



Specialty Flooring Products

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TECHNICAL DATA: VAPOR-CON

Vapor-Con

NC-Vapor-Con (NC-VC) is a two component high strength, moisture tolerant coating designed to reduce vapor transmission in concrete, cement underlayment / overlayment surfaces, prior to installation of Carpet, Hard or soft surface Tile, Hardwood (solid or engineered), Vinyl and VCT. NC-VC has excellent adhesion chemical resistance, flexural strength, and substrate penetration. This product is a stand alone coating when installed in multiple coats. Vapor-Con can be used with vapor transmission up to 12lbs / 1000sqft / 24hr. This product contains an anti microbial agent to prevent microorganisms from degrading the product and is specially formulated to resist mildew growth on the coating. This coating also resists bacterial odors.

Recommended Uses

Recommended for reducing vapor transmission in cement based substrates such as concrete floors, floor underlayments (Not Gypsum), and screeds. Vapor-Con reduces moisture to acceptable levels for the installation of most hard and soft surfaces flooring products. Substrates should have a minimum compressive strength of 2500psi.

General Product Data

SOLIDS BY WEIGHT:

Mixed = 53% (colors); 45% (clear); (+, - 2%)

SOLIDS BY VOLUME:

Mixed = 41% (colors); 36% (clear); (+, - 2%)

VOLATILE ORGANIC CONTENT:

Colors = 1.01 pounds per gallon (mixed)

Clear = 1.0 pounds per gallon (mixed)

RECOMMENDED FILM THICKNESS:

7 mils per coat wet thickness (yields 2-3 mils dry)

COVERAGE PER GALLON:

267-320 square feet @ 5-7 mils wet thickness

PACKAGING INFORMATION

5 gallon kit (volume approx.)

SHELF LIFE:

1 year in unopened containers

STANDARD COLOR:

Off white

DOT CLASSIFICATIONS:

Not regulated

FLEXIBILITY:

No cracks on a 1/8" mandrel

ADHESION:

425 psi @ elcometer (concrete failure, no delamination)

VISCOSITY:

Mixed = 900-1200 cps (colors); 400-900 cps (clear) (typical)

MIX RATIO:

Colors= 8.55# part A (.80 gallons, approx) to 1.75# part B (.20 gallons, approx)

Water Vapor Transmission ASTM-E96-05 Water method	Vapor-con Water method	Control Water method	% Reduction
Water Vapor Transmission,lbs/24hr.1000 ft ²	3.57	100% Water	96.4%
Water Vapor Transmission,lbs/24hr.1000 ft ²	0.426	14.23% Vapor	96.4%
Water Vapor Transmission,lbs/24hr.1000 ft ²	0.351	11.70% Vapor	96.4%

The vapor reduction membrane, which by definition, is intended to allow a solvent (water) to seek equilibrium on both sides of the membrane, was tested with 100% humidity (water) in contact with the underside of the coating and 50% humidity on the upper side, permitting water vapor to pass through, but reduced the transmission rate by 96.4%. This translates to one coat reducing the moisture vapor transmission (without assistance from a concrete slab) from 100% moisture to 3.57 lbs./24hrs 1000 ft².

CURE SCHEDULE:

Pot life – 1 gallon volume 1.0 – 1.5 hours

Tack free (dry to touch)..... 5-8 hours

Recoat..... 7-10 hours

Light foot traffic.....16-24 hours

Full cure (heavy traffic)..48 hours

APPLICATION TEMPERATURE:

55-90 degrees F with relative humidity below 75%

CHEMICAL RESISTANCE:

REAGENT	RATING
acetic acid 5%	2
xylene	2
mek	1
gasoline	2
10% sodium hydroxide	3
50% sodium hydroxide	2
10% sulfuric	2
10% hydrochloric acid	2
20% nitric acid	1
ethylene glycol	3

Rating key: 1 - not recommended, 2 - 2 hour term splash spill, 3 - 8 hour term splash spill, 4 - 72 hour immersion, 5 - long term immersion. NOTE: extensive chemical resistance information is available through your sales representative.

PRIMER:

None required.

TOPCOAT:

None required. A second coat and a light sand broadcast can be added if needed.

LIMITATIONS:

- * Color and gloss may be affected by humidity, low temperatures, chemical exposure or sodium vapor lighting.
- * Product will yellow in the presence of UV light
- * For best results use a squeegee and / or 1/4" or 3/8" nap roller.
- * Substrate must be sound and in good condition for coating to be applied
- * Substrate temperature must be 5°F above dew point.
- * All new concrete must be cured for at least 28 days
- * Product color will vary from batch to batch. Use only product from the same batch for an entire job.
- * Improper mixing or too thick of an application may result in product failure!!
- * Physical properties listed on this technical data sheet are typical values and not specifications.
- * See reverse side for limitations of our liability and warranty.
- * See reverse side for application instructions.

Vapor-Con

Mixing and Application Instructions

PRODUCT STORAGE: Store product in an area so as to bring the material to normal room temperature before using. Continuous storage should be between 60 and 90 degree F. Keep from freezing.

SURFACE PREPARATION: Surface preparation will vary according to the type of complete system to be applied. For a one or two coat system (5-7 mils dry) we recommend either Concrete screening, mechanical scarification or a fine brush blast (shot blast). A minimum of a CSP-2 is required for installation of Vapor-Con. All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate.

MOISTURE VAPOR EMISSION TESTING:

Prior to application of Vapor-con a moisture vapor emission rate test must be done to determine the moisture level prior to installation. This can be done by using a Calcium Chloride Test per ASTM 1869.04. However, this product can be applied to a damp floor as long as there are not standing puddles and the tests are within required and acceptable levels (see Technical Data).

PRODUCT MIXING: This product comes pre-packaged by weight. Kits should be mixed in their entirety. If partial kits are to be used, refer to the front of this technical data for proper weight mix ratios. After the two parts are combined, mixes well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. This product is an emulsion product and should be mixed well before using.

PRODUCT APPLICATION: The mixed material can be applied by squeegee or roller. Maintain temperatures within the recommended ranges during the application and curing process. Apply material with relative humidity within the parameters shown on the technical data. When the end of the pot life has been reached, you will find that the material becomes hard to apply and will actually tend to roll back up onto the

PRODUCT APPLICATION (CONT'D): roller. Do not try to continue application when the coating has reached this step. Applications made at different times with differing environmental conditions, may show slight variations in gloss.

RECOAT: If you opt to recoat product, you must first be sure that all of the solvents and water have evaporated from the coating during the curing process. The information on the front side is a reliable guideline to follow. However, it is best to test the coating before recoating. This can be done by pressing on the coating with your thumb to verify that no finger print impression is left. If no impression is created, then the recoat or topcoat can be started. Always remember that colder temperatures will require more cure time for the product before recoating or top coating can commence. Before recoating or top coating, check the coating to insure no epoxy blushes were developed (a whitish, greasy film or deglossing). If a blush is present, it must be removed prior to recoating. A standard type detergent cleaner can be used to remove any blush. Many epoxy overlays and coatings as well as urethanes are compatible for use as a topcoat for this product as well as multiple coats of this product.

CLEANUP: Use PM solvent

FLOOR CLEANING: Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.

RESTRICTIONS: Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured (see technical data under full cure). It is best to let the floor remain dry for the full cure cycle (48 hours). All adhesives and underlayments should be tested prior to installation for compatibility and suitability with Vapor-con before flooring materials are installed.

Warranty

Since no control is exercised over product use, The Nikka Corporation warrants that its products are manufactured free from defect and are consistent and within manufacturing tolerances on our data sheets. No other oral or written representation or statement of any kind, expressed or implied, now or hereafter made is authorized or warranted by The Nikka Corporation. This product is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular use. The Nikka Corporation shall have no liability for incidental or consequential damage, direct or indirect. Our liability is limited to price of or replacement of our product at our option. By accepting delivery of our product means that you have accepted the terms of The Nikka Corporation Warranty.

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