



# KOSTER VAP I 2000 Zero VOC

Technical Data Sheet CT 230

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## VOC free system for control of concrete floor moisture and pH

### Features

KOSTER VAP I 2000 Zero VOC is a VOC free, one-coat moisture vapor control system consisting of a unique combination of epoxy resins and compounds formulated to prevent floor covering failures on concrete slabs with elevated levels of moisture. KOSTER VAP I 2000 Zero VOC 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 Zero VOC can be applied to slabs with up to 100% RH, 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 low permeance flooring such as sheet goods and rubber tile. KOSTER VAP I 2000 Zero VOC is compliant with all state and federal VOC regulations, having a VOC content of 0 g/L, which allows installation in sensitive areas such as hospitals, schools and grocery stores. LEED Indoor Environmental Quality Credits available for EQ 4.2 (Low-Emitting Materials, Paints and Coatings).

### Technical Data

Pot Life:	approx. 12 min (apply material immediately after mixing)
Cure Time:	approx. 12 hr (depending on temperature and humidity)
Solids Content:	100%
VOC, mixed:	0 g/L
Flash Point:	>200° F
Tensile Bond to Concrete:	>200 psi (ASTM D7234)
Compressive Strength:	>8,700 psi
Flexural Strength:	>4,350 psi
Permeance:	0.056 perms (grains/h/ft <sup>2</sup> /in. Hg, ASTM E96 water method 73°F/50%RH)

### Fields of Application

KOSTER VAP I 2000 Zero VOC 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, and many other applications. KOSTER VAP I 2000 Zero VOC's low odor and zero VOC content 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 KOSTER VAP I 2000 Zero VOC 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 may 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 the 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 that are going to be coated with a KOSTER VAP I 2000 product 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 the shotblasting and grinding, the concrete slab must be vacuumed free of dust, dirt and debris prior to KOSTER VAP I 2000 Zero VOC installation. Do not use sweeping compounds that may cause bonding issues as most contain oil.

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

### Application

#### Mixing

Each unit of the material is packaged containing the components in the correct ratio.

**2.4 gallon unit:** Using a long, slim, pointed tool such as a screwdriver, carefully puncture the rubber seal on top of the B component can as well as the metal bottom of the B component can. Allow sufficient time for the B component to drain into the A component. Remove the B component can. Use a slow speed electrical mixer (≤400 RPM) and "Jiffy-type" mixing paddle to mix the material for 3 minutes. Components A and B are mixed at a ratio of 2:1 by weight (1.76:1 by volume).

**6 gallon unit:** Pre-mix the A component. Then pour the B component into the short-filled A component container while continually mixing. Mix for 3 minutes. Pour the fully mixed material onto the substrate immediately after mixing, emptying the container completely in a continuous ribbon across the work area. Do not invert container on floor to drain residual material.

### Application

The information contained in this technical data sheet is based on the results of our research and on our practical experience in the field. All given test data are average values which have been obtained under defined conditions. The installer is responsible for the correct application taking into consideration the specific conditions of the construction site and the final results of the construction process. This may require adjustments to the recommendations given here for standard cases. Specifications made by our employees or representatives which deviate from the specifications contained in any Company literature may not be relied upon in the absence of written confirmation from the Company. The installer must comply with all testing, technical requirement, guidelines, and industry customs at all times. The terms, conditions, and limitations contained in the written warranty for the product controls over the specifications contained herein. This guideline has been technically revised; all previous versions are invalid.

Apply KOSTER VAP I 2000 Zero VOC at substrate and ambient temperatures between 50° and 90°F. Do not apply KOSTER VAP I 2000 Zero VOC to concrete less than 7 days old. Provide ventilation during application and curing. KOSTER VAP I 2000 Zero VOC 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 Zero VOC is applied to the concrete surface, it may flow into voids 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 Zero VOC to be exposed to sunlight more than 48 hours. KOSTER VAP I 2000 Zero VOC 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 Zero VOC must be clean and free of dust, dirt, and debris. Sanding is not required. If installing coatings over KOSTER VAP I 2000 Zero VOC such as polymethyl methacrylate, epoxy, or polyurethane, the recoat window is 48 hours after KOSTER VAP I 2000 Zero VOC has cured for 12 hours. 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 Zero VOC 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.

Testing shows the following relationship between coverage, layer thickness, and permeance:

Spread Rate at CSP 3	Average Thickness	Permeance*
sq ft / gal	mils (0.001 in)	grains/hr/sqft/in.Hg
150	11	0.086
100	16	0.056

\*ASTM E96 water method, 73°F/50% RH

### Cleaning

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

### Packaging

CT 230 002	
CT 230 010	2.4 gallon kit
CT 230 025	6 gallon kit

### Storage

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

### Safety

Consult Safety Data Sheet. May cause irritation to eyes, skin, or

respiratory system. 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 eyes 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 products 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 FS	Art.-Nr. CT 233
KOSTER VAP I 2000 UFS	Art.-Nr. CT 234
KOSTER VAP I 2000	Art.-Nr. CT 235
KOSTER Gauge Rake	Art.-Nr. CT 915 001
KOSTER VAP I 06 Primer	Art.-Nr. SL 131 009
KOSTER SL Premium	Art.-Nr. SL 280 025
KOSTER SC	Art.-Nr. SL 282 022
KOSTER Universal Cleaner	Art.-Nr. X 910 010

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