



### Krystol® Waterstop System (Control Joint)

#### SCOPE

Application Instruction 205 describes how to create and waterproof a crack-control joint in concrete. Controlling crack location followed by proper treatment with Krystol is vital to the success of the Krystol Waterproofing System.

#### WHERE TO USE

Follow these instructions in ground slabs and perimeter walls that may be subject to hydrostatic pressure. This instruction is a variation of Application Instruction 202 (Krystol Waterstop System –External) and is applicable to both cast-in-place and shotcrete construction methods. This joint design is for non-moving joints only. For moving joints, use an engineered expansion joint.

#### SAFETY PRECAUTIONS

For Professional Use Only. These products contain Portland cement and will become caustic when mixed with water or perspiration. Avoid contact with skin and eyes. Wear protective clothing including goggles, impervious gloves and long sleeves. See the Material Safety Data Sheet for this product.

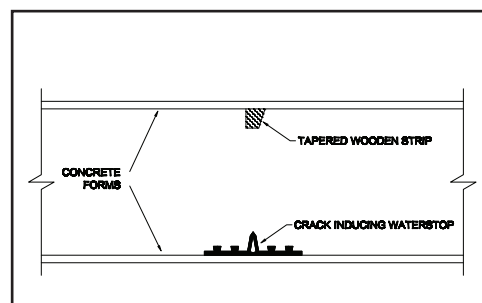
#### STEP 1: CREATE A CRACK INDUCING PLANE OF WEAKNESS

Note: Crack-control joints are recommended at all locations prone to cracking, such as abrupt changes in concrete thickness or direction. Follow ACI Guideline 301 - Specifications for Structural Concrete for Buildings. Typical wall sections should contain a crack-control joint at least every 6m (20ft.)

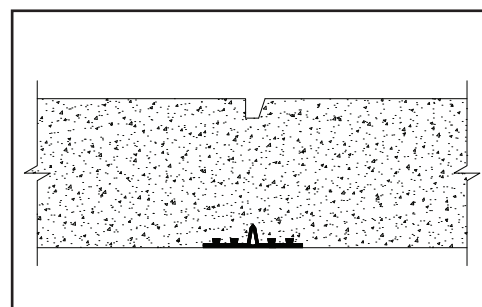
1. Install a crack-inducing base seal waterstop (similar to Greenstreak #639) to the exterior concrete form at the chosen crack-control location.
2. Install a tapered wooden strip to the interior concrete form, directly opposite the waterstop. Note that for shotcrete applications this strip is to be inserted at the time the shotcrete is installed. The resulting keyway is to be approximately 4 cm (1.5-inches) square.

#### STEP 2: PLACE CONCRETE or SHOTCRETE

1. Place concrete or shotcrete. Pay special attention to achieving the best possible consolidation – especially around all joint locations.
2. Leave concrete forms on as long as possible. In any case, be sure to prevent rapid drying of the concrete/shotcrete. Cure in accordance with ACI 308.1.



Step 1  
Crack induction system installed to concrete forms



Step 2  
Concrete or shotcrete after removal of forms



# Application Instructions

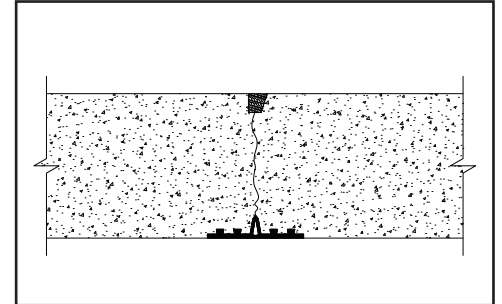
## Application Instruction 205

### STEP 3: INSTALL KRYSTOL WATERSTOP GROUT

1. Wait at least 28 days and preferably longer to allow the concrete/shotcrete to contract due to drying shrinkage. A properly designed and installed wall or slab system will see cracking occur only inside the crack-control keyway.
2. Clean the keyway using mechanical abrasion and/or water blasting. The keyway must be saturated with water, but surface-dry (SSD).

**NOTE:** DO NOT proceed with the installation of Krystol Waterstop Grout™ if water is actively leaking through the crack inducement joint. Instead, finish the application using the crack repair procedure described in Application Instruction 301.

3. Mix Krystol Waterstop Grout to a stiff putty consistency. Begin by mixing 3 parts powder with 1 part water by volume until smooth. Continue mixing and add more powder until achieving a sag free paste (final ratio approx. 4:1). The mixture will appear dry at first, but with vigorous mixing the Krystol® chemicals will dissolve and the mix will become smooth and workable.
4. Mix only as much material as can be placed in 30 minutes. Note that material left standing will quickly stiffen, but vigorous mixing will restore plasticity. Do not add water to the material once it has started to set. Over-watering will result in shrinkage cracking.
5. Tightly pack the Krystol Waterstop Grout into the keyway until it is flush with the surface.
6. Protect the application from drying or freezing for at least 24 hours.



*Step 3*

*Install Krystol Waterstop Grout™ after 28 days*