KOSTER
Waterproofing Systems

KOSTER VAP I 2000 UFS

Technical Data Sheet CT 234

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Ultra fast setting moisture vapor control system for the prevention of flooring failures such as osmotic blistering and delamination.

Features

KOSTER VAP I 2000 UFS is an ultra-fast setting, one-coat, membrane-forming, moisture vapor control system consisting of a unique combination of epoxy resins and other compounds formulated to prevent floor covering failures on concrete slabs with elevated levels of moisture. KOSTER VAP I 2000 UFS exceeds the performance requirements in ASTM F3010-13 "Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings." KOSTER VAP I 2000 UFS can be applied to concrete slabs with relative humidity up to 100% RH, MVER of up to 25 lbs, and provides protection from sustained exposure to pH 14. Therefore, moisture and pH testing is not required. It is an excellent moisture blocker for virtually all types of flooring, including vinyl, linoleum, carpet, rubber, terrazzo, and wood. KOSTER VAP I 2000 UFS is compliant with all state and federal VOC regulations with a VOC content of ≤10 g/L, which allows installation in sensitive areas such as hospitals, schools and grocery stores. LEED Indoor Environmental Quality Credits are available for EQ 4.2 (Low-Emitting Materials, Paints and Coatings).

Technical Data

Working time:	approx. 12 min (apply material immediately after mixing)
Cure time:	approx. 2-3 hr (depending on temperature and humidity)
Solids Content:	100%
VOC, mixed:	≤10 g/l
Flash Point:	≥200°F
Tensile Bond to Concrete:	≥500 psi (ASTM D7234)
Compressive Strength:	≥8,700 psi
Flexural Strength:	≥4,350 psi
Permeance:	0.060 perms (grains/h/ft2/in. Hg, ASTM E96 water method 73°F/50%RH)
Recoat Window:	48 hr (max)

Fields of Application

KOSTER VAP I 2000 UFS is formulated to treat new or existing concrete floors with high moisture and high pH. It is suitable for concrete slabs in offices, hospitals, schools, supermarkets, manufacturing facilities, airplane hangars, residential areas, retail stores, and many other applications. KOSTER VAP I 2000 UFS has low odor, ultra-fast setting time, and low VOC content, which allows for application in occupied buildings with minimum disruption. Vapor retarders under the slab are not required.

Substrate

It is the responsibility of the owner or the owner's representative to examine the slab for contaminants. Testing for contaminants is not required but is strongly recommended by KOSTER. Concrete substrates to receive a KOSTER VAP I 2000 product must be structurally sound, solid, and meet industry standards as defined in ACI Committee 201 Report "Guide to Durable Concrete." Surfaces to be coated with KOSTER VAP I 2000 products must be free of moisture-sensitive patching and leveling materials, adhesives, coatings, curing compounds, concrete sealers, efflorescence, dust, grease, oils and any other materials or contaminants that can act as bond breakers. Patching or leveling compounds that will be underneath KOSTER VAP I 2000 products must be long term resistant to high moisture and high pH.

Concrete slabs with existing floor failures

KOSTER strongly recommends identifying the cause of failure. This usually requires cores to be taken and analyzed by a qualified laboratory. Contact the KOSTER American technical team to discuss details of taking cores and to discuss results of analysis of the cores and recommendations based on the findings.

Surface Profiling

All concrete surfaces to be coated with KOSTER VAP I 2000 UFS must be mechanically prepared by shotblasting to an ICRI Concrete Surface Profile CSP 3 (Ref 1). Grinding is permitted only in areas inaccessible to shotblasting or for edging purposes. Acid etching is not permitted. Upon completion of te grinding and shotblasting, the concrete slab must be free of all dirt, dust, and debris prior to the KOSTER VAP I 2000 UFS installation. Do not use sweeping compounds, as most contain oil which may cause bonding issues.

Ref 1: ICRI 310.2R-2013, Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair

Application

Mixing

Each unit is packaged containing the components in the correct ratio. One unit consists of 3 bags; 2 bags containing A component and 1 bag containing B component. Remove the bags and all other packaging materials from the bucket. Cut open the tops of the A-component bags and empty the contents of both bags into the bucket. Cut open the top of the B-component bag and empty the contents of the bag into the bucket. Use a slow speed electrical mixer (≤400 RPM) equipped with a "Jiffy spiral-type" mixing paddle to mix the material for 2 minutes. Avoid entraining air bubbles while mixing. Pour the fully mixed material in a continuous ribbon onto the substrate immediately after mixing, emptying the mixing bucket completely.

CAUTION: If mixed product is left in a large quantity such as a fully mixed bucket, there is the potential for rapid reaction that can generate

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high temperatures and produce steam or smoke. To avoid such risks, pour the fully mixed material onto the substrate immediately after mixing, emptying the container completely. If a reaction occurs in the bucket, transport the container by the handle outdoors until it sets and cools.

Application
Apply KOSTER VAP I 2000 UFS at substrate and ambient temperatures between 50° and 90°F. Do not apply KOSTER VAP I 2000 UFS to concrete less than 7 days old. Provide ventilation during application and curing. KOSTER VAP I 2000 UFS is applied in one coat. Spread to the appropriate coverage rate using a notched squeegee. Immediately back roll with a 3/8-in nap epoxy rated roller at a right angle to the direction of the squeegee application, evenly distributing the product across the entire area to be treated. Examine the work immediately after rolling to assure complete, uniform coverage with no missed or thin areas. When KOSTER VAP I 2000 UFS is applied to the concrete surface, it may flow into voids and pin holes in the concrete that are connected to the surface. Air is displaced out of these voids as the coating flows in, resulting in “outgassing.” If excessive surface voids, pin holes, or bubbles are encountered, contact the KOSTER American technical team before proceeding. Do not allow KOSTER VAP I 2000 UFS to be exposed to sunlight more than 48 hours. KOSTER VAP I 2000 UFS does not develop an amine blush, so cementitious underlayments can be applied at later ages as long as the surface has been protected from sunlight. Prior to installation of underlayments, coatings, or floor coverings, cured KOSTER VAP I 2000 UFS must be clean and free of dust, dirt, and debris. Sanding is not required. To obtain KOSTER's 15 year warranty, KOSTER VAP I® 2000 products must be applied by a KOSTER trained applicator.

Coverage
KOSTER VAP I 2000 UFS must be installed at a minimum layer thickness of at least 11 mils (0.011 in). Spread rate on ICRI CSP 3 surface is not to exceed 150 sqft/gal.
A rougher surface profile or porous or absorptive concrete will require the use of more material to achieve a sufficient coating thickness.

Cleaning
Clean tools immediately after use with xylene or a similar solvent. Store and dispose of cleaning solvent and rags according to jobsite rules and applicable regulations.

Packaging

CT 234 002	0.7 gallon kit
CT 234 003	3 gallon kit

Storage
Store in original container away from sunlight between 50°F - 90°F.

Safety
Consult Safety Data Sheet. May cause irritation to eyes or skin. Avoid contact with eyes or prolonged contact with skin. Provide adequate ventilation. Wear personal protective equipment including gloves, safety eyewear, long sleeves,full length trousers, and non-absorbent shoes. In case of eye contact, flood with clean water and seek medical attention. In case of skin contact, wash area with soap and water. Do not use solvents on skin.

Warranties
KOSTER warrants that its product shall be in accordance with the specifications published in the current revision of the product data sheet. KOSTER covenants that in the event any of its products fail to meet their published specifications, KOSTER shall replace those products proved to be defective. KOSTER shall not be responsible for any incidental or consequential damages due to the breach of its warranties. Notwithstanding the foregoing, KOSTER’s sole liability hereunder shall not exceed the cost of the defective product originally purchased. EXCEPT AS SET FORTH ABOVE, KOSTER MAKES NO OTHER WARRANTIES EXPRESS OR IMPLIED AND MAKES NO WARRANTY AS TO THE MERCHANTABILITY OR FITNESS OF THE PRODUCT FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The user must determine if the product is suited for the intended use and the user must bear the risks and liabilities associated with it.

Related products

KOSTER VAP I 2000 Zero VOC	Art.-Nr. CT 230
KOSTER VAP I 2000 FS	Art.-Nr. CT 233
KOSTER Gauge Rake	Art.-Nr. CT 915 001
KOSTER VAP I 06 Primer	Art.-Nr. SL 131 009
KOSTER LevelStrong Skim Coat	Art.-Nr. SL 282 022

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