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VERTIBARRIER NS

Cold-Applied, Moisture-Cured, Waterproofing Membrane

DESCRIPTION

VERTIBARRIER NS is a single-component, cold-applied, solvent-free, water-activated, waterproofing system. The product is designed for vertical surfaces, but in certain situations, it can be applied on horizontal surfaces. It does not shrink and has a low volatile organic compound (VOC) content. It will not crack in extreme cold or flow due to softening at high temperatures.

USES

VERTIBARRIER NS is suitable for use on vertical exterior concrete surfaces where protection from water intrusion is desired. The product can be used for both above-grade and below-grade applications. VERTIBARRIER NS is intended for use on foundation walls, concrete tunnels, and planters. VERTIBARRIER NS is also suitable for plaza decks and elevated composite decks and also in between-slab (split-slab) applications. VERTIBARRIER NS is used on concrete, metal, and wood surfaces.

FEATURES/BENEFITS

- Fast curing at 75° F (23° C); no dust pick-up.
- May be applied to green concrete.
- Fast cure; speeds production.
- Cured with water addition in as little as two hours/Can be recoated same day for two-coat application.
- Will not harm foam plastic insulations.
- Remains undamaged due to freezing.
- Cures to a tough, flexible membrane.
- Easy to mix; add up to 3/4 quart (0.75 L) water per five gal. (18.9 L)

PACKAGING

4 Gal. (15.1 L) Pails.

COVERAGE

Approximate coverage per gallon (3.78 L):

26 ft.^{2} (2.4 m^2)	60 mils (dry)
17.5 ft.^{2} (1.6 m^2)	90 mils (dry)
13 ft.^{2} (1.2 m^2)	120 mils (dry)

SHELF LIFE

When stored indoors in original, unopened containers at temperatures between 40° - 70° F (4° - 21° C), optimum performance and best use is obtained within one year of date of manufacture.

SPECIFICATIONS/STANDARDS

- ASTM C836
- Complies with all current federal, state, and local maximum allowable VOC requirements, including National EPA VOC Emission Standard for Architectural Coatings, Arizona Maricopa County, CARB, Colorado AIM, LADCO, OTC Phase I and II, SCAQMD, and Utah Department of Air Quality.

CONTINUED ON THE REVERSE SIDE...

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TECHNICAL DATA

Property	Typical Test Value	Test Method
Solids Content by Weight, %	93 - 99	ASTM C2369
Solids Content by Volume, %	92 - 98	ASTM D2697
Initial Viscosity @ 77° F (23° C)	25,000 – 35,000 cps	
Working Time with addition of potable water	20 minutes at 75° F (23.9° C) and 50% RH	
Initial Cure with the addition of 3/4 quart (0.75 L) of potable water to 5 gal. (18.9 L) of VERTIBARRIER NS	2 Hours at 75° F (23.9° C) and 50% RH	
Tear Resistance, Die C	100 PLI (17.5 kN/m)	ASTM D624
Tensile Strength, psi	350	ASTM D412
Elongation at Break, %	550	ASTM D412
Permeability (60 mils) perms	1.15	ASTM E96 B
Permeability (90 mils) perms	0.77	ASTM E96 B
Permeability (120 mils) perms	0.58	ASTM E96 B
Shore A Hardness	25	ASTM D2240
Service Temperature, ° F (° C)	-25° - 150° (-31.7° - 65°)	
Minimum Application Temperature, ° F (° C)	Above 30° (-1°) and rising	
VOC Content, g/L	<50	ASTM D2369

APPLICATION

New Concrete ... Wet curing is recommended. All membrane curing compounds must be mechanically removed. New concrete should be power washed or blown clean with oil-free compressed air before coating application to ensure removal of dirt or debris that may compromise bond of VERTIBARRIER NS. A test application is always recommended before proceeding with primary application.

Surface Preparation ... Concrete must be in sound repair and free of all contaminates, including oil, grease, dust, laitance, and other bond-breaking materials. Concrete should exhibit a concrete surface profile (CSP) of 3 or greater in accordance with the International Concrete Repair Institute (ICRI).

All new and existing concrete substrates to receive VERTIBARRIER NS should be properly prepared and yield a CSP 3 – CSP 5. For existing concrete remedial work or new concrete lacking profile, lightly roughen or rough grind substrate in accordance with ICRI guidelines. A small scale mockup of the VERTIBARRIER NS system prior to full scale application may occur per project requirements for all interested parties.

All surfaces must be thoroughly dry, not damp, and have no standing water to ensure optimum performance of the VERTIBARRIER NS system.

For metal surfaces, remove all oils or other contaminates on the surface prior to application of VERTIBARRIER NS. Mechanically abrade and solvent wipe to remove any contaminates. Allow the solvent to evaporate completely prior to application of VERTIBARRIER NS.

Joints, Cracks, and Flashing ... Between 1/16” (1.58 mm) and 1/16” (1.58 mm) width must be filled with VERTIBARRIER NS or BEM from W. R. MEADOWS and tooled smooth. Non-moving cracks greater than 1/8” (1.58 mm) should be routed and filled with MEADOW-CRETE GPS from W. R. MEADOWS or comparable structural repair mortar. Once cured, a 60-mil application of VERTIBARRIER NS should be applied over and extending 6” (152.4 mm) beyond the patched area. A strip of REINFORCING FABRIC HCR from W. R. MEADOWS should then be brushed onto the membrane while still wet, showing full engagement with the membrane with no wrinkles.

Priming and Decreasing Blistering ... For porous substrates and where air and moisture release may cause pinholes or blistering problems, priming the substrate prior to application of VERTIBARRIER NS is recommended. Discovery of these conditions is generally revealed in the mockup.

Additionally, application of VERTIBARRIER NS during cooling hours of the day or not in direct sunlight may potentially decrease the probability of blistering due to outgassing from the concrete. Do not apply when the surface temperature of the substrate is greater than 110° F (43° C).

Mixing ... This is a water-activated waterproofing compound; as such, water is required for proper curing. The waterproofing membrane should be properly mixed with water to achieve optimal performance. Add up to 3/4 quart (0.75 L) of potable water per five gal. (18.9 L) pail of VERTIBARRIER NS.

VERTIBARRIER NS should be thoroughly mixed before adding water. Add 3/4 quart (0.75 L) of water to five gallons (18.9 L) of VERTIBARRIER NS and mix thoroughly for three minutes using a mechanical mixer at slow speed to ensure a homogeneous texture. Use a mixing blade designed for paints or coatings. Do not use mud or mortar mixers. Take care not to trap air into the material as this will result in blisters in the cured film. Avoid mixing in an up-and-down motion. To decrease the incorporation of air during mixing, the following mixers are recommended:

- Mixer - Collomix® Paddle Mixer Xo 55 R Duo Heavy-duty Forced-action Mixer or similar
- Blade Type – Collomix® Heavy Duty 3-Blade MK-140 HF paddle or Universal WK 120 HF Paddle or similar.

Application Method ... Store VERTIBARRIER NS at 75° F (23.9° C) at least 12 hours prior to use for ease of application.

VERTIBARRIER NS is applied by roller or trowel in a single coat application of 60 mils. Cure time will vary depending on temperature and humidity. VERTIBARRIER NS has an open working time of 20 minutes at 75° F (23.9° C) with the addition of potable water. Make sure all application of the membrane has been completed within this timeframe.

For critical protection requirements, a two-ply high-build, reinforced 120-mil application of VERTIBARRIER NS is recommended. Upon application of a 60-mil base layer, REINFORCING FABRIC HCR is immediately embedded with a broom or brush to ensure full membrane engagement and elimination of wrinkles. The second layer of 60 mils is applied to achieve the high-build thickness of 120 mils. Refer to HIGH BUILD REINFORCED SYSTEM TECH BULLETIN for proper installation guidelines.

At 75° F (23.9° C) and 50% relative humidity, allow coating to cure a minimum of 2 - 4 hours before proceeding to subsequent coats, but no more than eight hours apart. As ambient, substrate, and material temperatures increase, an oily-like film may develop on the surface and act as a bond breaker. For next-day or second-coat applications, rub the areas to be overlapped down [6″ - 8″ (152 - 203 mm wide)] with acetone, mineral spirits, or xylene. This removes the oil film. Do not use alcohol.

Recoat times will vary depending on temperature, direct sun exposure and humidity. The higher the temperature and humidity, the faster the cure. Applications exposed to direct sun heating will also cure faster. Typically, if more than 48 hours pass between coats, the surface must be solvent wipe and primed. (Refer to VERTIBARRIER PRIMING GUIDE). Due to project conditions and temperature, the recoat window of application may be decreased, requiring priming as little as 24 hours.

Membrane Protection Course ... Protect VERTIBARRIER NS with MEL-DRAIN™ (type with the polymeric backing film) from W. R. MEADOWS or alternatively PERMINATOR® 10 or 15 mil from W. R. MEADOWS.

VERTIBARRIER NS will not typically wash off if rain begins during or after application. Stop all work if rain begins and protect open or unused material from rainfall.

Cleanup ... Uncured VERTIBARRIER NS cleans up easily with acetone, mineral spirits, or xylene. Cured material is best removed by mechanical means.

PRECAUTIONS

Do not expose product to exterior UV for longer than 14 days. VERTIBARRIER NS is not to be used as a liner in a water-containing structure and is not to be used as an exposed or wearing surface. For this purpose, use the GEMITE® line of products. VERTIBARRIER NS is not compatible with asphalt, polymeric-based products, or asphaltic membranes. Do not use on surfaces that are later to be painted. It cannot withstand direct wear or abrasion. Containers that have been opened must be used as soon as possible. Do not dilute product with solvent under any circumstance. VERTIBARRIER NS is not recommended for use over magnesite, gypsum, lightweight concrete, or where chained or studded tires may be used. Concrete must exhibit 3000 psi (20.7 MPa) minimum strength prior to application of VERTIBARRIER NS. Always install a mockup prior to full installations.

This data sheet provides a summary of the factors, precautions, limitations, and design theories that should be considered when designing a complete waterproofing and drainage system, but is not standalone or complete; project, environmental, and application specific requirements must be considered before drafting a guide specification, determining suitability, or application of material. Project suitability of the VERTIBARRIER NS is the sole responsibility of the licensed design professional or installing contractor.

Refer to safety data sheet for health and safety information. WARNING: This product contains isocyanates.

For most current data sheet, sustainability info, and SDS, visit www.wrmeadows.com.

LIMITED WARRANTY

W. R. MEADOWS, INC. warrants at the time and place we make shipment, our material will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. Read complete warranty. Copy furnished upon request.

Disclaimer

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