Krystol Repair Grout

Grout Repairs and Parge Coat for Concrete and Masonry

DESCRIPTION

Krystol Repair Grout is used to provide a strong waterproof barrier for patching and parging defective concrete & masonry. Krystol Repair Grout features high strength and excellent bonding with low shrinkage, fiber reinforcement and high durability. Krystol Repair Grout contains Kryton's proven Krystol® technology which reacts with water and un-hydrated cement particles to grow insoluble needle-shaped crystals to waterproof the grout and seal hairline cracks. Krystol Repair Grout is NSF certified for potable water contact.

WHERE TO USE

Use Krystol Repair Grout as a strong, waterproof parge coat for porous materials such as concrete block walls. Repair Grout may also be used to repair general concrete defects such as honeycombs, or to resurface rough, uneven or damaged concrete. Krystol Repair Grout is also the preferred product for applications subject to heavy abrasion or erosion. After repairs with Krystol Repair Grout, you may apply Krystol T1 for additional crystalline waterproofing protection if desired. These instruction for Krystol Repair Grout may be used to substitute for any instruction or detail calling for Krystol Bari-Cote.

NOTE - For cracks or leaks, follow the Leak Repair procedure in Application Instruction 5.12 (cracks, holes, joints) or 5.32 (pipes).
NOTE - For coating higher density surfaces such as concrete, use Krystol T1 (Application Instruction 2.11).

LIMITATIONS

Do not install if air and surface temperatures are below 4ºC (40ºF). This product is effective for rigid structures only and may not reliably repair areas that are subject to movement. Consult a Kryton representative for project specific recommendations.

SAFETY PRECAUTIONS

Read and follow the Safety Data Sheets (SDS) for these products (available at www.Kryton.com). For professional use only. Powder is 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. Chip out any defects using a chipping hammer with a sharp, flat 25 mm (1 in.) chisel. Remove all weak or unsound concrete. Ensure edges are square and stable. Do not leave feathered edges.

2. Alternate – Saw cut the perimeter of the defect using a segmented diamond bade. Cut out the defect as square as possible and avoid sharp angles. Do not let the saw cuts overlap.

3. Thoroughly clean surfaces using high-pressure water blasting or mechanical roughening to remove any form release or curing compounds, and any weak concrete or masonry. Do not use an acid cleaner. Remove all dust, debris and standing water.

NOTE – For concrete resurfacing, a rough surface texture will enhance bonding. ICRI CSP #3-5 is recommended. The underlying concrete must be strong enough to bond to the new grout. Follow ICRI practices to assess surface strength for resurfacing.

STEP 2A: CONCRETE REPAIRS AND RESURFACING

1. Surfaces to receive Krystol Repair Grout must be brought to a saturated, surface-dry (SSD) condition. This means that the pores of the concrete or masonry are completely saturated with water, but no free water remains at the surface. Thoroughly pre-soak the surface with water, then remove excess water immediately before application. **TIP:** High pressure water blasting is effective at cleaning and saturating the surface in one step.
2. Mix Krystol Repair Grout to a putty consistency, approximately (4.5) parts powder to one (1) part clean water by volume. Do not mix more than can be applied within 15 minutes.
3. Pack the grout tightly into the repair so there are no voids and trowel flush.

NOTE: For repairs with minimum width and depth of 50 mm (2 in.) or larger, Krystol Repair Grout may be extended with 10 mm (3/8 in.) pea gravel. Use clean, non-reactive, well-graded gravel complying with ASTM C33. Mix 4 parts grout powder: 2 parts gravel, and up to 1 part water to make a low-slump, cohesive mix. Perform trial batches to confirm workability, as aggregate properties can vary.

NOTE: For resurfacing, apply a bonding slurry as described Step 2B, or apply a suitable polymer bonding agent.

STEP 2B: CONCRETE BLOCK WALLS – REPAIRS AND PARGE COAT

Concrete block walls are challenging to waterproof because the blocks are highly porous and contain many joints. Be thorough when examining the wall for defects that need to be repaired. A finish coat of Krystol T1 is recommended.

1. Repair any cracked or faulty mortar joints using the methods described in Steps 1 and 2A.

NOTE - Only remove faulty mortar from the joints. Do not damage the blocks. If the joints are leaking, follow the leak repair instruction in Application Instruction 5.12, but confine the repair to the joint only.

NOTE - It is recommended to protect the joint where the block wall meets the concrete floor as follows: Ensure both the block wall and the concrete along the floor joint are clean and rough. Mix grout to a putty consistency, approximately (4.5) parts powder to one (1) part clean water by volume, and firmly trowel a 25x25 mm (1x1 in.) triangle of grout across the wall-floor joint.

2. Clean and bring the surface to SSD condition as described in Steps 1 and 2A. **CMU blocks may absorb a lot of water before they reach SSD.**

3. A bonding layer will increase adhesion and make spreading the parge coat easier. Apply a bonding layer as follows: Mix Krystol Repair Grout to a slurry consistency, approximately three (3) parts powder to one (1) part clean water. Do not mix more than can be applied within 15 minutes. Firmly scrub a thin layer of this material over the surface to fill all surface voids. **Do not allow to dry. Immediately proceed with the parge coat.**

4. For the parge coat: Mix approximately four (4) parts powder to one (1) part clean water by volume. Trowel this mixture over the bonding layer to a thickness of 3-6 mm (1/8 to 1/4 in.). Work in sections if needed to maintain a wet edge.
   Greater thickness will increase strength, durability and waterproofing.

STEP 3: CURING AND PROTECTION

1. Protect fresh Krystol Repair Grout from rapid drying or freezing for at least 24 hours. Cover with tarps or poly if necessary. Protect the fresh grout from rain until it has fully hardened, and do not apply curing water if the grout has not hardened.

2. Begin wet curing once Krystol Repair Grout has hardened (1-2 hours under most conditions). Wet cure by ensuring the grout remains saturated with water by using hoses and sprinklers, saturated coverings or impermeable coverings. Maintain these curing conditions for at least 72 hours (7 days for drinking water tanks).

APPLYING OTHER PRODUCTS OVER KRYSTOL REPAIR GROUT

Leave a rough or textured surface if other products are to be applied. Additional parge coats of Krystol Repair Grout may be applied following the instructions in Step 2B any time after the first layer has hardened. Krystol T1 may be applied over Krystol Repair Grout any time after it has hardened. Other paints or finishes must be suitable for use on new concrete. Follow the manufacturer's instructions, including all steps for surface preparation and any recommended primers.

COVERAGE AND YIELD

Yield per pail: Approximately 13 liters (0.46 cubic feet) per 25 kg (55 lb pail).

Parge Coat - Approximate Coverage per 25 kg (55 lb) Pail	
Thickness	Coverage
3 mm (1/8 inch)	4.8 m^2 (52 sq.ft.)
6 mm (1/4 inch)	2.4 m^2 (26 sq.ft.)

TOOLS & MATERIALS

- Clear water supply
- Mixing bucket, drill and mortar paddle
- Margin trowel
- Concrete trowel
- Chipping hammer
- Diamond grinder
- Masonry brush
- Poly or curing sheets