KÖSTER
Waterproofing Systems

KÖSTER VAP I 2000

Technical Data Sheet CT 230

Issued: 2023-06-16

- CTL Test Report, Standard Test Methode for Vapour Transmission of Materials, ASTM E-96-10, Project Nr. 28326, 18.3.2013.
- Report: Study of the permeability of impurities through a coating of KÖSTER VAP I 2000 from 4.9.2017 VAHANEN BUILDING PHYSICS LTD, FINLAND
- LEED Compliance Test By Berkley Analytics, "VOC Emission Test Certificate", Certificate Nr. 170815-04, Aug 15, 2017.
-AgBB Test certificate, H 6939 FM-2, Emissions Testing acc. to DIBt principles for the health assessment of construction products, 12.10.2012.

A system for the control of moisture and pH on concrete floors to avoid osmotic blistering

CE	KÖSTER BAUCHEMIE AG Dieselstraße 1-10, 26607 Aurich **13** **CT 230** **EN 13813:2002** **KÖSTER VAP I 2000** **Synthetic resin for internal uses**
Reaction to fire	Efl a)
Release of corrosive substances	SR
Water permeability	NPD
Wear resistance	≤ AR 0.5
Bond strength	≥ B 2.0
Impact resistance	NPD
Sound insulation	NPD
Sound absorption	NPD
Thermal resistance	NPD
Chemical resistance	NPD
Dangerous substances	NPD

Features
Due to its very high interlacing density, KÖSTER VAP I 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.

Technical Data

Consistency	low viscous
Mix ratio	A : B by weight (2 : 1)
Density of the mixed material	1.1 g / cm3
Pot life at + 23 °C	approx. 25 min.
Solids content	100%
Flash point	> + 200 °C
Curing time at + 20 °C	approx. 12 hours
Mechanical an chemical final strength, at 23 °C	after 7 days
Application / processing temperature	+ 10 °C – + 30 °C
Max. relative humidity during application/processing	85 %
Earliest water resistance	after 24 hours / + 23 °C
Compressive strength	approx. 65 N / mm2
Storage temperature	+ 10 °C – + 25 °C
µ value	144,960
Sd value, consumption 500g / m²	65.2 m

Fields of Application
KÖSTER VAP I 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, rubber, wood, and solid backed carpet.

Substrate
KÖSTER VAP I 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 / mm². 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.

Underlayments / Leveling compounds:
KÖSTER SL Premium is especially suited for instalment on top of KÖSTER VAP I 2000.

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

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

Do not install KÖSTER VAP I 2000 over any gypsum based products.

Adhesives
Most flooring systems and adhesives may be applied directly to the cured KÖSTER VAP I 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 I 2000 coated concrete. Apply adhesives to a test area to check for compatibility prior to overall application.

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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 I 2000 are mixed using an electrical stirring device below 400 rpm until a homogeneous consistency is achieved. To avoid defects due to insufficient mixing, repot the material and mix it again.

KÖSTER VAP I 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
Approx. 0.450 kg / m²

Cleaning
Clean tools immediately after use with KÖSTER Universal Cleaner.

Packaging

CT 230 002	2.95 kg combipackage
CT 230 010	10.13 kg combipackage
CT 230 025	25.32 kg combipackage

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

Safety
Wear appropriate Protective Personal Equipment (PPE) when installing the material. Observe all governmental, state, and local safety regulations when processing the material.

Mixed material must be used immediately and entirely after mixing. **Material residues must be stored outdoors as they develop a high reaction heat and smoke may form**. This also applies to large-volume applications.

Other
Liquid polymers react to temperature fluctuations by changing their viscosity and/or curing behavior. Low temperatures will slow the reaction; high temperatures will accelerate the reaction rate. Mixing large volumes will also increase the reaction rate. Coating work should therefore only be carried out at falling or constant temperatures. The instructions given in the Technical Guidelines must be followed.

A dew point distance of +3 °C must be maintained during and for at least 12 hours after coating work. Coatings must be protected from moisture in all forms until completely cured. At material temperatures below +15 °C the consistency changes - the material becomes more viscous.

Related products

KÖSTER VAP I 2000 UFS	Prod. code CT 234
KÖSTER Gauging rake	Prod. code CT 915 001
KÖSTER VAP I 06	Prod. code SL 131 009
KÖSTER SL Premium	Prod. code SL 280 025
KÖSTER SL	Prod. code SL 281 025
KÖSTER SL Protect	Prod. code SL 286 025
KÖSTER Universal Cleaner	Prod. code X 910 010

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