Master Format #: 07 16 16

## **VANDEX SUPER/SUPER WHITE**



## **NSF/ANSI 61 APPROVED CRYSTALLINE WATERPROOFING**

## **PACKAGING**

Vandex Super 50 lb (22.7 kg) pail Code: V001P 05 50 lb (22.7 kg) bag Code: V001P 50 Vandex Super White 50 lb (22.7 kg) pail Code: V002P 05 50 lb (22.7 kg) bag Code: V002P 50

#### **CLEAN UP**

Clean tools and equipment with water before the material hardens.

#### **SHELF LIFE**

1 year in original, unopened package

# SPECIFICATIONS AND COMPLIANCES

 NSF/ANSI 61 certified for use with potable water



## **DESCRIPTION**

VANDEX SUPER and VANDEX SUPER WHITE are waterproof treatments that become an integral part of concrete through a crystallization process. Once the cementitious carrier is applied to either the positive or negative side of the substrate, crystal growth occurs, blocking the capillaries and minor shrinkage cracks within the concrete to prevent any further water ingress. In addition to waterproofing, VANDEX SUPER/SUPER WHITE protects concrete substrates against saltwater, wastewater, harsh ground water and certain chemical solutions.

#### PRODUCT CHARACTERISTICS

#### **FEATURES/BENEFITS**

- Positive or negative side to minimize excavation
- Allows vapor to pass through substrate
- Remains permanently active within concrete
- Resistant to hydrostatic pressure
- Provides resistance against chemical exposure
- No membrane to tear or puncture
- Monolithic, no seams to separate
- Can be applied to "green" concrete structures
- No special surface preparation or primers needed
- NSF/ANSI Standard 61 approved for potable water use

#### **PRIMARY APPLICATIONS**

- Sewage & water treatment plants
- Swimming pools
- Foundations & basements
- Secondary containment tanks
- Dams & water reservoirs
- Manholes
- Tunnels & subways
- Construction joints
- Spillways
- Structural slabs
- Underground vaults
- Retaining walls

#### **COVERAGE**

Coverages rates for VANDEX SUPER/SUPER WHITE vary depending on the application. Below are typical applications and their usage rate.

**Positive and negative side wall waterproofing:** 320 ft²/bag (29.7 m²/bag) per coat (approximately 5 to 7 wet mils). Two coats are required. (160 ft² of wall area can be completed with one bag of product).

**Water retaining structures:** 320 ft²/bag (29.7 m²/bag) per coat (approximately 5 to 7 wet mils). Two coats are required. (160 ft² of wall area can be completed with one bag of product).

Freshly placed concrete slabs (including split slabs): 205 ft²/bag (19.0 m²/bag).

Construction joints: 160 ft²/bag (14.8 m²/bag) (approximately 10 to 14 wet mils). Only one coat is required.

## **TECHNICAL INFORMATION**

The following are typical values obtained under laboratory conditions. Expect reasonable variation under field conditions.

| Test Method | Test Property          | Values   |
|-------------|------------------------|--|
| CRD-C 48-92 | Permeability Testing   | At the completion of the test, the treated specimens (6"x6" [15.2cm x 15.2cm]) did not exhibit any water leakage. All specimens were tested for 14 days under 200 psi (462 feet of head pressure [13.8 bar]). An independent laboratory test report is available upon request.   |
| DIN 1048    | Water Penetration      | Treated specimens (7.5"x 15.5" x 4" [19.1cm x 39.4cm x 10.2cm]) exhibited an average water penetration of 9mm when tested for 72 hours under 72 psi (166 feet of head pressure [5.0 bar]). An independent laboratory test report is available upon request.  |
| ASTM C109   | Compressive Strength   | 7 days 2,500 psi (17.2 MPa)<br>28 days 3,500 psi (24.1 MPa)  |
| ASTM C348   | Flexural Strength      | 7 days 300 psi (2.1 MPa)<br>28 days 350 psi (2.4 MPa)  |
| ASTM C666   | Freeze/Thaw Resistance | 300 cycles 98% Relative Dynamic Modulus  |
| ASTM C672   | Scaling Resistance     | 50 cycles 0 Rating, No Scaling   |
| ASTM C267   | Chemical Resistance    | Treated specimens and ASTMC 494 (5,450 psi [37.6 MPa]) untreated reference specimens were immersed in brake fluid, pool chlorine (5ppm), ethylene glycol (100%), mineral oil (100%), toluene (100%), sodium hydroxide (50%) and hydrochloric acid (10%). The compressive strength and weight change of each specimen was determined after 1, 7, 14, 28, 56, and 84 days. The treated specimens either outperformed or were the same as the reference specimens. An independent laboratory test report is available upon request. |

## **DIRECTIONS FOR USE**

**Surface Preparation:** The surface must be structurally sound, clean and free of dirt, oil and other contaminants including curing compounds, form release agents, old coatings, paint and efflorescence. New concrete and masonry must be cured well enough to support the application of VANDEX SUPER/SUPER WHITE without marring the surface. All concrete laitance must also be removed. Provide an absorptive surface (CSP 1-3 in accordance with ICRI Guideline 310.2) on all substrates including precast and formed concrete. The surface must have an open capillary system for adhesion and for optimum crystalline growth. Remove form marks and other protrusions. Concrete honeycombs, cavities, joints, cracks, voids, tie holes and other defects must be opened and routed to sound material. No active water leaks should be present at the time of application of VANDEX SUPER/SUPER WHITE. Use SPEED PLUG or VANDEX PLUG to stop all active leaks. Any surface defects need to be addressed with the application of EucoRepair V100. Once prepared, the substrate needs to be soaked with water to a saturated, surface-dry (SSD) condition just prior to the application of the material.

**Mixing:** Approximate mixing ratio is 2 parts clean, potable water to 5 parts of VANDEX SUPER/SUPER WHITE powder by volume. Alternately, mix the entire 50 lb. (22.7 kg) bag or pail with 1.75 to 2.0 gal (6.6 to 7.6 L) of water. DO NOT MIX any more material than can be used within 20 minutes. Agitate the mixture frequently to restore workability.

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## **DIRECTIONS FOR USE (CONTINUED)**

**Application: Brush:** Apply VANDEX SUPER/SUPER WHITE to properly prepared concrete and masonry substrates with a masonry brush. Spread the material across the SSD surface and work into the surface at the specified coverage rate. If a second coat is required, apply the second coat while the coat is still "green" and can support the second coat being scrubbed over top of it. The setting time of VANDEX SUPER (gray) is approximately 60 minutes, while the setting time of VANDEX SUPER WHITE is approximately 150 minutes. Set times were determined under laboratory conditions at 72 °F (22 °C).

**Spray:** VANDEX SUPER/SUPER WHITE may be applied using appropriate spray equipment with compressed air (i.e. hopper gun). For spray equipment, the recommended air pressure is approx. 73 psi (0.5 MPa) with an air delivery rate of 18 ft<sup>3</sup> (500 L)/minute. If needed, spray apply a second coat while the first coat is still "green" and can support the second coat.

**New concrete slabs:** Place and screed concrete as usual. Once the concrete has reached initial set and the bleed water has disappeared, use a power trowel with float shoes to open the surface of the concrete. Broadcast VANDEX SUPER/SUPER WHITE over the surface at the specified amount with a mesh sieve or other mechanical means. The material must then be worked into the surface with float shoes prior to the start of final finishing procedures. Properly cure upon completion. This is the only application where the 7 day cure time on new concrete isn't required prior to material placement.

**Split slab construction:** Once the base slab has been placed (min. 4" [10 cm]), apply VANDEX SUPER/SUPER WHITE at the specified rate with a mesh sieve. Proceed to placing the topping slab as to not displace any of the material on the base slab. **Construction joints:** Just prior to the placement of the adjoining slab, apply the specified amount of VANDEX SUPER/ SUPER WHITE slurry to the prepared, exposed side of the slab in place. Take care to not displace the material as the adjacent slab is placed.

## PRECAUTIONS/LIMITATIONS

- Chemical resistance data is given as a reference. These products are NOT intended to be used on chemical containment structures.
- Do not retemper VANDEX SUPER/SUPER WHITE.
- Do not mix more material than can be placed in 20 minutes.
- Do not apply to frozen or frost filled surfaces or when temperature is below or expected to fall below 40 °F (4 °C) within 48 hours.
- When using in extreme conditions, follow the recommendations in ACI 305R "Guide to Hot Weather Concreting" or ACI 306R "Guide to Cold Weather Concreting".
- Protect treated surfaces from frost for 5 days.
- Do not apply VANDEX SUPER/SUPER WHITE at temperatures above 90 °F (32 °C), unless the surface has been fully saturated with water at the time the application begins. Take protective measures to shade substrates in elevated temperatures.
- VANDEX SUPER/SUPER WHITE slurry is not designed as a wearing surface. Apply a protective topcoat before subjecting
  it to traffic.
- When applied to the inside of open cisterns, tanks, pools, etc., do not fill with water for at least 7 days after application. Inspect for hardness prior to filling.
- Allow minimum 3 days drying time before backfilling. Protection boards may be used to prevent gouging.
- Allow 28 days cure and neutralize the product before the application of coatings.
- Protect treated surfaces for 24 hours from rain.
- Apply a test patch to evaluate performance and appearance on substrates which have been subjected to contamination, efflorescence or chemical attack.
- In all cases, consult the Safety Data Sheet before use.

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