



nora[®] leveler

Product Description:

nora[®] leveler is a Portland cement-based, high compressive strength leveling compound used to repair, smooth and level clean concrete as well as existing ceramic, terrazzo or other suitable subfloors. It is designed for thicknesses ranging from featheredge to 1 inch and thicker applications up to 5 inches when mixed correctly with pea gravel.

Installations may be barrel/drill mixed or for large applications, a suitable pump at a minimum thickness of 1/8th inch. All subfloors shall be prepared as detailed in the nora installation guides and ASTM F710 - Standard Practice for Preparing Concrete Floors to receive Resilient Flooring. Priming first with nora[®] primer is required over all suitable porous and non-porous substrates. If any doubt exists, conduct a bond test for confirmation.

Always follow the nora Installation Guide that is available on www.nora.com/us. 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 leveler shall only be used under nora[®] flooring.

Technical Data:

1. Packaging: 50 lb. plastic, white bags
2. Pallet size: 36 bags
3. Color: Grey
4. Shelf life: 1 Year
5. Storage: Keep dry in moderate cool conditions
6. Protect from Freezing: No
7. VOC content: VOC content is 0 grams/liter; product is in compliance with the SCAQMD Rule 1168 Standard for Substrate Specific Applications for Porous Material, which has a VOC limit of 50 grams/liter
8. LEED contribution: nora leveler is in compliance with the VOC limits of SCAQMD Rule 1168 required by LEED and can contribute to LEED Credit 4.1-Low Emitting Materials, Adhesives & Sealants. MR Credit 5, Regional Materials* Up to 2 points
9. Warranty: The terms of the LIMITED WARRANTY can be obtained at www.nora.com/us.
10. Application: Pump or Gauge rakes with a spiked roller or metal straight edge finishing trowel
11. Coverage per 50lb bag: ~48 square feet at 1/8 inch; ~24 square feet at 1/4 inch
12. Mix ratio: 5 quarts of water per 50 pound bag
13. Working temperature: 50°F – 95°F (10°C – 32°C)
14. Priming: Yes, refer to substrate preparation
15. Compressive strength: ~ 1,500 psi at 24 hours ~ 4,100 psi at 28 days
16. Working time: Approximately 15 minutes, depending on conditions, product must be able to heal
17. Final set time: ~ 3-4 hours
18. Moisture tolerance: The maximum %RH shall be the same as the adhesive being used when tested following the protocol of ASTM F2170 using Wagner Rapid RH probes
19. Minimum thickness: 1/8 inch
20. Radiant heating: Yes, contact the nora Technical Department
21. Cure / Dry time: This will vary depending on thickness, porosity, ambient temperature and humidity, minimum 16 hours required before flooring installation
22. Castor chairs: After 72 hours
23. Light foot traffic: After 4 – 5 hours, Heavy rolling loads: After 72 hours

Conditioning:

The leveler and the area to receive the leveler shall be fully enclosed, weather tight and climate controlled at 50°F – 95°F (10°C – 32°C) for 48 hours prior to the installation and 48 hours after application. The ambient temperature and relative humidity will directly affect the drying time.

Subfloor Preparation:

Follow the detailed nora Installation Guide. It is the responsibility of the flooring contractor to ensure the suitability of the substrate. For concrete substrates test following the protocol of ASTM F2170 – Standard Test Method for Determining Relative Humidity in Concrete Slabs Using *in situ* Probes, using Wagner Rapid RH probes only. The results shall not exceed the maximum allowable for the selected nora adhesive. Substrate shall be dry, clean (without any contaminants or bond breakers), structurally sound as per ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring, and primed first with nora primer following the directions on the label.

If the test results exceed the limitations, the installation shall not proceed until the moisture level lowers to an acceptable level, or use the nora® membrane following the Installation Guide. Note: Making the subfloor surface porous and using the HVAC or Dehumidification systems with good air flow in the correct conditions may help speed up the drying process, however the rate at which the subfloor will dry cannot be confirmed. Use only water based sweeping compounds or a suitable vacuum cleaner as required.

On and below grade slabs shall have a confirmed permanently effective vapor retarder directly under the concrete. Alternatively, the nora membrane shall be used first following the Installation Guide. Concrete substrate shall have finished shrinking curling, cracking or moving in any way prior to the application of nora leveler. 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 mechanical means 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 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.

Wood Substrate:

All wooden subfloors shall be a minimum thickness of 1 1/4 inch and double sheeted with overlapping joints using APA (American Plywood Association) underlayment grade plywood, installed as per ASTM F1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring and nora Installation Guide.

Other Subfloors:

Please contact the nora Technical Department for any fire retardant surfaces or specific recommendations regarding all other substrates. Do not install over oriented strand board (OSB), particleboard, masonite, lauan, or similar unstable substrates. If any doubt exists, then bond tests shall be performed to confirm a very good bond of the entire system.

Priming:

For porous substrates pre-dilute with water 1:1. For non-porous substrates no mixing required. For gypsum substrates contact Technical Department. Applying to smooth substrates use a 3/8" (10 mm) nap roller, for rough substrates (\geq CSP 3) use a clean broom. Ensure a complete, thin film of product, without any puddles or voids.

Note: Two applications will be required for porous substrates. nora leveler can typically be applied at about 2 to 4 hours when tack free and within a maximum of 24 hours. If exceeded, re-apply a second, un-diluted coat and install underlayment within 24 hours. If that's missed again, remove primer mechanically and start again. An insufficient amount of primer may cause “pinholes” to form in the underlayment or a weak bond resulting in delamination.

nora leveler is very fluid once it is mixed correctly. Prevent underlayment from seeping through holes in the floor. Pipes, holes and penetrations should be blocked or filled with caulking, grout, or fiberglass insulation prior to the application.

Dormant Saw Cuts, Crack Inducers and Cracks (> 1/32"):

Do not install over moving cracks. For permanently dry slabs and without heavy rolling loads, nora leveler may be used. Remove all saw laitance, dirt, debris, coatings, sealers, and visible moisture from the dormant saw cuts. Use a suitable dustless concrete saw with a diamond blade or similar to achieve this. For deep joints, a backer rod a (minimum of 1/2 inch down) may be used prior to

filling. If the moisture level is too high or for extreme rolling loads, do not fill these with nora leveler only; use the nora membrane following the crack repair method.

Expansion Joints:

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

Mixing Ratio:

Five quarts of clean potable water per 50 lb. bag of nora leveler.

Mixing with Barrel/Drill:

Add the powder to the pre-measured water (do not over water) while mixing with a suitable high-powered drill (500-1000 rpm) in a mixing barrel with an appropriate mixing paddle. Mix for about 30 seconds and use a margin trowel to clean the sides of the barrel, continue to mix for an additional 30 – 60 seconds (not more) to achieve a creamy, lump free liquid consistency and install immediately.

Deep pours that require between 1–5 inches, use 15 lb. of clean, dry pea gravel (diameter 1/8–3/8 inch) to reinforce each bag of nora leveler. Apply 1-inch of leveler, then add pea gravel, rake it in and then continue with pour. Note: Additional patching or smoothing may be required after curing.

Application:

Immediately pour the mixture in the required area using the gauge rake set at the required thickness. Maneuver the leveler so all of the substrate is evenly covered. Using spiked shoes and a spiked roller on an extendable handle, roll back and forth, breaking the surface tension of the wet leveler. This allows for better healing and a smoother surface. Do not turn the roller sharply, and slow down at the end of each push or pull as that may affect the desired finish. The working time is approximately 15 minutes, depending on conditions; the product must be able to heal itself.

Other Limitations:

- Surfaces must be primed first with nora primer.
- All nora leveler shall be dry prior to installing the flooring.
- Adhesive residue shall be completely removed by mechanical means.
- Do not use where hydrostatic pressure can occur, or areas of permanent moisture exposure.
- Do not use as a wear surface.
- Do not install over substrates containing asbestos.
- Contact nora Technical Department if underfloor heating is present.
- Do not install over substrates containing asbestos.
- Only for indoor use under nora flooring by professional installers.
- Perform bond tests as required to ensure the substrate and preparation is suitable.
- Use only water based sweeping compounds or a suitable vacuum cleaner as required.
- All local, state and federal regulations shall be followed.

Clean up:

Wash tools immediately with water.

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 or breathing in the dust. Use of protective gloves (rubber) and safety glasses and a suitable dust mask is recommended, do not swallow.

Disposal:

Disposal should be in accordance with local, state and national regulation. Do not allow liquid product to reach sewage system. Allow the bag to get wet and let product residue harden, and 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.

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