



## 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

#### Description:

The KOSTER VAP I® ORS System consists of two components; 1) A cleaning system using a special detergent (ORS-D.); 2) An oil resistant primer coating (ORS-C) with a sand broadcast. Both products combine to provide a dry, uncontaminated surface which is fit to receive flooring/coating systems. The ORS-D has the ability to penetrate deep into the concrete surface to extract oil and/or hydrocarbon based compounds leaving a clean surface for the 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 ORS-D applications may be necessary depending on levels of contamination. Consult with the ORS tech 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 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 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 VAP I® Systems. Independent lab core testing and analysis is highly recommended prior to the start of any 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, (ORS-D). The substrate must be cleaned with 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 a 3/8" nap roller suitable for epoxies.

**Under no circumstances should the floor be allowed to dry prior to the application of the VAP I® ORS-C.**

**WAIT A MINIMUM OF 15-20 MINUTES** and broadcast washed/dried silica type sand into wet ORS-C coating to rejection for subsequent installations of materials/systems. Apply approximately 30 lbs. of sand (mesh size #30-50) for each 100 ft<sup>2</sup>. The size of sand will depend on final finish of surface required; if a rough surface is desired- use a 30-40 mesh sized sand; if smoother surface is desired- use a 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 ORS-C (Primer Coating):

Consistency: Approximately 800 MPa  
Mixing ratio: 8.33:1 (A: B); 4:1 by volume  
Pot life: 1 hr @ 70° F

Foot traffic: 12 hrs  
Compressive strength: 80 N/mm  
Specific gravity: 2 g/cm<sup>3</sup>  
VOC Compliant: 4.5 gr/L.  
Standard color: green  
Packaging: 4 gal unit  
Flash point: 203°F  
Solid content: 97%  
Water Vapor Reduction: 6lbs/1000ft<sup>2</sup>/24 hours.

### Technical Data ORS-D (Special Detergent):

Color: Clear  
VOC Compliant: 0.0 gr./L  
Packaging: 5 gal unit; 2.5 gal unit

### Packaging:

ORS D – 5 gal container; 2.5 gal container  
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 ORS-C or ORS-D to freeze.

### Spread Rate:

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

### Cleaning:

Immediately after use clean tools with an organic solvent for ORS C, with water for ORS D.

### Disposal:

Contain and dispose of all waste material & waste water generated by the 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<sup>®</sup> ORS System** may be used on vapor-driven concrete with a tested water vapor drive of 6 lbs/1000 ft<sup>2</sup>/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 ft<sup>2</sup>/24, KOSTER VAP I<sup>®</sup> 2000 must be installed at appropriate spread rate. See VAP I<sup>®</sup> 2000 data sheet for details. This unique 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: 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: ORS-D

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

KEEP OUT OF REACH OF CHILDREN  
FOR INDUSTRIAL USE ONLY  
READ MATERIALS SAFETY DATA SHEET  
BEFORE USING  
EMERGENCY RESPONSE: Infotrac 800-535-5053

### 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<sup>®</sup> ORS System must be applied at ambient and substrate temperatures between 50° and 90° F. (10° C and 32.2° C). The relative humidity must not exceed 80%.

### Warranties:

LIMITED WARRANTY: KOSTER AMERICAN CORPORATION (“KOSTER”) warrants that its products shall be in accordance with their published specifications and covenants that, in the event any of its products fail to meet their published specifications or their published performance standards (subject to published conditions such as proper application and surface preparation), KOSTER shall replace those products proved defective, but KOSTER shall not be responsible for consequential damages due to the breach of its warranties. Notwithstanding the foregoing, KOSTER’S 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 FOR A PARTICULAR PURPOSE.

This agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia, and all parties consent to jurisdiction in the courts located in the Cities of Norfolk and Virginia Beach, Virginia and agree that no other courts shall be an appropriate venue for any disputes arising out of the relationship between the Company and the Customer.

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