KOVER KRACK ELASTOMERIC PATCH APPLICATION GUIDE

Instructions For Filling Cracks On Vertical Surfaces

Masonry and stucco surfaces invariably produce "cracks" which are either structural or non-structural. A summary of the types of cracks likely to be encountered and methods for repair are outlined in this Kover Krack application guide.

GENERAL PREPARATIONS:

- All surfaces must be firm and free of dirt, oil, grease, efflorescence, mildew and loose material.
- Unsound masonry must be wire brushed or blasted to obtain a firm surface.
- Dirt, loose contaminants and chalk may be removed by high pressure chemical and water cleaning.
- Any chalk or porous coating not removed by pressure cleaning should first be sealed with an Alkali Resistant Surface Conditioner.
- To remove mildew, scrub with a solution of 3 heaping tablespoonfuls of trisodium phosphate (TSP), 1 quart of hypochlorite household bleach and 3 quarts. of warm water. (WEAR PROTECTIVE GOGGLES AND WATERPROOF GLOVES.) Rinse thoroughly and allow to dry. In case of skin contact, wash off with plenty of water. Never mix ammonia or ammoniated detergents with chlorine bleach. Always follow other manufacturer's directions and precautions.
- Do not use Kover Krack below grade or under water.
- Do not apply when temperature of surface or air is below 50°F (10°C).
- In hot weather, dampen surface before application of Kover Krack elastomeric products to prevent material from drying too quickly over new or unpainted masonry.
- **MIXING/STIRRING:** Stir thoroughly to a uniform consistency with a paddle or mechanical mixer.
- **THINNING:** Not recommended.
- **APPLICATION:** Read directions for each specific product.
- **CLEAN UP:** After using Kover Krack elastomeric products, clean tools immediately with a warm detergent solution and rinse thoroughly with clean water.
- **DRYING TIME:** For best results, allow Kover Krack elastomeric products to cure overnight.
- **TINTING:** Not recommended.

CAUTION:

- Do not patch any cracks in "new" concrete until the concrete has cured for 30 days.
- Do not apply sealants when the relative humidity is above 90%.
- Do not apply sealants if rain or threatening weather is expected within 8 hours.
- Keep sealants from freezing.

"Random Distribution"(Hairline) Shrinkage Cracks

PRODUCT:

Kover Krack Brush Grade Elastomeric Sealant Smooth or Textured

Random Distribution Hairline Shrinkage Cracks are always non-structural, and are usually less than 1/16" wide.

APPLICATION TECHNIQUE:

Crack cut-out not necessary. Make sure the surface is firm. If surface is chalking, apply a suitable alkali-resistant surface conditioner before applying sealant. Apply **Kover Krack Brush Grade Elastomeric Sealant** over the center of the crack at a wet film thickness of 1/16". Then with either a broad knife or a brush, "feather" the material to either side of the crack, going from 1/16" at the crack down to zero over a 2" area. This gradual reduction in thickness helps conceal the patch and allows the elongational characteristics of the patching compound to work effectively (See: Diagram 1).

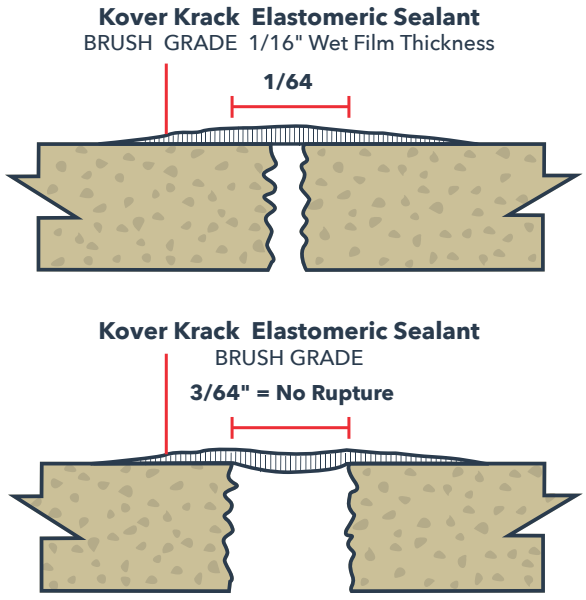


DIAGRAM 1. CORRECT 1/16" BUILD-UP APPLICATION

Shrinkage Cracks "Mass Distribution" (Hairline)

These cracks are also non-structural and are usually less than 1/64" wide. Because they occur in such large numbers, it is best to use brush grade sealant since it has been specially formulated to fill and cover hairline cracks in a single application.

Application Technique: Crack cut-out not necessary. Make sure the surface is firm. If surface is chalking, apply a suitable alkali resistant surface conditioner before applying sealant. Bridge cracks by brushing a generous, uniform layer of **Kover Krack Brush Grade Elastomeric Sealant** over the entire area in need of renovation. Apply at a spread rate of between 70-80 sq. ft. per gallon. This will render an average wet film thickness of approximately 20 mils.

Correct Application:

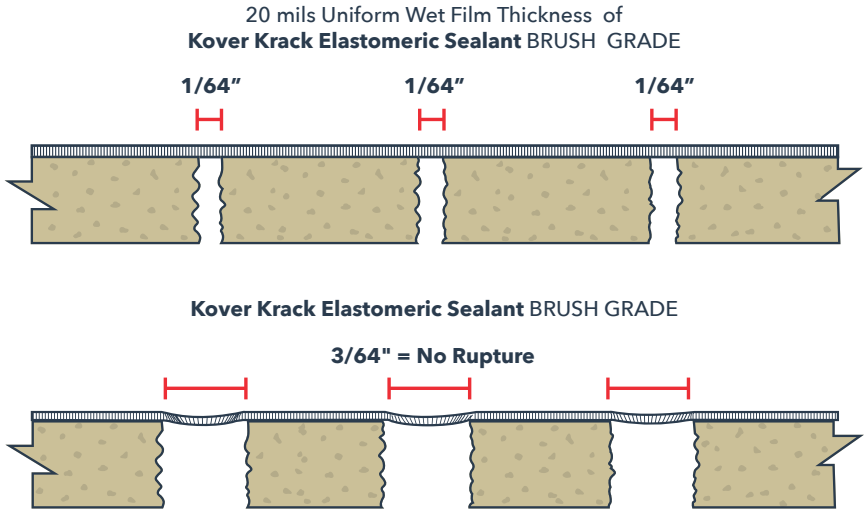


DIAGRAM 2. RECOMMENDED 20 mils UNIFORM APPLICATION OF **Kover Krack Elastomeric Sealant** BRUSH GRADE

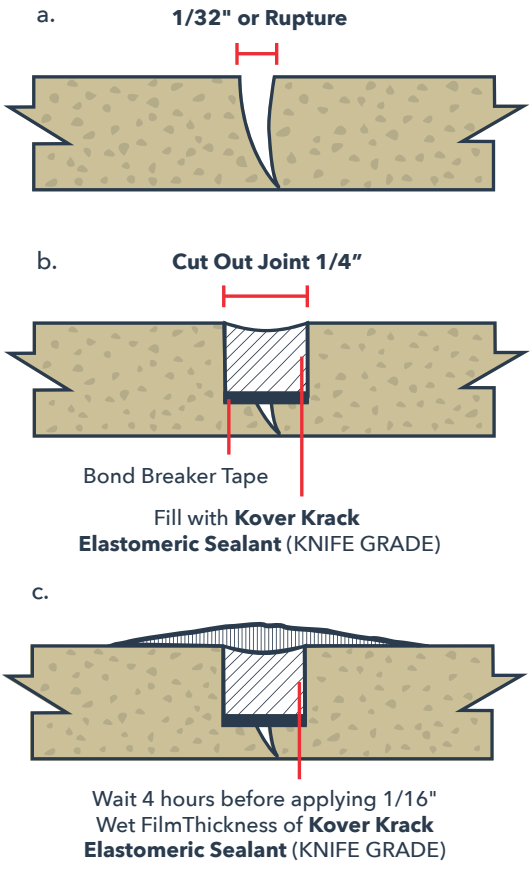


DIAGRAM 3. REPAIRING NON-STRUCTURAL MOVEMENT CRACKS

Movement Cracks (Non-structural)

PRODUCT:

Kover Krack Knife Grade Elastomeric Sealant Smooth or Textured

Non-structural Movement Cracks range from 1/16" to 1/4" or greater. Note: In some instances, such cracks are an indication that the building is in need of an expansion joint at a specific point. Consult a qualified structural engineer to determine the specific needs.

APPLICATION TECHNIQUE:

Cracks that range from 1/64" to 1/32" can be treated in exactly the same manner as shrinkage cracks; however, **Kover Krack Knife Grade Elastomeric Sealant** should be used rather than the brush grade product. Cracks, voids and joints which exceed 1/32" should be routed out to 1/4" wide by 1/4" deep. When completed, the joint should be flushed out with water and checked to see that the surface is sound and free of grinding dust. If dust is still evident after flushing, an alkali resistant surface conditioner should be used to bind the dust to the surface. Once the joint is sound, a bond breaker tape must be used to prevent three-point adhesion. Fill the joint with Kover **Krack Knife Grade Elastomeric Sealant** (See: Diagram 3b), permitting a small crest to remain, and allowing for any shrinkage that may occur. After a minimum of 4 hours cure time, apply a second coat at a wet film thickness of 1/16". This should be placed over the center of the filled joint and "feathered" down to zero over a 2" area.

Movement Cracks (Structural)

By definition, STRUCTURAL cracks larger than 1/4" are deficiencies in the design of a building. If cracks of this size or larger are present, consult a specialist on building materials and renovations for recommendations on appropriate methods of repair. NOTE: **Kover Krack Elastomeric Sealants** of the type presented in this booklet should NEVER be used as "STRUCTURAL" repair products.

Surface Cracks (Dual Thermal Induced)

PRODUCT:

Kover Krack Knife Grade Elastomeric Sealant, Smooth or Textured Infinity Urethane Fortified Acrylic Gun Grade Sealant

The most likely place to encounter these cracks is in high-rise buildings. The phenomenon shows up as very fine stress cracks, which invariably run parallel to the general positioning of a dense concrete substrate. This is hidden to the human eye and is behind the rigid outer shell of an exterior "stucco" coat (See: Diagram 4a). These unwanted surface cracks occur when two different materials such as concrete/cinder block and dense concrete, which in turn have singular specific heat values, come into close proximity to one another. The varying coefficients of expansion and contraction of these materials transcends through to the outer finish, placing great stress upon the non- flexible "stucco" coat, especially prevalent in the area of direct contact (See: Diagram 4b.)

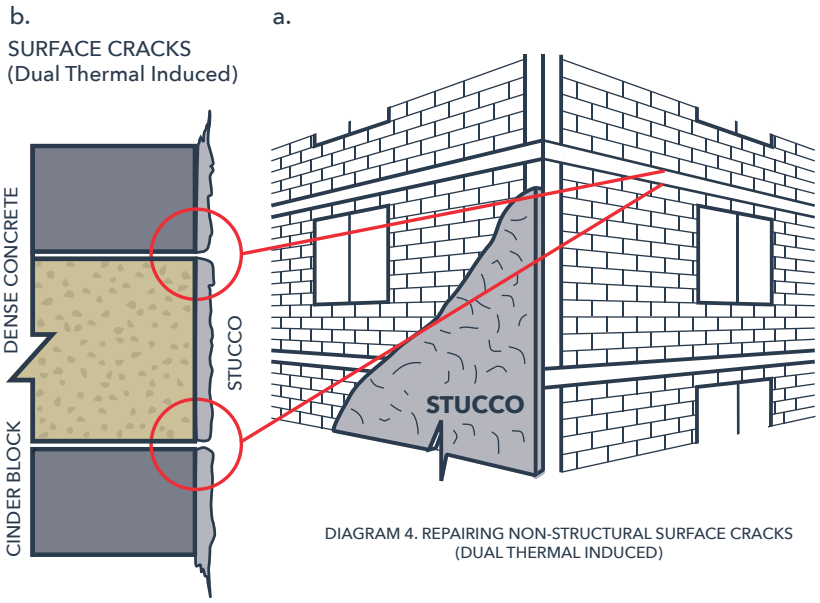
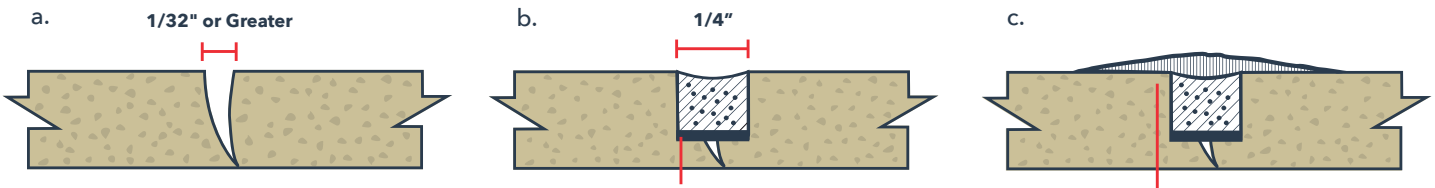


DIAGRAM 4. REPAIRING NON-STRUCTURAL SURFACE CRACKS (DUAL THERMAL INDUCED)

APPLICATION TECHNIQUE:

Cracks that range from 1/64" to 1/32" can be treated in exactly the same manner as shrinkage cracks, except that Kover Krack Elastomeric Sealant KNIFE GRADE should be used rather than Kover Krack Elastomeric Sealant BRUSH GRADE. Cracks, voids and joints which exceed 1/32" should be routed out to 1/4" wide by 1/4" deep. When completed, the joint should be flushed out with water and checked to see that the surface is sound and free of grinding dust. If dust is evident after flushing, a suitable alkali resistant surface conditioner should be used to bind the dust to the surface. Once the joint is sound, a bond breaker tape must be used to prevent three-point adhesion.
(See: Diagram 5b).

Fill the joint with Kover Krack Knife Grade Elastomeric Sealant or Infinity Urethane Fortified Acrylic Sealant. (See: Diagram 5b), permitting a small crest to remain to allow for any shrinkage that may occur. After a minimum of 4 hours cure time, apply a second cap of Kover Krack Knife Grade Elastomeric Sealant or Infinity Urethane Fortified Sealant.



Bond Breaker Tape

Fill with **Kover Krack Knife Grade Elastomeric Sealant** or **Infinity Gun Grade Urethane Fortified Acrylic Sealant**

Wait 4 hours before applying 1/8" Wet Film Thickness of: ***Kover Krack Knife Grade Elastomeric Sealant*** or **Infinity Gun Grade Urethane Fortified Acrylic Sealant**

DIAGRAM 5. REPAIRING NON-STRUCTURAL SURFACE CRACKS (DUAL THERMAL INDUCED)

Surface Cracks (Dual Thermal Induced)

PRODUCTS:

Kover Krack Knife Grade Elastomeric Sealant, Smooth or Textured INFINITY Urethane Fortified Acrylic Gun Grade Sealant

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Acrylic Sealant at a wet film thickness of just under 1/8". This should be placed over the center of the filled joint and "feathered" down to zero over a 2-1/2" area.

Notice: Kover Krack Knife Grade Elastomeric Sealant is available in TEXTURED for use over stucco systems to match the stucco texture.

Expansion & Control Joints And Windows

PRODUCT:

Infinity Urethane Fortified Acrylic Gun Grade Sealant

Expansion and Control Joints are engineered into buildings to compensate for anticipated movement. They allow segments of the structure to move independently of each other while retaining the integrity of the structure. For this reason, the products used must have good expansion and contraction capabilities.

SURFACE PREPARATION:

Surface to receive patching compound must be structurally sound, clean, dry and free of dirt, moisture, loose particles, oil, grease, asphalt, tar, paint, wax, rust, waterproofings, curing and parting compounds, membrane materials, etc. Concrete, stone and other masonry must be cleaned where necessary by grinding, sandblasting or wire brushing to make surface firm and free of contamination and laitance.

JOINT DESIGN:

To the entire extent, the design of the joint depends upon a variety of factors, such as maximum expansion and contraction of the surface materials due to thermal change. Where possible, INFINITY Urethane Fortified Acrylic Sealant should be applied when the joint is at its median opening to obtain the greatest efficiency with subsequent joint movement. Service Conditions: The dimensions of the joint to be sealed must be established in relation to service conditions. The number of joints and joint width should be designed not to exceed ±25% maximum movement. The joint width may be determined by calculating the change in size of the joint between the high and low temperature extremes and multiplying the change by a factor of 4.

BACKING MATERIALS:

In deep joints, patching compound depth should be controlled with closed cell, non-gassing type backer-rod. Other caulks should not be used as fillers. Backer-rod should not be primed. Care should be taken to ensure that backer-rod is not punctured. When the depth of the joint does not permit the use of backer-rod, a bond breaker (polyethylene strip) must be used to prevent three-point adhesion.

JOINT SIZE:
If it is determined that a joint will open and close 1/4" between temperature extremes, the joint width should be four times the 1/4", or 1" minimum. The depth of the sealant should be approximately 1/2 the width of the joint, with a maximum depth of 1/2" and a minimum of 1/4". Minimum joint width should be 1/4".

SEALANT DEPTH:
To maintain recommended sealant depth, backer-rod is installed by compressing and rolling into joint channel without stretching lengthwise. Backer-rod should be about 1/8" larger in diameter than the width of the joint to allow for compression.

APPLICATION TECHNIQUE:
Diagram 6 shows an example of how movement is effectively dissipated across an entire joint. Use INFINITY Urethane Fortified Acrylic Sealant to fill the joint. Fill the gap from the deepest point to the surface and apply at a temperature above 40°F. Avoid application on moisture laden surfaces, since the moisture will adversely affect adhesion.

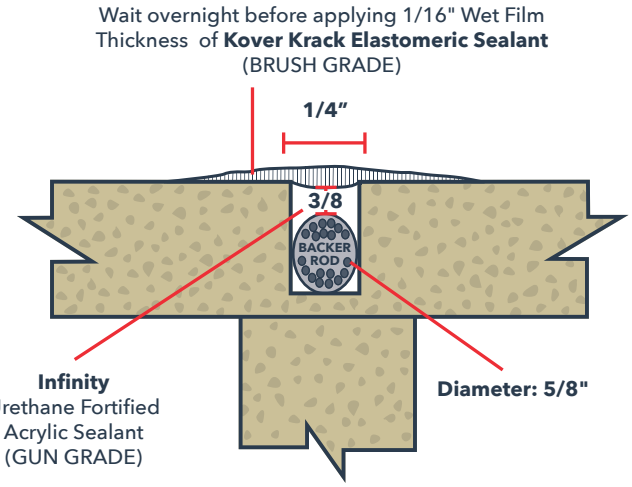

DIAGRAM 6. USE OF BACKER-ROD IN JOINT REPAIRS