

Sections

**09** 09 96 00  
High Performance Coatings

# VAPOR-TEK™ 440

HIGH PERFORMANCE, TWO COMPONENT 100% SOLIDS, EPOXY COATING DESIGNED TO CONTROL MOISTURE VAPOR EMISSION RATES UP TO 20LB. / 24 HR / 1,000 FT. PRIOR TO THE APPLICATION OF FLOORING.

### Description

A revolutionary, 100% solids, two component epoxy coating designed to control moisture vapor emission rates up to 20 lb / 24 hr / 1,000 ft, prior to the application of epoxy floor systems, vinyl, rubber, tile, cementitious overlays, terrazzo, wood, or carpet.

Vapor-Tek 440 reduces the permeance of moisture vapor through concrete substrates to levels that are acceptable for the installation of resinous floor coatings. The high performance

and quick installation features of this system make it an ideal solution. Meets ASTM F3010 for vapor permeance.

### Solids

100%

### Appearance/color

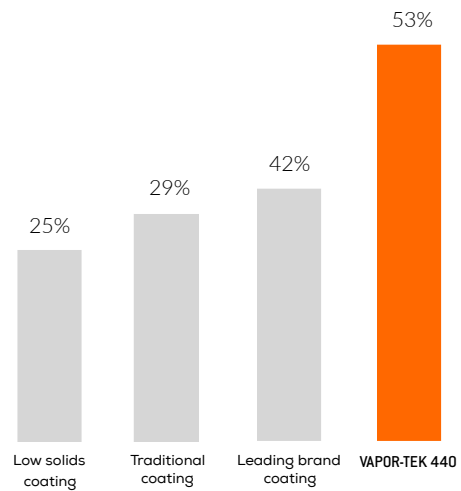
Available in clear

### Coverage

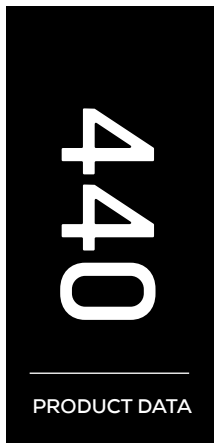
100 ft<sup>2</sup>/gallon

### VAPOR PERMEANCE

Meets the requirements of:  
ASTM F3010



Percentage Improvement vs. Control



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## Technical Data Sheet

### TECHNOLOGY // ADVANTAGES

- **Composition** - 100% solids nanotechnology driven high-performance moisture vapor barrier coating
- **Helps reduce effects of moisture vapor transmission**
- **One coat application**
- **May be used as a primer to an epoxy floor system** or stand-alone product before applying flooring
- **Ensures protection of moisture sensitive floor coverings**
- **Stops dusting** and allows for easy cleaning
- **No VOCs** - no odor
- **Will form an excellent bond to concrete** - will not delaminate when exposed to moisture emission rates up to 20lb/24 hr/1000 sq. ft.
- **Meets ASTM F3010** - Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings
- **Can be applied to concrete 10 days old**

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### TYPICAL PROPERTIES

**Appearance** - Clear

**Packaging** - 1.5 gallon kit, 3 gallon kit

**VOC's** - 0 g/L

**Recommended Thickness** - 17 mils

**Shelf Life** - 1 year (unopened) from date of manufacture

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### APPLICATIONS

- Interior
- Horizontal
- Basements
- Warehouses

### SUBSTRATES

- Concrete
-



# Technical Data Sheet

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## TESTING DATA

### TECHNICAL SPECS

**Feature:** Moisture vapor barrier system

**Chemistry:** 100% solids epoxy

**Color:** Clear

**Finish:** Gloss

**Carrier:** 100% solids

**Availability:** 2 component kit

**Packaging:** 1.5 Gallon Kit, 3 Gallon Kit

**Coverage:** 100 sq. ft. per gallon at 17 mils

**Application Method:** Roller

**Application Temperature:** 60 F - 90 F

**Number of Coats:** 1

**Storage/Shelf Life:** 1 Year

**Clean up:** Xylol

**VOC Content:** 0 g/L

**Film Thickness:** 17 mils

**Adhesion:** 350 psi

**Viscosity:** 700 cps

**Primer:** None

### CURE TIMES (70°F)

**Pot Life** - 1 gallon volume: 30 - 40 minutes

**Tack Free (dry to touch):** 6-10 hours

**Recoat or Topcoat:** 12-16 hours

**Full Cure (Heavy Traffic):** 3-7 days

Test results are averages obtained in a controlled environment, material and curing conditions of 70°F and 50% relative humidity. Reasonable variations should be expected .



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## APPLICATION

### Surface Prep

1. The concrete substrate to be coated must be clean, dry, and completely free of loose particles, grease, oil, or any substance that would interfere with proper bond.
2. Surface and air temperatures must be at least 55°F during application. Surface and air temperatures should not exceed 90°F. Keep material from freezing.
3. Perform moisture vapor transmission testing per ASTM F1869 (calcium chloride) to verify that the vapor pressure is below 20lb/24hr/1000ft<sup>2</sup> or above 75% and below 95% (relative humidity) per ASTM F2170.
4. A surface profile of a CSP 3 or 4 is recommended prior to installing the Vapor-Tek 440 by mechanical scarification until a suitable profile is achieved.

### Application

**Mixing:** Standard packages are in pre-measured kits and should be mixed as supplied in the kit. We highly recommend that the kits not be broken down unless suitable weighing equipment is available. Mix each individual component before using. Mix part A and part B together with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. Avoid whipping air into the liquids. After mixing, transfer the mixed material to another pail (the transfer pail) and again remix before applying to the concrete substrate. Improper mixing may result in product failure.

**Application** - The mixed material can be applied by brush or roller. However, the material can also be applied by a suitable serrated squeegee and then back rolled as long as the appropriate thickness recommendations are maintained. When applying by serrated squeegee, back roll the material at a right angle to the direction of the squeegee application. Maintain temperatures and relative humidity within the recommended ranges during the application and curing process. Do not use any heating equipment that would produce carbon dioxide. When rolling out the product, it is best to roll out the product in one direction and then back roll the material in the opposite direction to make sure it is worked into the concrete well. If concrete conditions or over aggressive mixing causes air entrapment, then an air release roller tool should be used prior to the coating tacking off to remove the air entrapped in the coating. When the mixed material is applied to the concrete surface, pin holes or voids may develop when air is displaced (outgassing). If voids or pin holes occur, re-application to remove them must be undertaken. Grind these areas and clean off residue; make sure the surface is dry and re-coat. Thinner applications than recommended may result in insufficient moisture vapor protection.

**Coating:** Concrete treated with Vapor-Tek 440 can be covered with wood flooring, tile, carpet or an epoxy floor system. For proper adhesion, use a product or primer suitable for application over a non-porous surface when applying to the moisture vapor product. Wait at least 12-16 hours before applying flooring, coatings, overlays, or other surfacing before the material is properly set up. Cooler temperatures or a colder substrate might need additional curing time. Usually, the degree of cure is sufficient when you can firmly press down on the coating with your thumb and leave no marking. The maximum recoat window for the Vapor-Tek 440 is 48 hours.



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### APPLICATION

#### Application Notes:

- Vapor-Tek 440 should not be used as a final wear surface.
- Do not use over lightweight concrete such as gypsum based underlayments.
- Product color may vary from batch to batch.
- This product is not UV color stable.
- Color stability may be affected by environmental conditions such as high humidity, chemical exposure or certain types of lighting.
- Substrate temperatures must be 5°F above dew point.
- For best results, apply with a high quality roller.
- All new concrete must be cured for at least 10 days prior to application with a minimum compressive strength of 3,500 psi and a minimum tensile strength of 200 psi.
- Testing must be performed to confirm a moisture vapor emission rate below 20lb/24hr/1000ft<sup>2</sup> per ASTM F1869 or between 75% and 95% for ASTM F2170.
- Surface must be durable, clean, free of laitance with a surface profile minimum of CSP Level 3.
- Do not expose this product to water until fully cured.
- Product is not suitable for preventing hydrostatic water conditions.
- Manufacturer is not responsible for entrapped moisture and/or water underneath applied coatings with a low rate of water vapor transmission which can deteriorate concrete resulting in a cohesive failure within the concrete surface.
- Product will not prevent failures from insufficient surface preparation, improper applications, alkaline silica reaction (ASR), ionic compounds or soluble salts in the concrete.
- Manufacturer is not responsible for failures caused by cracks and pin holes or damage caused by use. Cracks and joints are not covered by any warranty.
- Product is not warranted for any products not recommended by or manufactured by the vapor barrier manufacturer.

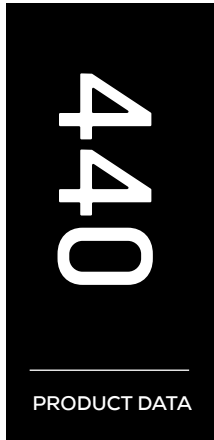
- Any un-reacted alkaline silicate compounds within the concrete can result in osmotic action/water vapor transmission that will channel these water soluble compounds to the surface where they can effectively break the bond of the applied system as well as preventing penetration of the coating into the substrate.
- Slabs must be at least 4" thick with a functioning vapor barrier.
- Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured. It is best to let the floor remain dry for the full cure cycle. Dependent on actual complete system application, surface may be slippery, especially when wet or contaminated; keep surface clean and dry.

#### Clean Up

Clean equipment, tools and surfaces with xylol. Unused or old material may be disposed of in a waste disposal site in accordance with local, state and federal laws.

#### Precautions/Safety

Use appropriate safety equipment during application and handling. Please refer to the safety data sheet (SDS) for additional precautionary instructions before use.



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### APPLICATION

#### Best Performance

- Proper application is the responsibility of the user.
- Make sure the most current versions of technical data sheets and safety data sheets are being used.
- Keep out of reach of children and pets.
- Store in a cool, dry place away from direct sunlight. Avoid opened containers, as moisture will cure the material.

#### Coverage

100 square feet per gallon. Variations in texture and porosity of substrate will affect the coverage and performance of the product.

#### KreteTek Industries Inc.

66 River Road  
Hudson, NH 03051

[www.Ghostshield.com](http://www.Ghostshield.com)

#### Customer Service and Technical Support

1-855-KreteTek (1-855-573-8383)

#### Warranty

KreteTek Industries Inc. warrants our products are manufactured to strict quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular purpose. Any use or application other than recommended herein is the sole responsibility of the user. Listed physical properties are typical and should not be construed as specifications. No warranty is made, expressed or implied, regarding such other information, the data on which it is based or the results you will obtain from its use. We shall have no liability for incidental or consequential damages, direct or indirect. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sale of our products.

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#### For professional use only.

Last revised 4/18