nora[®] 310 ADHESIVE

1 Product Name / Manufacturer

1.1 Product

nora[®] 310 is a two-component urethane adhesive designed specifically formulated for the installation of specific nora[®] rubber floor covering products on suitable substrates. When parts A & B are thoroughly mixed together and used as recommended, they form a reactive adhesive that cures to a tough, flexible film with a good resistance to surface moisture and many chemicals.

1.2 Manufacturer

nora systems, Inc. 9 Northeastern Blvd. Salem, NH 03079 800-336-5096 603-894-1021 www.nora.com/us

2 Technical Data

- **2.1 Unit:** 1 gallon unit or ½ gallon unit within a carton both part A & Part B
- 2.2 Packaging: 1 gallon and 1/2 gallon.
- 2.3 Shelf life: 12 months; if expired do not use.
- **2.4 Storage:** Room temperature and away from direct sunlight.
- **2.5** Freeze / thaw stable: Stable per ASTM D7149 at 0°F (- 18°C).
- **2.6** Mixed in pot life: 15 20 minutes at 68°F
- **2.7 Working time:** 45 200 minutes (dependent upon conditions)
- **2.8 Moisture in concrete tolerance:** ≤ 80% RH following the protocol of ASTM F2170 (Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes).
- 2.9 VOC Content: VOC content is 0 grams/liter; product is in compliance with SCAQMD Rule

1168 Standard for Rubber Floor Adhesives, which has a VOC limit of 60.

- 2.10 Leed Contribution: nora 310 adhesive 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. In addition it is also GREENGUARD Children & Schools Certified.
- **2.11 Coverage:** ~170 190 square feet per gallon
- **2.12 Warranty:** As detailed in the nora limited warranty. www.nora.com/us
- **2.13 Application:** 1/32 x 1/16 x 1/32 U notch trowel.
- 2.14 Ideal Working Temperature: 68°F ± 5°F (17-23°C)
- 2.15 Heavy Foot Traffic: After 12 hours
- 2.16 Heavy Rolling Loads: After 72 hours
- 2.17 Wet Cleaning: After 72 hours

3 Installation

3.1 Site Conditions:

The area to receive flooring, must be fully enclosed, weather tight and climate controlled at the normal service ambient temperature and humidity (except walk in freezers or similar) or $68^{\circ}F \pm 5^{\circ}F$ and $50\% \pm 10\%$ ambient relative humidity (RH) for 48 hours before, during and 72 hours after the installation.

The flooring and all accessories must be acclimated within this area or nearby with the same climate condition for at least 48 hours prior to installation. Areas of the flooring subjected to direct sunlight, for example through doors or windows, must have them covered using blinds, curtains, cardboard or similar for 24 hours prior, throughout and for a period of 72 hours after the installation.

nora flooring must not be installed when dew point occurs (a surface temperature at which condensation occurs). The substrate surface must be at least 5°F above dew point when installing nora products. Example: If the ambient conditions are 70°F and 65% RH, the dew point is 57°F and you must not proceed with the installation, unless the surface temperature is at a minimum of 62°F. Dew point calculation charts are available on the web.

For preparation of substrates and subfloor conditions, follow the written instructions as outlined in the nora installation guide and ASTM F710 – Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

Mat Bond Testing: Conducting mat bond tests will help determine the compatibility of the flooring adhesive to the substrate surface, including the preparation and all other products to be used. There are several factors that can influence the outcome of a bond test, therefore it is important to follow the protocol. The responsible party must ensure that the tests are conducted only at a time when subfloor and jobsite conditions comply with those requirements which are outlined in this installation guide and ASTM F710 – Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

The area where the testing is being performed, must be fully enclosed, weather tight and climate controlled at the normal service ambient temperature and humidity (except walk in freezers or similar) or $68^{\circ}F \pm 5^{\circ}F$ and $50\% \pm 10\%$ ambient relative humidity (RH) for 48 hours before, during and 72 hours after the installation.

Install an appropriate number of 2 foot square bond tests using the appropriate trowel notch, open times, and rolling etc., Do not uplift to check for adhesive transfer. Use tape or similar to seal all of the edges to the substrate. No foot traffic (12 hrs.) or rolling loads. After three days assess the bond tests, cut a two inch wide strip from the center of the test sample and slowly peel up from one end; the point of failure should be between the adhesive and either the substrate or the back of the flooring. Removal of the balance of the sample should be very

difficult, and then it can be considered successful providing no sign of moisture is found.

It is the responsibility of the installing party to determine the suitability of the subfloor being covered. Bond tests are required for nora products applied directly over the properly prepared substrate.

3.2 Installation Guidelines:

Following the nora Installation Guide, dry-lay the required area, includes cutting all seams. Lift up a workable section (usually half.)

Add all of Part B to Part A and mix to a consistent color, using a mixing paddle and electric drill. Note: Do not partial mix units.

After mixing, immediately pour the entire adhesive to the substrate and spread using a 1/32 inch x 1/16 inch x 1/32 inch U-notched trowel

Allow sufficient open time so the adhesive becomes tacky and install the nora® flooring. This will help reduce squeeze-out and movement of the flooring material.

Immediately and slowly roll the flooring in both directions utilizing a 3-section 100 pound roller.

Repeat the process for the second half. Re-roll again in both directions every 60 minutes until the flooring remains in contact with the adhesive and substrate. If necessary, apply weights to any lifting areas overnight. Refer to the nora[®] Installation Guide.

Clean-up: Using 70% Isopropyl Alcohol or liquid soap and a clean cloth, remove all excess adhesive immediately, as it cannot be removed once cured.

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