



*At the Lab. In the Field.
By Your Side.*

KRYSTOL WATERSTOP SYSTEM™

SHOTCRETE (HORIZONTAL JOINTS)

TECHNICAL BULLETIN #105(C)

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October 2006



**CONCRETE
WATERPROOFING**

QUESTIONS: 1-800-267-8280 or www.kryton.com

SCOPE

Technical Bulletin #105 (C) details the procedures to be followed to properly install the Krystol Waterstop Joint System to horizontal shotcrete cold joints and construction joints.

WHERE TO USE

The Krystol Waterstop System must be applied at all cold joints between successive layers of shotcrete where the first layer of shotcrete has been allowed to harden.

SAFETY PRECAUTIONS

For professional use only. These products contain cement powder 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.

MATERIALS AND COVERAGE

- Krystol Waterstop Grout – 50 feet per 55 lb bucket (15 lineal meters per 25 kg bucket)
- Clean water supply

TOOLS

- Mixing bucket
- Drill with paddle mixer
- Natural bristle concrete brush
- High-pressure water blaster

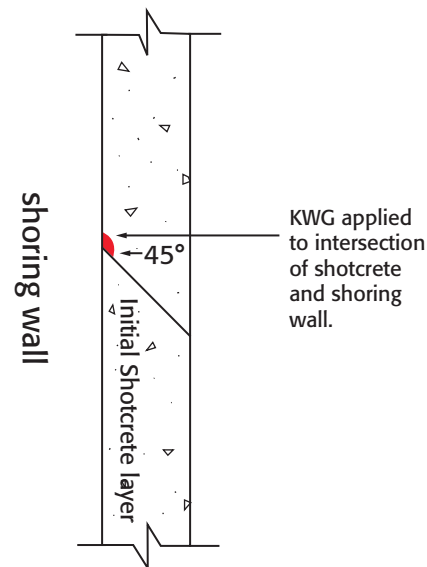
SURFACE PREPARATION

Concrete surfaces to receive Krystol Waterstop Grout must be sound, clean and free of contaminants or debris. Joints should be prepared by high-pressure water blasting (minimum 5000psi) or heavy grit sandblasting to remove overspray, rebound, dust, curing compounds or other contaminants.

Construction joints must be finished to a 45 degree angle upon completion of a shift of shooting while the concrete is still plastic.

VERY IMPORTANT: Surfaces to be treated 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 (or through water blasting) then remove excess water with a brush or broom just prior to applying the Krystol Waterstop Grout.

WALL TO WALL / SIDE VIEW



TECHNICAL BULLETIN

APPLICATION

1. Ensure that the area is presoaked with clean water to a saturated surface dry (SSD) condition. Leave no standing water.
2. Mix the Grout to a thick putty consistency (4 parts powder to one part clean water by volume)
3. Mix only small amounts at a time. Note that material left standing will quickly stiffen, but vigorous mixing will restore flowability. Do not add water to material once it has begun to set. Over-watering may result in shrinkage cracking.
4. Do not apply to standing water. Do not apply to dry concrete. Surface must be SSD.
5. Tightly pack the Krystol Waterstop Grout against the intersection where the top of the existing shotcrete cold joint meets the shoring wall. Using a trowel, ensure that the GROUT covers an area minimum one inch above the shoring wall and one inch down the existing shotcrete cold joint. The minimum thickness of the shotcrete joint at the intersection should be $\frac{3}{4}$ inch thick.
6. Protect the application from damage by rain, rapid drying or freezing for at least 24 hours.
7. Allow for the GROUT to harden for minimum 3 hours before the subsequent layer is shot.
8. Follow ASA approved methodology in preparing the joint and applying the next layer of shotcrete.

WALL TO WALL / FRONT VIEW

