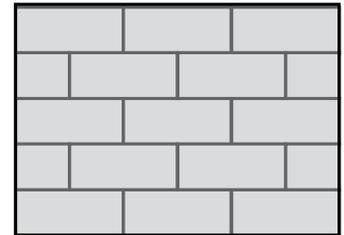


# Krystol T1® & T2® Waterproofing System Waterproofing a Concrete Block Wall

## CAUTION

Due to the porosity of typical concrete block and the amount of mortar joints that could potentially have weak bonds to the blocks, this application is more difficult than waterproofing cast-in-place or precast concrete structures. Repairs may need to be revisited on more than one occasion to ensure that all the weak joints are discovered and addressed and areas of high porosity receive an appropriate amount of treatment. Treatment of a test section is recommended before attempting large repairs.



## LIMITATIONS

The Krystol T1 and T2 Waterproofing System is an effective waterproofing system for rigid concrete structures only and may not be reliable for structures that experience constant or repeated movement. Consult a Kryton representative for project specific recommendations. Air and surface temperature at the time of application must be at least 4°C (40°F).

## SAFETY PRECAUTIONS

Read the Material Safety Data Sheets (MSDS) for these products. For professional use only. These products become extremely caustic when mixed with water or perspiration. Avoid contact with skin or eyes. Avoid breathing dust. Wear long sleeves, safety goggles and impervious gloves.

## STEP 1: SURFACE-PREPARATION

1. Before applying Krystol T1, ensure that the substrate is clean and open-pored. Concrete surfaces must be clean and free of paint, sealers, form release agents, dirt, laitance or any other contaminates. Prepare the surface by sandblasting, high pressure water blasting (minimum 3,000 psi), scarifying, shot blasting or other method of mechanical surface preparation to remove loose concrete and surface contaminates. Concrete with some exposed aggregate is ideal. Wash and rinse the surface with a detergent or concrete degreaser if needed.
2. Even for uncontaminated surfaces, mechanical surface preparation will assist by opening up pores closed due to smooth trowelled surfaces, formwork etc. The freshly roughened surface will provide maximum adhesion and better penetration of the waterproofing chemicals.

**Tip:** Acid etching is not recommended. If acid etching must be used, all traces of acid must be neutralized and rinsed away before applying the Krystol T1 and T2.

3. Surfaces to receive Krystol T1 and T2 must be brought to a saturated-surface-dry (SSD) condition. The concrete must be completely saturated with water to allow the Krystol chemicals to penetrate deeply and react. The outer surface, however, must be only slightly damp, so as not to dilute and weaken the bond. Thoroughly pre-soak the surface with water; then remove excess water with a sponge or vacuum just before applying Krystol T1.

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### STEP 2: ADDRESS ALL LEAKING MORTAR JOINTS AND NON-MOVING COLD JOINT

1. Repair all defects, including cracks and honeycombs, before applying Krytol T1 and T2 using the following procedures:
  - a. Cracks and joints: Application Instruction 5.12 — Waterproofing Cracks, Holes & Joints
  - b. Pipe penetrations: Application Instruction 5.32 — Waterproofing Tie Holes and Pipe Penetrations.

**IMPORTANT:** All leaking defects must be repaired. However, even defects not currently leaking may leak in the future if not repaired before applying the surface coating. In most cases, all defects should be repaired whether they are currently leaking or not. Consult your Kryton representative for project specific recommendations.

### STEP 3: APPLY KRYSTOL T1 (1st COAT)

**IMPORTANT:** Ensure that Krytol T1 and T2 is only applied to a damp (SSD) surface. As you apply the Krytol T1 and T2 coatings, you may need to rewet the concrete ahead of you to maintain a damp (SSD) surface. Failure to bring the surface to an SSD condition will result in a weak bond between the Krytol coating and the concrete, and may lead to dusting, flaking and delamination of the Krytol treatment.

1. Mix Krytol T1 to a thick paste; approximately 3 parts powder to 1 part clean water. Mix only as much as can be placed in 30 minutes.
2. Ensure the surface is damp (SSD).
3. With a concrete brush, use an aggressive, circular scrubbing motion to apply the Krytol T1 coating over the concrete. Push the coating into any voids in the concrete surface to ensure a good bond. Apply at 0.8 kg/m<sup>2</sup> (1.5 lb./sq. yd.).

**Tip:** Make coverage estimation easy by laying pails of Krytol T1 in advance, one every 31 m<sup>2</sup> or 330 sq ft.

4. Cure and protect, as in Step 5 below.

### STEP 4: APPLY KRYSTOL T2 (2nd COAT)

**TIP:** To ensure complete coverage with no missed or thin spots, we recommend that you always apply two coats. While it is permissible to use Krytol T1 for both coats, using Krytol T2 for the second coat will give a harder, more durable finish. Note that in certain cases it may be acceptable to use a single coat of Krytol T1 and eliminate the second coat. Consult your Kryton representative for project specific recommendations.

1. The second coat can be applied as soon as the Krytol T1 has set hard (usually 6-24 hours depending on conditions). Wash and rinse the hardened Krytol T1 to remove surface bloom before applying Krytol T2. Some exposed aggregate in the Krytol T1 coating is ideal.
2. Ensure the hardened Krytol T1 surface is damp (SSD).
3. Install Krytol T2 by following the same procedure used to install Krytol T1.

### STEP 5: CURING & PROTECTION

**IMPORTANT:** Krytol T1 and Krytol T2 must be kept damp and “wet cured” for at least 3 days to develop its full properties. Curing for several days or even weeks will be beneficial in most cases. Do not apply curing water if the coating is still soft to the touch; this will wash out the coating and produce poor results. Instead, use protective surface coverings to retain moisture during the initial hardening period.

1. Cover the freshly applied Krytol coating with tarps or plastic to prevent water loss due to evaporation. Wet curing should begin as soon as the Krytol coating has hardened enough not to be damaged by the application of curing water, usually 6-24 hours depending on conditions. Wet curing should also begin if the coating starts to dry out.
2. Do not allow water to pool on the surface during the first 24 hours or until the coating is hard. Once the coating has hardened, mist the surface with water as needed to keep the repair damp for 3 days. Curing water should be applied at least three times each day for three days. More frequent application may be needed in hot, dry weather.
3. Keep protective coverings in place during the curing period to retain moisture. As the coating gains strength, thoroughly soak the surface to keep the coating fully saturated
4. Protect the repair from frost, rain and traffic for at least 24 hours. Heavy traffic must be avoided during the curing period.

### STEP 6: WAIT AND REVISIT

It may take more than one visit to the site to ensure that all of the leak points are discovered and treated. It is recommended

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that there is at least a two-week waiting period to allow the crystals time to grow and seal and then to revisit the site to check on the watertightness of the wall. If there are still damp/leaking areas, address them starting at Step 1: Surface Preparation.

***Important:***

Many factors will affect the success of block wall repair such as porosity of the block, proper methods being used when the wall was built, whether the blocks are filled or hollow, the bond between the blocks and mortar, hydrostatic pressure, and others. Blocks that have been left hollow may gather water and this scenario will be more difficult to repair. It is recommended to drill drain holes in the bottom blocks to release water build up.