



KOSTER VAP I[®] ORS

An Oil-Removal and Containment treatment process to rehabilitate concrete surfaces making them suitable to receive any type of flooring system

Technical guideline / Article number 6.038
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Description:

The KOSTER VAP I[®] ORS System consists of two components; 1) A cleaning system using a special detergent (KOSTER VAP I[®] ORS-D.); 2) An oil resistant primer coating (KOSTER VAP I[®] ORS-C) with a sand broadcast. Both products combine to provide a dry, uncontaminated surface which is fit to receive flooring/coating systems. The KOSTER VAP I[®] ORS-D has the ability to penetrate deeply into the concrete surface to extract oil and/or hydrocarbon based compounds leaving a clean surface for the KOSTER VAP I[®] ORS-C coating. The detergent is forced into the concrete with a "spinner" that ejects hot water at 5000 psi to force the detergent into the concrete. Depending on the degree of oil contamination, 2 or more KOSTER VAP I[®] ORS-D applications may be necessary depending on levels of contamination. Consult with the KOSTER VAP I[®] ORS technical staff for complete application requirements.

Surface Preparation:

The substrates to receive the KOSTER VAP I[®] ORS SYSTEM must be sound and absorptive and meet acceptable industry standards as defined in ACI Committee 201 report "Guide to Durable Concrete." Any type of surface contamination such as adhesives, adhesive residue, old coatings, curing compounds and underlayments must be removed completely by shotblasting prior to the KOSTER VAP I[®] ORS treatment being applied. Do NOT apply KOSTER VAP I[®] ORS onto surfaces that have been treated with any type of concrete sealer prior to consulting with KOSTER American Corp. Make sure the substrate surface does not deteriorate due to the presence of Alkaline Silica Reactive (ASR) substances or sulphurous compounds encountered in certain geographical areas. Testing for concrete deficiencies and contaminants such as ASR, un-reacted silicates, high water vapor emissions, etc. is the responsibility of the building owner and strongly recommended by KOSTER American to avoid product failures.

KOSTER American Corporation advises that surfaces to be treated with KOSTER VAP I[®] ORS be inspected and evaluated by an experienced firm (independent lab) prior to the application of any KOSTER systems to determine its suitability to receive KOSTER VAP I[®]

Systems. Independent lab core testing and analysis is highly recommended prior to the start of any KOSTER VAP I[®] ORS treatment project or application.

Depending on level of contamination, it may be necessary to mechanically remove surface buildup of oily crusts prior to the application of special detergent, (KOSTER VAP I[®] ORS-D). The substrate must be cleaned with KOSTER VAP I[®] ORS-D and hot water (180°F) blasted with a minimum of 5000 psi in accordance with the detergent scrubbing method as outlined in ICRI Guideline No. 03732. Vacuum the oily wastewater into containment tanks. Repeat process until oil is removed from the concrete slab. Dispose of the oily wastewater in accordance with all federal, state, and local regulations.

If self-leveling underlayments are to be used for any reason, always apply these systems ON TOP OF the KOSTER VAP I[®] ORS SYSTEM, never underneath. Consult with KOSTER AMERICAN prior to using underlayments, repair mortars and screeds.

Application Instructions:

Mix Component A and B at a ratio of 4:1 by volume. This is accomplished by pre-mixing the A component; then pouring the B component into the short-filled A component; mixing all the while. Mix with a slow speed motor (<400 RPM) and "Jiffy-type" mixer for 3 minutes to a streak-free consistency. Pour the fully mixed material onto the substrate immediately after mixing. Squeegee material evenly over surface, followed by back rolling with an epoxy-rated 3/8" nap roller.

Under no circumstances should the floor be allowed to dry prior to the application of the KOSTER VAP I[®] ORS-C. Wait a minimum of 15-20 minutes and broadcast washed/dried silica type sand into wet KOSTER VAP I[®] ORS-C coating to rejection for subsequent installations of materials/systems. Apply approximately 30 lbs. of sand (mesh size #30-50) for each 100 ft². The size of sand will depend on final finish of surface required. If a rough surface is desired; use 30-40 mesh sized sand. If smoother surface is desired; use 40-50 mesh size sand.

Allow a minimum 12 hour cure (longer if ambient temperatures are lower than 60°F) and remove all loose sand.

Technical Data KOSTER VAP I[®] ORS-C:

Consistency: Approximately 800 MPa
Mixing ratio: 8.33:1 (A: B); 4:1 by volume
Pot life: 1 hour at 70°F
Foot traffic: 12 hours
Compressive strength: >11000 PSI
Specific gravity: 2 g/cm³
VOC Compliant: 4.5 g/l.
Standard color: green
Packaging: 4 gal unit
Flash point: 203°F
Solid content: 97%
Water Vapor Reduction: 6lbs/1000ft²/24 hours.

Technical Data KOSTER VAP I[®] ORS-D:

Color: Clear
VOC Compliant: 0.0 g/l

Packaging:

KOSTER VAP I[®] ORS D: 5 gal and 2.5 gal container
KOSTER VAP I[®] ORS C – 4 gal container 3.2 gal-A;
0.8 gal-B
Shelf life is 18 months in closed, original unopened packaging, stored in a dry, cool area. Do not allow KOSTER VAP I[®] ORS-C or KOSTER VAP I[®] ORS-D to freeze.

Spread Rate:

KOSTER VAP I[®] ORS C - 100 ft²/gallon
KOSTER VAP I[®] ORS D – 350-400 ft²/gallon per coat, based on a total two-coat application. The number of total coats or the KOSTER VAP I[®] ORS-D applied will depend upon contamination levels in any given slab.

Cleaning:

Immediately after use clean tools with an organic solvent for KOSTER VAP I[®] ORS C, with water for KOSTER VAP I[®] ORS D.

Disposal:

Contain and dispose of all waste material and waste water generated by the KOSTER VAP I[®] ORS cleaning & coating procedures in accordance with all current local, state, and federal regulations and requirements. Collect any spills with absorbent materials.

Water Vapor Reducing Systems

The KOSTER VAP I[®] ORS System may be used on vapor-driven concrete with a tested water vapor drive of 6 lbs/1000 ft²/24 hour period or less (ASTM F-1869 calcium chloride test). Contact KOSTER American technical staff if water vapor readings exceed 6 lbs. If moisture vapor transmissions exceed 6 lbs/1000 ft²/24, KOSTER VAP I[®] 2000 must be installed at appropriate spread rate. See KOSTER VAP I[®] 2000 data sheet for details. This unique KOSTER VAP I[®] ORS Coating is compatible with most underlayments, floor adhesives and industrial coating systems. Contact KOSTER

American for specific applications. KOSTER American offers a complete and comprehensive 10-year warranty for the entire system when properly applied.

Safety Precautions: KOSTER VAP I[®] ORS-C

Component A contains epoxy resins. Component B contains amines. Avoid skin and eye contact as well as prolonged exposure to vapors. When necessary, use safety goggles and chemical-resistant gloves. Ventilate work area properly. In confined spaces or when necessary, use NOISH/MSHA approved vapor respirator.

Safety Precautions: KOSTER VAP I[®] ORS-D

Use rubber gloves and tightly sealed goggles. Avoid prolonged skin contact.

First Aid:

Eye Contact — Flush immediately with water and consult physician.

Skin Contact — Wash immediately with soap and water.

Respiratory Problems — Remove person from coating area and take to fresh air.

Environmental Conditions:

The KOSTER VAP I[®] ORS System must be applied at ambient and substrate temperatures between 50°F and 90°F. The ambient relative humidity must not exceed 80%.

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.