



NXT[®] Vapor Reduction Coating

DS-507.0-1017

**Globally Proven
Construction Solutions**



1. PRODUCT NAME

NXT[®] Vapor Reduction Coating

2. MANUFACTURER

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3. PRODUCT DESCRIPTION

NXT Vapor Reduction Coating is a single-coat, 100% solids, liquid applied 2-part epoxy coating specifically designed for controlling the moisture vapor emission rate from new or existing concrete slabs prior to installing NXT underlayments. NXT Vapor Reduction Coating exceeds ASTM F3010 standard with a perm rating of 0.052 grains/h/ft²/in. Hg (3 ng/h • m² • Pa) at only 12 mil thickness.

Uses

- Ensures protection of moisture/pH sensitive floor coverings.
- Reduces MVER ≤25 to below 3lbs/1000ft²/24hrs (170 μg/(s • m²))
- Use on concrete up to 100% RH / 14 pH.
- Ideal for slab-on-grade construction and elevated slabs.
- Allows for the installation of vinyl, rubber, VCT, carpet, wood, ceramic tile, stone and other moisture sensitive floor coverings and floor adhesives.

Advantages

- Exceeds ASTM F3010 standard
- Component of the LATICRETE[®] System Warranty
- Can be applied over new concrete in as little as 5 days
- Fast cure – ability to apply finish floor goods or NXT underlayments in as little as 12 hours
- VOC content (mixed) <75g/L
- UL GREENGUARD GOLD CERTIFIED
- Low odor

- Easy to use
- Compatible with NXT underlayments as well as non-water based adhesives for hardwood, vinyl, carpet and tile

Suitable Substrates

Concrete slabs (Interior use only)

Packaging

Full Unit Kit*: 6.5 Gal. (24.6 L)

- Part A – 2.2 Gal. (8.3 L) packaged in a steel pail
- Part B – 4.3 Gal. (16.3 L) packaged in a steel pail

Mini Unit Kit*: 2.5 Gal (9.4 L)

- Part A – 0.8 Gal. (2.8 L) packaged in a steel pail
- Part B – 1.7 Gal. (6.6 L) packaged in a steel pail

*NXT[™] Vapor Reduction Coating is a kit of two pails. Individual pails (Part A or Part B) cannot be purchased separately, and cannot be returned separately.

Coverage

NXT Vapor Reduction Coating is to be applied at minimum thickness of 12 mils. NXT Vapor Reduction Coating when applied at a minimum 12 mils thickness exceeds ASTM F3010 and will control moisture vapor emission rate up to 25 lbs/1,000 ft²/24 hr (1415 μg/(s • m))[^] per ASTM F1869/maximum[^] RH conditions per ASTM F2170. In order to help insure coverage, periodically check mil thickness using an NXT Vapor Reduction Coating Wet Film Thickness Gauge.

Vapor Permeance ^μ	MVER/ RH	mil thickness	ft ² /gal (m ² /L)
0.052 grains/h/ft ² /in Hg (3 ng/h • m ² • Pa)	≤25 lbs (1415 μg) / 100%	12	133 (3.2)
Each full unit will yield approximately 865 ft ² (80.8 m ²) ^{**} . Each mini unit will yield approximately 319 ft ² (29.8 m ²) ^{**} .			

^{**}Coverage is approximate and will vary depending on CSP (concrete surface profile), mil thickness, absorption, and other field conditions.

[^]No visible water or condensation on the surface.

^μ Tested according to ASTM E96 Wet Method

Shelf Life

Factory sealed containers of this product are guaranteed to be of first quality for two (2) years if stored at temperatures >32°F (0°C) and <110°F (43°C).

Limitations

- Interior use only
- NXT Vapor Reduction Coating is not a replacement for waterproofing membranes. When a waterproofing membrane is required HYDRO BAN[®] can be installed directly over NXT Vapor Reduction Coating.
- All existing expansion joints, cold joints must be brought up through the NXT Vapor Reduction Coating and the finish. Failure to honor movement joints will result in cracking and/or loss of bond.

- Not for use over any other substrates other than concrete slabs
Cured for a minimum of 5 days at 70°F (21°C)
- LATICRETE is not responsible for moisture emission from expansion and isolation joints, existing cracks, or new cracks that may develop in the concrete slab after the system has been installed.

Cautions

- Consult SDS for more safety information.
- NXT™ Vapor Reduction Coating Part A causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. Toxic to aquatic life.
- NXT Vapor Reduction Coating Part B causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.
- Check www.laticrete.com for any technical bulletins or updated information about the product and its application.
- Contact your local LATICRETE Technical Sales Representative with any questions.
- Once material is fully mixed the reaction may generate high heat if left in mixing container for an extended period of time.
- Protect finished work from traffic until fully cured.
- Do not take internally.
- Keep out of reach of children.

4. TECHNICAL DATA

Test	Method	Results
Vapor Permeance At 12 mil thickness	ASTM E96	0.052 grains/h/ft ² /in. Hg. (3 ng/h • m ² • Pa) CTL Project 281426
Tensile Strength (7 days)	ASTM C1583	> 410psi (>2.8 MPa) Concrete Failure
Pull off Adhesion Strength	ASTM D7234	> 480 psi (> 3.3 MPa)
Alkalinity Resistance	ASTM D1308	Pass (resist up to 14 pH)

Specifications are subject to change without notification.

Technical data shown in LATICRETE product data sheets and technical data sheets are typical but reflect laboratory test procedures conducted in laboratory conditions. Actual field performance and test results will depend on installation methods and site conditions. Field test results will vary due to variability of job site factors.

5. INSTALLATION

Surface Preparation

Concrete slabs must be clean, structurally sound, absorptive, and have an ICRI concrete surface profile (CSP) of 3 - 5. All dirt, oil, paint, laitance, efflorescence, sealers, curing compounds and any other bond breaking contaminants must be removed down to the full depth of contamination by shot blasting or other mechanical means then swept and vacuumed clean. Use of chemicals to remove contaminants is prohibited. Use of sweeping compound is not recommended as they may contain oil which will act as a bond breaker. Do not use over gypsum or asphalt based products. Water drop test (Refer to TDS 230N for water drop test instruction) is recommended prior to application of NXT Vapor Reduction Coating. If the water drop test yields a non-suction results where the water beads up and doesn't absorb, please contact LATICRETE Technical Sales Representative. Per ASTM F3010, concrete slab to receive NXT® Vapor Reduction Coating must have a tensile pull-off strength of 200 psi (1.4 MPa) or greater when tested in accordance with ASTM C1583.

Surface temperature must be 50–90°F (10–32°C) during application and for 24 hours after installation. In all cases, the surface temperature of the prepared concrete slab must be warm enough to avoid condensation on the surface of the concrete.

Joints, Cracks, Surface Depressions and Other Irregularities

All joints and cracks should be evaluated and repaired if necessary prior to installation of NXT Vapor Reduction Coating. A good crack repair technique depends on knowing the causes and selecting appropriate repair procedures that take these causes into account. Repairing a crack without addressing the cause may only be a temporary fix. Successful long-term repair procedures must address the causes of the cracks as well as the cracks themselves. Refer to ACI 224.1R-07 for guidance on evaluation and repair of cracks in concrete. LATICRETE product application over moving cracks and joints is not recommended.

1. Moving joints (e.g. expansion joints, isolation joints, etc.) and dynamic (moving) cracks must be honored up through the NXT Vapor Reduction Coating. LATICRETE is not responsible for vapor emission through untreated joints or for areas where cracks may develop later.

2. All non-moving joints and dormant cracks (e.g. saw cuts, surface cracks, grooves, control joints, etc.) must be cleaned out and free of all loose debris. Non-structural cracks up to 1/8" (3 mm) in width can be filled with NXT Vapor Reduction Coating epoxy during main application. Inspect these areas to ensure cracks are completely filled with no voids. Non-moving joints, dormant cracks greater than 1/8" (3 mm) wide, can be patched with mixture of 1 part NXT Vapor Reduction Coating and 3 parts clean, dry play sand. In a suitable container, such as an empty NXT Vapor Reduction Coating pail, pour 1 part NXT Vapor Reduction Coating pre-blended to 3 parts clean, dry play sand, using a 300 rpm drill with jiffy paddle, mix together for 2-3 minutes until the NXT Vapor Reduction Coating and qualified sand mixture is consistent. Slowly pour the mixture into the crack, using the flat side of a trowel force the epoxy/sand mixture into the crack. Surface crazing and hairline cracks do not need filling. Construction Joints, Expansion Joints and Large moving cracks that have lost aggregate lock (one side of crack is higher than the other) have structural implications and cannot be repaired using this method.

Moisture Evaluation

Moisture testing must be conducted in accordance with finish floor goods and adhesive manufacturers' requirements prior to NXT Vapor Reduction Coating application. When evaluating moisture conditions the HVAC system or a properly conditioned temporary enclosure must be operational and in place for the minimum specified time period recommended in the moisture test standard. The concrete floor slabs and the ambient air space above the floor must be at service temperature and relative humidity for at least 48 hours before taking moisture measurements in the concrete slab. These conditions must remain throughout the test period to ensure accurate results.

Mixing

Before using, store resins at room temperature 65-85°F (18-30°C) for 24 hours to ensure ease of mixing. Mix Components A and B at a ratio of 1:2 by volume (components are packaged into the pails to the specified ratio). Pour the A component into the larger B component steel pail. Verify that all of the Part A liquid is drained from pail. Mix with a slow speed drill (<300 RPM) with a jiffy blade for 3 minutes, assuring mixture is fully uniform and that all ribbons of contrasting shade are completely eliminated. Pour the fully mixed material onto the substrate immediately after mixing.

NOTE: Do not mix NXT Vapor Reduction Coating in a plastic bucket as mix generates excessive heat!

Application

Pour ribbons of NXT® Vapor Reduction Coating onto the prepared concrete and spread using appropriate round or square notch squeegee that is designed to apply the desired mil thickness in a single coat. Apply an even coat making sure to cover all areas thoroughly. Immediately following, while epoxy is still wet, use a high quality 3/8" (9 mm) nap non-shedding paint roller to back-roll at 90° from the squeegee direction to help ensure full coverage and uniform thickness. Replace worn squeegee blades and paint rollers when necessary to help ensure proper application. Use a paint brush to apply epoxy around penetrations, columns, and any other obstructions. Periodically check mil thickness using a NXT Vapor Reduction Coating Wet Film Thickness Gauge. Allow to cure for 12 hours at 50-90°F (10-32°C) prior to installation of underlayment or finish flooring. Always consult flooring and adhesive manufacturer's installation instructions, restrictions and confirm compatibility with NXT Vapor Reduction Coating. Always test performance and compatibility of floor systems prior to application.

Flooring and Self Leveling Underlayments Installation

In all cases the NXT Vapor Reduction Coating surface must be protected from traffic, dust, debris, rain, and any other contaminants. NXT self-leveling underlayments shall be installed over NXT Vapor Reduction Coating as soon as the epoxy is slightly tacky to the touch with no transfer; typically 12 hours after application depending on ambient and substrate conditions. The maximum time to install finished floor goods or NXT self-leveling underlayments over NXT Vapor Reduction Coating is 3 days provided that the surface is protected from traffic, dust, debris, water and any other contaminants. If NXT Vapor Reduction Coating is left open and unprotected longer than 3 days or the surface becomes contaminated, contact LATICRETE Technical Sales Representative. NXT self-leveling underlayments require the use of NXT Primer. Refer to TDS 230N for detailed primer installation instructions. Always refer to finished floor manufacturer's recommendations regarding installation instructions, restrictions, moisture conditions and compatibility. Tile or stone can be installed using LATAPOXY® 300 Adhesive or 254 Platinum. Always test performance suitability and compatibility of finished floor systems prior to their application. Sample surfaces should be installed as a field test so as to be representative of entire surface and tested for intended use.

Use as a Primer for SLU's

When using NXT Vapor Reduction Coating with sand broadcast as a primer for NXT Self-leveling products, refer to TDS230D for surface prep and installation instructions.

6. AVAILABILITY AND COST

Availability

LATICRETE® and LATAPOXY materials are available worldwide.

For Distributor Information, Call:

Toll Free: 1.800.243.4788

Telephone: +1.203.393.0010

For on-line distributor information, visit LATICRETE at

www.laticrete.com

Cost

Contact a LATICRETE Distributor in your area.

7. WARRANTY

See 10. FILING SYSTEM:

DS 230.13: LATICRETE Product Warranty

DS 025.0: LATICRETE 25 Year System Warranty
(United States and Canada)

8. MAINTENANCE

LATICRETE and LATAPOXY grouts require routine cleaning with a neutral pH soap and water. All other LATICRETE and LATAPOXY materials require no maintenance but installation performance and durability may depend on properly maintaining products supplied by other manufacturers.

9. TECHNICAL SERVICES

Technical Assistance

Information is available by calling the LATICRETE

Technical Service Hotline:

Toll Free: +1.800.243.4788 ext 235

Fax: +1.203.393.1948

E-mail: techsupport@laticrete.com

Technical and Safety Literature

To acquire technical and safety literature, please visit our website at

www.laticrete.com.

10. FILING SYSTEM

Additional product information is available on our website at

www.laticrete.com. The following is a list of related documents:

DS 230.13: LATICRETE Product Warranty

DS 025.0: LATICRETE 25 Year System Warranty
(United States and Canada)

DS 663.0: HYDRO BAN®

DS 236.0: 9235 Waterproofing Membrane

DS 502.0: NXT® Primer

TDS 230N: NXT Substrate Preparation and Primer Guide

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