

K A U F M A N

PRODUCT INFORMATION

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Recommended Field Procedures for Curing & Sealing Compounds

Kaufman Products' curing and sealing compounds are premium quality products, for use on both freshly poured and aged concrete. They comply with all applicable local, regional, and federal regulations, including the Environmental Protection Agency (EPA), the Ozone Transport Commission (OTC), and the Lake Michigan Air Directors Consortium (LADCO) where applicable. Using these products correctly will help to give concrete its best properties.

Preparation

Prior to application of the compound, concrete slabs must be placed and finished in accordance with American Concrete Institute guidelines, such as ACI 302.1R: Guide for Concrete Floor & Slab Construction and/or ACI 207.1R: Mass Concrete. Concrete should be clean and free of form oil and other contaminants before application. If concrete is cleaned or rinsed in advance of application, allow to thoroughly dry for a minimum of 1-2 days

Product Application

Apply product to freshly placed concrete slabs immediately following the disappearance of the surface water sheen (or bleed water) after final finishing. Once the concrete has reached the cooling cycle, it is ready to be cured (surface temperature of between 50-86°F). Delaying application will result in the curing compound soaking into the slab and not forming an adequate membrane, which will impact its ability to promote proper hydration, as well as resulting in an uneven gloss on the surface of the concrete.

Lightly agitate product immediately prior to use for 1 – 3 minutes using a low speed mixer, fitted with a Jiffy mixer or similar mixing paddle. Larger volumes of product may be agitated with a diaphragm air pump or positive displacement pump at 500 rpm or less. Do not use high-speed or gear-driven pumps or agitators with wax-based products. Apply all curing and sealing compounds by either a sprayer or a medium-heavy (3/8") nap paint roller. If applying by roller, and using a solvent-based product, make certain that the roller is solvent resistant. The use of a roller can easily leave roller marks, and the pressure placed on the roller can also affect the finished film appearance. All OTC versions will evaporate very quickly, and if left in a paint tray will become "stringy" as the solvents evaporate. Maintain a wet edge when rolling. Do not roll on excessively, which will cause the film to dry incorrectly. Once material becomes tacky, cease back-rolling or brushing. Do not allow roller to become dry.

If spraying, use the appropriate nozzle wand and tip (25–100 psi. or 0.2– 0.7 MPa.) to produce a properly

atomized spray. For very large jobs, use a high quality power sprayer. Use Chapin nozzle # 1-5937 or equivalent when applying high solids curing compounds (25% solids content or higher). If applying two coats, make two applications at right angles to each other to give the most complete and uniform coverage. Do not allow product to puddle. In addition, the use of a lamb's wool applicator or back rolling will generally remove any roller marks, and will prevent over-application or bubbles in the coating. Use a sprayer that includes Viton equipped parts when spraying solvent-thinned products, and if using one of the OTC versions, make certain to spray and back-roll immediately, before the product begins to dry.

Apply product at the coverage rate, in ft²/gallon, listed on the label or data sheet. Application of curing compound on a slab that appears dry, but is continuing to bleed, can result in map cracking of the dried curing compound and reduction in moisture retention within the slab.

Always clean equipment promptly with mineral spirits or xylene (for solvent-borne products) or with potable water for water-borne products. Never leave a solvent based product in the can or drum outside in direct sunlight.

Removal

Use EasiKleen EM to remove DR Cure and Thinfilm Series products 420, 450, and 453. Use K Pro CD to remove Thinfilm Series products 422, 424, 445, 445FL, and 446. All others, remove using approved bead-blasting techniques, or with the use of a heavy duty paint remover such as methylene chloride.

General Precautions

After application, protect from rain and other wet conditions for at least 3-4 hours at 72°F. Cold weather and hot weather conditions will affect the proper drying of curing & sealing compounds, particularly water-based products. We recommend using these products on days with a minimum of 45°F for 12 hours after placement. In addition, wind protection is highly recommended. Products should be applied as supplied; do not add water or other thinners. Do not apply curing compounds to slabs designed to be static dissipative, disseminating; or to slabs to receive toppings without prior removal or unless otherwise approved. When Krystal Series products are applied to porous surfaces, such as flagstone, slate, terrazzo, or old concrete, the product will penetrate unevenly and may lead to an uneven or blotchy finish. Coated floors are slippery when wet. Barricade wet areas and post wet floor signs as appropriate. Use SureGrip for added skid resistance.

We recommend the use of many of our products with carpet or tile mastics. However, they are not acceptable for use with grout beds, cement toppings, epoxies, or

many other flooring systems. When applying tile or carpet over cured concrete, always follow the adhesive manufacturer's recommendations. Curing compounds should be removed mechanically or chemically if they are not approved for use under any subsequent system.

Curing & sealing compounds are not permanent coatings, and will require cleaning and re-coating every so often depending upon the exposure to abrasion, UV radiation, and chemical exposure.

Precautions for All Water Based Products

All water-borne products within the Kaufman line, with the exception of wax-based materials, are freeze-thaw stable, and simply require being brought back to room temperature and stirred or lightly agitated prior to use. Do not use water-based curing or curing & sealing compounds on latex-modified mortars. If water based products are over-applied, do not adhere to the concrete, are subject to cold temperatures during the first 12-24 hours, or the concrete allows water to rise through the slab and get trapped under the coating, then a whitening or hazing may occur.

General Precautions for All Solvent-Based Products

Solvent-borne products are flammable; take care to avoid open flames and sparks. Always extinguish all lighted tobacco products. Solvent based products should only be used on exterior applications. If used in areas where fumes can enter a structure make certain to block all HVAC ducts, doors, or windows, which may distribute solvent odor. Turn off any air conditioning or heating systems that may bring the fumes inside the structure. If solvent odors, safety concerns, or the fast drying times of solvent based materials are objectionable, use one of our emulsion (water based) products such as Krystal 15 Emulsion, Krystal 25 Emulsion, or Krystal 30 Emulsion. With solvent-borne products, take care to avoid residual water in application equipment. Use SureGrip for added skid resistance. Use extreme caution when using Krystal 25 OTC and Krystal 30 OTC, because they both possess extremely low flash points, and they are significantly more hazardous than any of the other solvent-thinned products in our line. Keep containers closed until ready to use. These products will not freeze; however bring the temperature of the products up to at least 60°F by leaving it in a warm environment. Never apply direct heat to these products. Heavy applications can lead to improper drying, bubbling and discoloration. All OTC products are highly flammable, and vapors may ignite explosively, causing flash fires, severe burns, and death. Keep away from open sparks, flames, pilot lights, stoves, water heaters, electric motors, and any other sources of ignition during use and until all vapors are gone. Vapors are heavier than air, and may travel long distances to areas away from work site before igniting and exploding. If a spill occurs, contain the spill and use an inert absorbent. Make certain to properly dispose of the absorbent. **Do not smoke while applying these products or anywhere near the related vapors.** If a safer version is desired, try using Krystal 25 PCBTF or Krystal 30 PCBTF. These products should be applied only by experienced contractors and applicators.

Krystal OTC products dry very rapidly. When spraying, make certain to keep the sprayer tip within 8-12" of the concrete surface. Hot weather, direct sunlight, or windy conditions may cause Krystal OTC series products to bubble. The ideal conditions for placement are cool, overcast days when the temperature is 50-80 °F, throughout application and complete drying of the product.

Troubleshooting

It is possible that a light gray or white haze will appear in a curing compound immediately after placement, and even several months after placement. This occurs when the membrane begins to lift off of

the concrete slab, which forms a gap between the concrete and the material. When light reflects off this air void, it becomes diffused, which causes a hazy appearance instead of the normal colorless and glossy film. In addition, a white haze will appear when the product is over-applied, when too many coats of material are applied, or when ground water rises through the slab due to a lack of a moisture barrier under the slab. The use of a Xylene wash should solve this problem. Specific to water-based products, if the application temperature is below 45° F, if it is greater than 80% humid, there is a lack of air flow (such as a basement) or the product is over-applied, then the water will find it difficult to evaporate correctly. As a result, the product will stay white, and can even turn to a white powder. To avoid this problem, follow manufacturer's directions, remove the material, and re-apply properly.

If applying the product to old concrete, make certain that the slab is clean, if cleaned with water that it has dried for 1-2 days, and perform a tape adhesion test to determine whether or not the slab is clean enough to allow the product to adhere correctly.

Try to prevent hard water, such as that from a sprinkler, from getting onto the slab. Hard water will leave a residue of hard minerals on the slab, causing water spots. If the slab is not level, squeegee off puddles. Always remove oil, fertilizer, leaves, etc., from the slab to prevent staining. These products have moderate durability, and will over time develop scuff marks and scratches, and will wear off from abrasion and weathering. If the product is dark and blotchy after application, this could be due to several issues, including variations in the concrete mixes and finishing techniques, differences in porosity, and uneven application. Particularly with regard to burnished concrete, variations can occur. Some rubber materials can react with the material, due to plasticizers used in the rubber. This can cause the membrane to cease adhering to the concrete.

The use of the proper sprayer is suggested, as opposed to a roller, as rollers more often than not produce roller marks and lead to over-application issues such as bubbles and whitening. The use of air to blow off any dust, dirt, pollen, or debris is acceptable. Back-rolling after spraying is the ideal method, as this helps to prevent application issues. Do not pour the product onto the slab, and then roll it on, as this will usually lead to application problems. Likewise, if rolling the product, use a paint tray to prevent roll off excess material prior to application.

It is suggested that the applicator keep Xylene on the jobsite to assist with proper application of the OTC products, including problems related to haze, bubbles, roller marks. Simply apply a light coat of Xylene to solve these problems.

A small test application is always recommended prior to a full scale application, which helps the laborers to learn the correct manner in which to apply the product.

PRIOR TO USE, STOP AND READ AND UNDERSTAND THE PRODUCT LABEL, SAFETY DATA SHEET AND PRODUCT DATA SHEET. The complete Safety Data Sheet on all products are available on our website at www.kaufmanproducts.net, and may be requested by phone at (800) 637-6372.

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LIMITED WARRANTY: We warrant our products to be of good quality and will replace material proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement, Kaufman Products, Inc makes no warranty or guarantee, expressed or implied, including warranties of fitness or merchantability, respecting its products, and Kaufman Products, Inc shall have no other liability with respect hereto. User shall determine the suitability of the product or the intended use and assume all risks and liability in connection thereto. Our salesmen, distributors, and their salesmen have no authority to change the printed recommendations concerning the use of our products.