

## KÖSTER VAP® 2000

Technical guideline / Article number **6.035**

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- Official test certificate: Report of Water Transmission Test, Law Project Number 50160-0-3481.01.832 (LAW Engineering, Inc. Atlanta / USA)

### 2-component solvent free resin system for preventing osmotic bubble formation under coatings / coverings and for alkalinity barriers

#### Features

Due to its very high interlacing density, KÖSTER VAP® 2000 is able to reduce the accumulation of water vapor to such an extent that synthetic resin coatings, synthetic resin adhesives and plastic coverings are not pushed off the substrate. The material displays a good resistance to water, sewage, mineral oil, salt solutions, and diluted acids. Due to its high compressive strength and its low modulus of elasticity, KÖSTER VAP® 2000 should not be used in areas which are exposed to high temperature fluctuations, (e. g. outside).

#### Technical Data

Consistency	low viscous
Mix ratio	100 : 50, A : B by weight (2: 1)
Density of the mixed material	1.1 g / cm <sup>3</sup>
Pot life at 23 °C	approx. 25 min.
Solids content	100%
Flash point	> 200 °C
Curing time at +20 °C	approx. 12 hours
Mechanical a chemical final strength, at 23 °C	after 7 days
Application / processing temperature	10 – 30 °C
Max. relative humidity during application/processing	85 %
Earliest water resistance	after 24 hours / 23 °C
Compressive strength	approx. 65 N / mm <sup>2</sup>
Storage temperature	10 – 25 °C

#### Field of application

KÖSTER VAP® 2000 is a special resin for application on unsealed interior concrete floors such as industrial and multi-purpose halls, offices, hospitals, schools, supermarkets, manufacturing facilities, airplane hangars, storage and retail space, and commercial and residential construction which is exposed to moisture from the underside due to faulty or missing waterproofing of the concrete. It protects against high concrete alkalinity (ph 13 – 14) and serves as a primer by reducing the water vapor diffusion prior to the application of epoxy or polyurethane resin coatings or respectively the adhesion of vapor tight floor coverings such as PVC.

#### Surface Preparation:

KÖSTER VAP® 2000 is used to seal concrete surfaces. The minimum age of the concrete surface to be sealed must be 7 days. The surface to be sealed must be clean, absorbent, free of dust, oil and grease and other adhesion reducing substances. Any kind of surface contamination like adhesives, coatings, curing compounds, efflorescence, dust, grease, oils, etc., have to be removed completely by shot blasting. Smooth concrete surfaces must be roughened by sand or shot blasting. The substrate must have a minimum adhesive tensile strength of 1.5 N / mm<sup>2</sup>. During application and curing the surface must have a minimum + 3° C above the dew point. The concrete must be free of alkali sensitive aggregates, and the surface free of water soluble silicates as often found in surface hardeners, sealing agents, and crystalline waterproofing products.

KÖSTER Corporation recommends older, existing concrete slabs be cored and analyzed for various contaminants such as sulphurous salts, ASR (Alkali Silica Reaction), unreacted water soluble silicates and any other deleterious compounds

Slabs that have existing flooring failures are strongly recommended to have core samples taken to identify the failure mode or identify any deleterious constituents in the concrete. It is the owner or owner's representative's responsibility to test the slab for contaminants.

#### Underlayments / Leveling compounds:

Cementitious underlayments, leveling or skim coatings are not required over VAP® 2000 but are commonly used to smooth or level the VAP® 2000 coated surface in preparation for subsequent floor coverings and systems as required. VAP® 2000 is not formulated to be a floor leveling product.

All underlayments, leveling or skim coats must be applied on top of the cured VAP® 2000 unless otherwise specified by your representative or the KÖSTER Technical Staff. To guarantee proper adhesion of cementitious products to non-porous surfaces use VAP® I 06 Primer prior to the installation of any cementitious material.

Do not install VAP® 2000 over any gypsum based products.

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 proper and thereby effective and successful application of our products is not subject to our control. The installer is responsible for the correct application under consideration of the specific conditions of the construction site and for 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 exceed the specifications contained in this technical guideline require written confirmation. The valid standards for testing and installation, technical guidelines, and acknowledged rules of technology have to be adhered to at all times. The warranty can and is therefore only applied to the quality of our products within the scope of our terms and conditions, not however, for their effective and successful application. This guideline has been technically revised; all previous versions are invalid.

## Adhesives:

Most flooring systems and adhesives may be applied directly to the cured VAP® 2000. Adhesives must be designed and formulated for use over a non-porous substrate. There is no absorption of any fluid or solvents from the adhesive into the VAP® 2000 coated concrete. Apply adhesives to a test area to check for compatibility prior to overall application.

Adhesives containing solvents (including water) that are not allowed to flash off prior to the flooring installation may be applied to a minimum of 4 mm of a cementitious underlayment. Check with the manufacturer's recommendation for installation over an underlayment and the required thickness for use as an absorptive blotter.

## Application

The two components of KÖSTER VAP® 2000 are mixed using an electrical stirring device below 400 rpm until a homogeneous consistency is achieved. To avoid defects due to insufficient mixing, replot the material and mix it again.

KÖSTER VAP® 2000 is applied evenly with a roller or squeegee in one coat. The formation of puddles must absolutely be avoided! Concrete surface profile, absorption rate and moisture vapor rates can effect coverage requirements. The substrate must be completely covered with a glossy film. The minimum continuous layer thickness is 0.4 mm. If a second coat is necessary to achieve the minimum layer thickness, it is to be applied between 12 and 24 hours after the first coat.

After a waiting time of min. 12 hours, subsequent work steps such as the application of sealants, coatings or coverings can be carried out. In order to avoid air entrapment, use only solvent free or respectively water free adhesives.

## Consumption

500 g / m<sup>2</sup> (250 g / m<sup>2</sup> per layer)

Exposure to permanent negative side water: 800 g / m<sup>2</sup> in two layers

## Cleaning of tools

Clean tools immediately after use with KÖSTER KB-Pox® Cleaner.

## Packaging

25 kg combi package

## Storage

Store the material at 10 °C to 25 °C. If stored in originally sealed packages it can be stored for 1 year.

## Technical guidelines cited

KÖSTER KB-Pox® Cleaner  
KÖSTER VAP® I 06 Primer

Art.-No. 9.08  
Art.-No. 6.031