



# nora<sup>®</sup> membrane

## Product Description:

The nora<sup>®</sup> membrane is a two-component 100% solids epoxy used for controlling excessive moisture in concrete slabs or cement-based terrazzo, also all on / below grade slabs without confirmation of an effective vapor retarder, prior to installing nora<sup>®</sup> flooring. The nora membrane is used as part of the nora<sup>®</sup> pro install System.

Applied in a single-coat application system, nora membrane offers low viscosity with high-density resins that penetrates deep into the substrate and effecting consolidation well beneath the surface.

nora systems, Inc. is approved by Lloyd's Register Quality Assurance to the Quality Assurance Management System Standard ISO 9001:2000. Also ISO 14001 Environmental Management Systems Certified.

All nora products are intended for indoor use only, by professional floor installers. In high stressing commercial and industrial sectors; e.g. hospitals, schools, airports, shopping centers, underfloor heating and castor chair traffic etc., nora membrane shall only be used under nora flooring

## Technical Data:

1. Packaging: 2 gallon white mixing pail including Part A (in base) and Part B (two bottles on a tray)
2. Unit consists of: 1.47 gallons of Part A (Resin) and 0.53 gallons of Part B (Hardener)
3. Color: Transparent
4. Shelf life: 2 years
5. Units per Pallet: 36 Units
6. Storage: 40°F – 95°F (4°C – 35°C) moderate cool conditions, avoid freezing
7. Freeze / thaw Stable per ASTM D7149
8. Flash point: >200°F (93°C)
9. Working time: ~ 40 minutes @73°F (23°C) and is reduced by higher temperatures
10. Concrete surface profile: CSP of 3
11. Permeability: < 0.1 perm per ASTM E96
12. Moisture vapor limits: 90%, 95% or 100% RH depending on coverage when tested following the protocol of ASTM 2170 using Wagner Rapid RH Probes
13. Viscosity: 190 to 230 cps
14. VOC content: VOC content is 46 grams/liter; product is in compliance with the SCAQMD Rule 1113 Standard for Architectural Coatings, which has a VOC limit of 100 grams/liter for waterproof sealers
15. LEED contribution: nora membrane is in compliance with the VOC limits of SCAQMD Rule 1113 required by LEED and can contribute to LEED Credit 4.2-Low Emitting Materials, Paints & Coatings. MR Credit 5, Regional Materials Up to 2 points
16. Warranty: The terms of the limited warranty can be obtained at [www.nora.com/us](http://www.nora.com/us). Registration for 10 year nora pro install System warranty required.
17. Application System: Flat squeegee then 3/16<sup>th</sup> notched squeegee and back roll as required
18. Radiant heating: Yes, contact the nora Technical Department
19. Cure time: ~ 6 hours (tack-free touch), this will vary due to temperature and humidity
20. Castor chairs: After 72 hours
21. Heavy foot traffic: After 8 hours
22. Heavy rolling loads: After 72 hours
23. Wet cleaning: After fully cured

## Conditioning:

nora membrane and substrate shall be fully acclimated to 50°F - 86°F (10°C – 30°C) for a minimum of 48 hours prior, during and 48 hours after the installation is completed. The ambient temperature and relative humidity will directly affect the drying time.

## Coverage:

If nora membrane is being used due to a lack of a confirmed effective vapor retarder, then use the 150 sq. ft. coverage rate. If an effective vapor retarder is confirmed or the substrate is above grade, then test following ASTM F2170 – Standard Test Method for Determining Relative Humidity in Concrete Slabs Using *in situ* Probes, using Wagner Rapid RH probes only. The results will determine the coverage rate and Dry Mills Thickness (DMT) of the nora membrane. Coverage rates are approximate and based on a good surface with a CSP of three (3). These rates should be used as a general guide only. Additional material will be required on rough and uneven surfaces and for saw cut and crack treatment. It is the responsibility of the flooring contractor to ensure proper coverage. Note: The surface of the concrete shall always be surface dry, with no standing water or visible sign of moisture.

- < 90% RH, 260 sq. ft. per unit (minimum 10 mils DMT)
- < 95% RH, 200 sq. ft. per unit (minimum 14 mils DMT)
- < 100% RH, 150 sq. ft. per unit (minimum 18 mils DMT)

## Subfloor Preparation:

Always follow the nora Installation Guide. Subfloors shall be surface dry, clean (uncontaminated) and structurally sound as per ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring. The surface shall shot-blasted and have a minimum Concrete Surface Profile (CSP) of 3. Water droplet tests shall be performed to confirm suitable porosity. Perform tests for porosity until you are sure the entire area is porous. This can be done by placing a dime size droplet of water on the surface – it will be absorbed into the concrete within one (1) minute to be considered porous. Measure and mark out the correct per sq. ft. for a unit (refer to the coverage). Perform bond tests as required to ensure the substrate and preparation is suitable.

Concrete substrate shall have finished shrinking curling, cracking or moving in any way prior to the application of nora membrane. nora systems, Inc. accepts no liability for a failure or complaint due to cracking, shrinking, curling or slab movement of any kind.

They shall be free of dust, solvents, paint, wax, varnish, oil, grease, asphalt, old adhesives, and other extraneous materials that may interfere with the bond. These shall be completely removed by shot-blasting only. All local, state and national regulations shall be followed.

The RFCI (Resilient Floor Covering Institute) “Recommended Work Practices for Removal of Resilient Floor Coverings” are a defined set of instructions addressed to the task of removing all resilient floor-covering structures including adhesive and adhesive residues. For more information contact RFCI directly at [www.rfci.com](http://www.rfci.com) or 706-882-3833.

When concrete slabs have or are suspected of having ASR (Alkali Silica Reaction) present, do not use this product. Contact the nora Technical Department for recommendations.

## Dormant Saw Cuts and Cracks (>1/32”):

Do not install over moving saw cuts or cracks. Remove all saw laitance, dirt, debris, coatings, sealers, and visible moisture from the dormant saw cuts and cracks. Use a suitable dustless concrete saw with a diamond blade or similar to achieve this. These shall be filled with nora membrane mixed properly, then immediately mix in either nora® patch, nora® leveler (powder only) or silica sand to a consistency that can be flat troweled and pressed in so the gap is completely sealed. For wide gaps use a thicker mixture, for deep joints a backer rod, a minimum of ½ inch down, may be used prior to filling. Do not allow more than 48 hours between the applications of membrane/powder mixture and nora membrane, if this happens contact the nora Technical Department.

## Expansion Joints:

These shall not be covered or overlaid with any nora product. Use an industry standard expansion joint assembly.

## Mixing:

Mix full units only, do not partial mix or dilute. Use a low speed drill (300 – 450 rpm) and a suitable mixing paddle. Pre-mix Part A to a homogenous consistency. Pour both bottles of Part B into Part A and mix to a homogenous consistency. Do not mix at high speeds (which can trap air), or over mix as the working time will be reduced.

## Application:

When mixed, immediately pour part of the unit onto the required area and using a flat squeegee, pull it tight to the surface leaving behind a thin even layer of nora membrane. This effectively self-primers the substrate, reducing the risk of pinholes. Wearing spiked shoes pour the balance of the unit (within 5 – 30 minutes) on top of the first application then using a 3/16<sup>th</sup> notched squeegee spread out the nora membrane evenly within the area.

If pinholes or bubbles are noticed prior to the membrane setting, back-roll using a spiked roller (type used for leveling) as this will help remove air bubbles or pinholes prior to the membrane setting or use a pre-soaked 3/8” (10mm) nap roller.

Note: If the substrate is extremely porous, pinholes may still occur. If ANY pinholes exist, apply another application of nora membrane within 48 hours using a flat squeegee (600-800 sqft coverage per unit). If only a few exist, they can be filled using the five (5) minute Loctite Epoxy Instant Mix (available from most DIY stores). Manually fill ALL pinholes and allow it to cure before proceeding.

#### Clean Up:

Immediately clean all tools and equipment with a clean cloth and 70% Isopropyl alcohol or soap and water, once cured this material can only be mechanically removed and that may damage some surfaces.

#### Other Limitations:

- The area and membrane shall be 50°F - 86°F (10°C – 30°C) for 48 hours prior and after application.
- If underfloor heating is present, contact the nora Technical Department.
- This is not an anti-fracture membrane and shall not be used in areas subject to hydrostatic pressure.
- Only for indoor use under nora flooring by professional installers.
- Do not apply on wet substrate.
- Check the production date, if expired do not use.
- Do not use on subfloors that are subject to freeze/thaw cycles.
- Do not use over any substrates containing asbestos.
- Do not acid-etch surfaces before applying the nora membrane
- Protect from freezing, if frozen, thaw and mix prior to use.
- Working time is ~ 40 minutes @73°F (23°C), reduced by higher temperatures.
- Do not traffic or cover until cured ~ 6 hours (tack-free touch), reduced by higher temperatures.

#### Warning:

Do not sand, dry sweep, dry scrape, drill, saw, bead-blast, or mechanically chip or pulverize existing resilient flooring, backing, lining felt, asphalt "cutback" adhesive, or other adhesive. These products may contain asbestos fibers and/or crystalline silica. Avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm. Unless positively certain that the product is a non-asbestos containing material, you must presume it contains asbestos. Regulations may require that the material be tested to determine asbestos content.

Various local, state and federal government agencies have regulations governing the removal of in-place asbestos-containing material. If you contemplate the removal of a resilient floor covering structure that contains (or is presumed to contain) asbestos, you must review and comply with all applicable local, state and federal regulations.

#### Precautions:

Keep out of reach of children. Keep container closed during storage. Avoid contact with eyes and skin. Use of protective gloves (rubber), safety glasses and adequate ventilation is recommended, do not swallow.

#### Disposal:

Disposal should be in accordance with local, state and national legislation. Do not allow liquid product to reach sewage system. Mix and let product residue harden in unopened container, then dispose of as construction waste. Empty packaging can be recycled after thorough and proper cleaning.

#### Important:

For more information please refer to the nora Installation Guide, MSDS (Material Safety Data Sheet) that must be read and fully understood prior to usage, available on [www.nora.com/us](http://www.nora.com/us).

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#### **nora systems, Inc.**

9 Northeastern Blvd.  
Salem, NH 03079  
Toll free: 800-332-NORA  
Phone: (603) 894-1021  
Fax: (603) 894-6615  
E-mail: [info-us@nora.com](mailto:info-us@nora.com)  
[www.nora.com/us](http://www.nora.com/us)