



# Krystol® Waterstop System

(Internal Method - Wall to Slab)

### SCOPE

Application Instruction 201 details the procedure to properly install the Krystol® Waterstop System to concrete construction joints using the Internal Method of application. The Krystol® Waterstop System is installed in place of other less reliable joint systems and allows for flexible scheduling and easy inspection. It can be installed by the concrete placers after finishing the slab or by the forming contractor before installing the forms.

### WHERE TO USE

Follow these instructions at horizontal construction joints such as wall-to-slab intersections (wall sits on slab). For joints that are slab-to-slab, wall-to-wall or slab-to-wall (slab is inboard of wall) refer to Application Instruction 202.

### LIMITATIONS

The Krystol® Waterstop System is intended 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 sheets for these products.

### COVERAGE

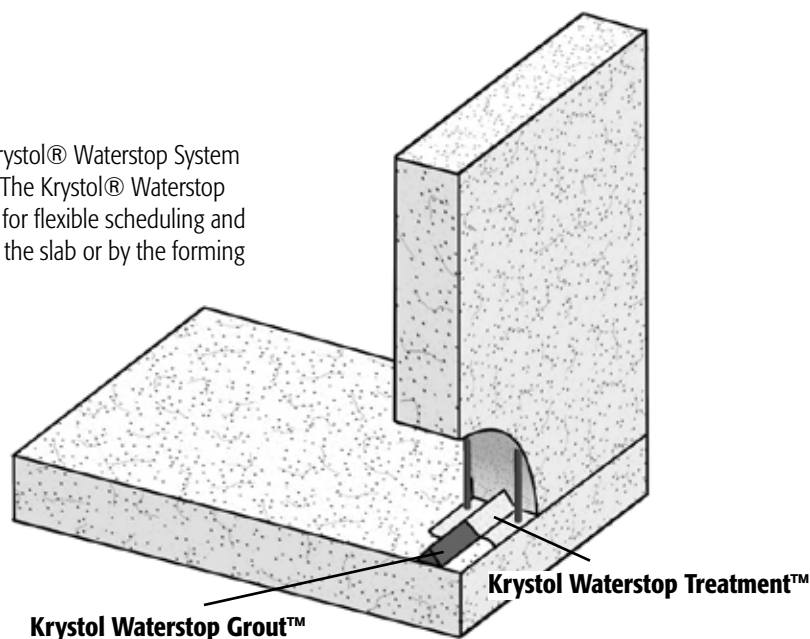
Material	Coverage
Krystol Waterstop Grout™ INTERNAL (Red)	1.67 kg/m (3.3 lbs/yard) = 15 lineal meters per 25 kg pail (50 feet per 55 lb pail)
Krystol Waterstop Treatment™	1 kg/m <sup>2</sup> = 3 lineal meters per 1.0 kg for a 30 cm joint = 10 lineal feet per 2.2 lbs for a 12" joint

### REFERENCE

Application Instruction 202 Krystol® Waterstop System (External Method) - wall to slab

Technical Data Sheet 601 Krystol Waterstop Grout™ - Internal (K-322i)

Technical Data Sheet 603 Krystol Waterstop Treatment™ (K-321)



### TOOLS AND MATERIALS

- Krystol Waterstop Grout™ INTERNAL (Red)
- Krystol Waterstop Treatment™
- Clean water supply
- Mixing bucket, drill and paddle
- Natural bristle concrete brush
- Margin Trowel
- Kryton Triangular Trowel or similar tool
- Watering can and towel
- High pressure water blaster



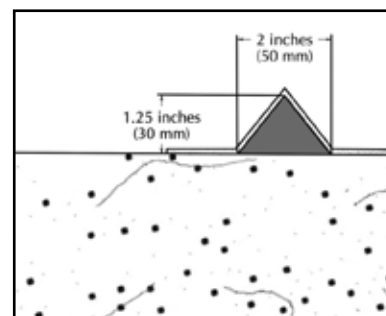
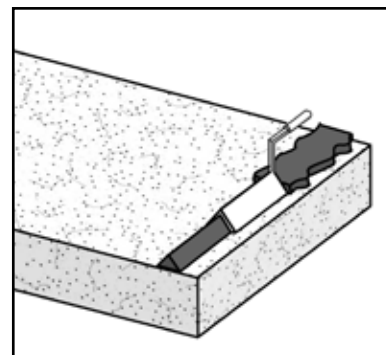
### STEP 1: PREPARE THE SURFACE

1. Concrete surfaces to receive the Krystol® Waterstop System must be sound, clean and free of contaminants or debris. Joints should be prepared by high-pressure water blasting to remove any form oils, curing compounds, dust or other contaminants.

**VERY IMPORTANT:** Surfaces to receive the Krystol® Waterstop System must be brought to a saturated surface-dry (SSD) condition. This means that the pores of the concrete are completely saturated with water but no free water remains at the surface. Pre-soak the surface with water then remove excess water with a towel just before applying the Krystol Waterstop Grout™ or Treatment™.

### STEP 2: INSTALL KRYSTOL WATERSTOP GROUT™

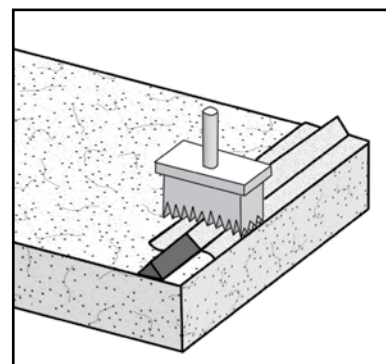
1. Mix Krystol Waterstop Grout™ to a stiff putty consistency using the following procedure. Begin by mixing 3 parts powder with 1 part water by volume until smooth. Then add an additional part of powder (for a total of approximately 4 to 1) and continue mixing to obtain a sag free paste. The mixture will appear dry at first, but with vigorous mixing the Krystol chemicals will dissolve and the mix will become smooth and workable.
2. 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.
3. Apply a line of Grout down the center of the joint using a margin trowel and then mold it into a triangle using the Kryton Triangular Trowel or similar tool. The Grout should form a continuous triangular strip that measures 50mm (2 inches) wide by at least 30mm (1.25 inches) high. If reinforcing bars are present, apply the Grout as close to the center of the joint as possible ensuring a minimum 50mm (2 inches) of cover remains between the Grout and the edge of the pour.
4. Protect the Grout application from damage by rain, rapid drying or freezing for at least 24 hours or until it is covered by Krystol Waterstop Treatment™.



Step 2  
Install Krystol Waterstop Grout™

### STEP 3: INSTALL KRYSTOL WATERSTOP TREATMENT™

1. Wait until the Grout application has hardened enough not to be damaged during the application of Treatment (a minimum of 2 hours under most conditions).
2. Mix Treatment to a thick slurry consistency (5 parts powder to 2 parts clean water by volume).
3. Apply Treatment to coat the intended joint area using a concrete brush. Employ a circular, scrubbing motion so as to achieve maximum adhesion and penetration.
4. Apply Treatment at a spread rate of 1 kg/m<sup>2</sup> (5 square feet per pound). Be sure to cover the entire contact area of the joint including the triangle of Grout.
5. Protect the Treatment application from damage by rain, rapid drying or freezing for 24 hours or until concrete is poured over it. Forms may be closed immediately after inspection.
6. Concrete may be poured over the joint anytime after the Treatment has hardened, even several days later.



Step 3  
Install Krystol Waterstop Treatment™