 0.8kg per m²; 25kg per 32m²

Protect the surface from hot sun, frost, rain and ponding

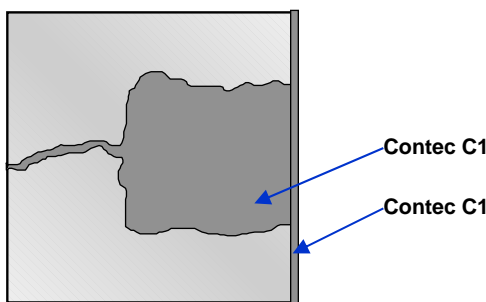


Crack Repair / Remedial Application

Contec C1 Proven Crack Repair Method for Concrete Water proofing

Water penetrating cracks in concrete may cause damage to the structure, including the corrosion of reinforcing steel. Repair and maintenance of concrete structures is not difficult and is a sound investment for the long term.

Follow application process provides for Dry or Wet crack repair:



DRY REPAIR :

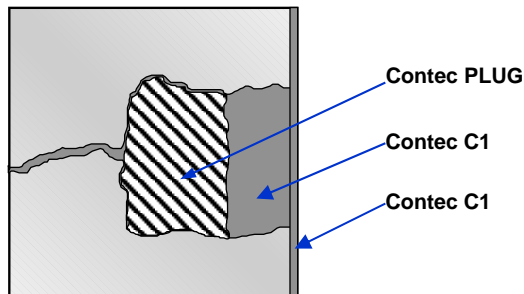
Chip out crack to form a chase approx. 30mm x 30mm deep. Chase should form a "U" shape. Wash area thoroughly with water, leaving no pooling. Prime with C1 slurry. Fill flush with surface with C1. Overcoat with C1 slurry at the rate of 0.75 kg/m².

TECHNICAL DATA



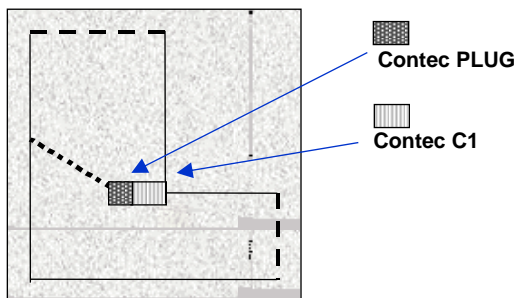
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LEAKING REPAIR :

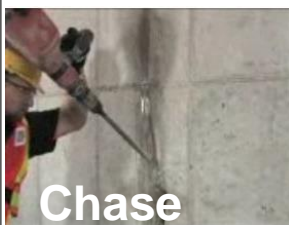
Chip out crack as above. Wash area thoroughly with water, leaving no pooling. Mix Contec Plug into 'putty' and press into chase. Prime with C1 slurry. Fill flush with surface with C1 and overcoat with C1 slurry at rate of 0.75 kg/m².



FLOOR WALL JOINT - CRACK REPAIR

Use the same principle as explained above.

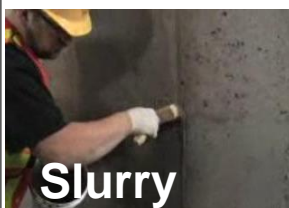
PREPARATION: Contec C1 can be used to repair leakage through non moving static cracks. In general cracks must be cut out. The chase should be approximately 30mm wide and 30mm deep. If using an angle grinder, the cut faces should be well washed with water as well as being roughened with a chisel. In all cases unsound or bony sections should be removed even if reinforcing steel is exposed. Thin precast walls used in such constructions as water tanks should only be chased to a depth and width of up to 20mm.



Chase



Apply C1



Slurry

DEEP CHASE: After removal of loose and bony concrete the repair of water leaks must be completed at the full depth and then the remaining void is filled with concrete or mortar.

PRE-SOAK SURFACE: Pre-soak surface of the chase with water. Water penetration must be contained by the application of Contec PLUG to approximately half of depth of the chase prior to progressing further.

DRY CRACK REPAIR APPLICATION

1. Pre wet surface of chase.
2. Prime the chase with a brush coat of Contec C1 mixed with water (3:1).
3. Mix 5 parts of Contec C1 powder with 1 part clean water to putty consistency. Only mix sufficient for use within 20-30 minutes. Ensure chase is damp and fill to the surface level with Contec C1 and lightly tamp to consolidate.
4. Apply surface coat of Contec C1 over repair to a width of approximately 300mm.

CURING: Protect from hot sun, frost, rain and ponding until hardened and cured. Contec C1 must harden for 7 days prior to being immersed in liquids. Internal treatment of covered water tanks must be continuously ventilated until satisfactory curing and hardening is achieved.



CONCRETE PROTECTION PTY LTD

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AUSTRALIAN MADE AND OWNED



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Remedial Slurry Application

1. Scrape and remove damaged surface. Repair cracks and clean surface.
2. Wet surface with water
3. Prepare slurry mix. In a bucket mix 5 parts **C1** to 2 parts water
4. Using a concrete brush, apply an aggressive circular motion to coat the surface
5. Apply the second slurry coat
6. Apply a water moisture cure for 48 hours to encourage crystalline growth.



Slurry Curing

Completed applications should be moist cured for 48 hours and protected from rain and light traffic for 12 hours. Heavy traffic should be avoided until the surface has hardened. Treated concrete surfaces should not be permanently exposed to liquids for 7 days. Finishes containing Portland cement may be applied over Contec **C1** after 3 hours, but other paint and coating finishes should not be applied before 28 days

Slurry Curing

0.8kg per m²; 12.5kg per 16m²

Packaging

2.5 kg pail
6.25 kg pail
12.5 kg pail

Physical Properties

Colour	Grey
Texture	Powder
Particle Size	40-150 microns
Bulk Density	1.4
PH (when mixed)	13
Rate of Penetration	2 mm per week

Safety Precautions

Do not apply when the surface temperature is below 5°C. Contec **C1** in a slurry format has a high pH which necessitates protective clothing and eye wear. The product is not designed to be a decorative surface and will change the surface colour.



Wear rubber gloves and protective clothing. Avoid contact with skin and eyes. Avoid inhaling product dust. Refer SDS

FIRST AID: If poisoning occurs contact a doctor. If effected flush repeatedly with water and wash skin thoroughly.



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