MOISTURE
VAPORSEAL™ HM PLUS

FLOOR PREP.com BY DEPENDABLE

DIVISION
Division 7
Damproofing and Waterproofing
07 10 00

PACKAGING
VAPORSEAL™ HM PLUS 3.16 US Gallon Kit packaged in a box as;

3 US Gallon Pail for Part A (2.16 G Resin)

1 US Gallon Jug for Part B (1 G Hardener)

SUITABLE SUBSTRATES
Well bonded, clean, sound and stable structural concrete, with a CSP of 3.

LEED
VAPORSEAL™ HM PLUS may contribute to LEED certification of projects as follows:

Indoor Environmental Quality
EQ 4.2
Low Emitting Materials
VOC content <99g/l
Materials and Resources
MR 5.1
Regional Manufactured
Cleveland, OH

DESCRIPTION
VAPORSEAL™ HM PLUS is a two part, 100% solids epoxy moisture mitigation system for the control of vapor emissions in concrete. VAPORSEAL™ HM PLUS is an effective barrier to moisture up to 100% relative humidity (ASTM F2170-11), and/or 25 lbs MVER (ASTM F1869-11). VAPORSEAL™ HM PLUS' low viscosity allows for fast and easy installation over concrete.

VAPORSEAL™ HM PLUS utilizes advanced epoxy resin systems (Benzyl Alcohol and Nonylphenol free), is VOC compliant resistant to high pH levels making it a perfect solution for concrete subject to high moisture content (RH). VAPORSEAL™ HM PLUS meets ASTM F3170-13 standards when tested per ASTM E96 at 11 mils thickness.

FEATURES AND BENEFITS
- 100% solids BA and NP free epoxy
- One coat, low viscosity application
- Low VOC and low odor
- Advanced epoxy resin system addresses vulnerability to osmotic blistering
- Compliant with ASTM F3010-13; Permeability less than 0.1 perm at 11 mils in dry film thickness (DFT)
- An effective barrier against migration of alkalinity from concrete to flooring adhesives
- Low viscosity system for easy installation
- Pre-measured containers reduce installation time by eliminating the need to measure mix ratios

VAPORSEAL™ HM PLUS may be applied on green concrete as quickly as 7 days after placement. Concrete surface must be dry, with no curing compounds or surface treatments applied. Subsequent shrinkage (cracking) or movement of green concrete slabs treated with VAPORSEAL™ HM PLUS are not the responsibility of Dependable, LLC.

PROPERTIES

Composition	2C 100% Solids Adv. Epoxy resins
Color	Part A - Clear Yellow Part B - Clear Yellow
Shelf Life	2 years stored (see Storage on PDS)
VOC (ASTM D3960)	<99 g/L
Viscosity (ASTM D2196)	Approx. 600 cps (when initially mixed)
Consistency	Pourable Liquid
Flash Point	>199ºF (93ºC)
Placement Time	20 minutes at 70ºF
Dry Time to Traffic @73F* *See dry time section	5- 6 hrs
Coverage per 3.16 USG Kit	400 sq ft (12 mils) on Concrete CSP3 625 sq ft (>8 mils)
Permeability by ASTM E96-05	<0.1 perm (12 mils DFT)
14 day spot test - covered	No effect
14 day spot test, uncovered	No effect
14 day immersion	No effect
Pull Off Adhesion by ASTM D7234	>300 psi
Compliant with ASTM F3010-13	Yes

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All specifications were tested in laboratory conditions. Changing the temperature, or mixing ratios, or the environment can affect these specifications. Call Dependable technical services if you have any questions.

LIMITED WARRANTY:
Please fill out the form located at our website under the page Vaporseal HM PLUS, for our 10 year replacement warranty. Otherwise, Dependable's Vaporseal HM PLUS comes with our standard warranty listed below.

Dependable, LLC warrants to the initial purchaser only that the goods sold hereunderwill be free from defects in material and workmanship and, except as otherwise set forth herein, will conform to the specifications provided. If any failure to meet this warranty appears within one year from the date of shipment of the goods, on the condition that Dependable, LLC. will correct any such failure by either replacing or repairing any defective goods, at Dependable, LLC's option. THIS LIMITED WARRANTY DOES NOT COVER: improper or defective slab construction, improper installation of the flooring, site preparation that is not in accordance with Dependable, LLC's requirements, substrate failure resulting in the delamination of the product, inhibiting contaminants being present that prevent proper performance or adhesion, cracks that develop after the installationof the product, product problems related to osmotic blistering or hydrostatic pressure, failure resulting from alkali silica reaction, or acts of God.

The preceding paragraphs set forth the exclusive remedy for all claims based on failure of or defect in the goods sold hereunder, whether such failure or defect arises before or during the warranty period and whether a claim, however instituted, is based on contract, indemnity, warranty, tort (including negligence), strict liability or otherwise. The forgoing warranty is exclusive and is in lieu of all other warranties whether written, oral, implied or statutory.

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PREPARATION AND APPLICATION

VAPORSEAL™ HM PLUS is suitable for installation in concrete on floors with RH levels up to 100% RH.

- All floors should be tested per ASTM F-2170 (Standard Moisture Test Method for Determining Relative Humidity in Concrete) before installing VAPORSEAL™ HM PLUS. Other methods for testing moisture, including ASTM 1-1869-11 (Calcium Chloride test), are not accepted by Dependable, LLC and will not be considered for any warranty claims.
- Sources of external water infiltration that contribute to high moisture drive on slabs on or below grade should be identified and controlled prior to installing VAPORSEAL™ HM PLUS.
- Concrete surface must be dry prior to installing VAPORSEAL™ HM PLUS.
- During application and cure, maintain ambient and substrate temperatures 65 – 90°F, with a relative humidity of 30-80%. Concrete must be 5 degrees Fahrenheit or more above the dew point of the slab at the time of installation and throughout product cure.
- All concrete slabs must be structurally stable, sound, and clear of any contaminants or bond breakers prior to installing VAPORSEAL™ HM PLUS. Ensure all old adhesives, contaminants, curing compounds, bond breakers, oils, silicates, dust and sealers are completely removed. It is the responsibility of installer to utilize concrete core testing to identify potential use of silicates on slab, or in circumstances where alkali-silica reaction is suspected.
- After all slab repairs have been completed, mechanically prepare the concrete by shotblasting to a CSP of 3 prior to installing VAPORSEAL™ HM PLUS.
- Chemical preparation of the floor is not acceptable under any circumstances.
- Carefully vacuum the floor following mechanical preparation to ensure removal of dust, debris on the slab.

Leveling (application of self-leveling underlayments) should be done over the VAPORSEAL™ HM PLUS. If the concrete is too uneven to provide a uniform film of VAPORSEAL™ HM PLUS, use Prep Pro RC to fill any significant holes to provide a more uniform surface. After PrepPro RC has cured mechanically prepare ALL surfaces receiving VAPORSEAL™ HM PLUS to a CSP 3. For instructions on how to install PrepPro RC, consult our latest technical data sheet found on our website (www.profloorprep.com).

Joints and Cracks

All expansion and isolation joints must be honored when installing VAPORSEAL™ HM PLUS. Applying VAPORSEAL™ HM PLUS to concrete surfaces and "welding" control joints with the VAPORSEAL™ HM PLUS may lead to slab relaxation, slab curl, cracking and subsequent issues with finished flooring. Dependable, LLC is not responsible for such occurrences (whether they lead to moisture intrusion or not). Where this is a concern contact Technical services prior to installation. Hairline cracks may be covered with VAPORSEAL™ HM PLUS, and then covered with an underlayment. Any nonmoving cracks 1/8" must be filled with a high modulus epoxy before installing VAPORSEAL™ HM PLUS. Consider adding sand to the High modulus epoxy for wider cracks. Consult Technical Support prior to installing a topping over VAPORSEAL™ HM PLUS.

Application Prodcedures
FOR PROFESSIONAL USE ONLY

Use chemical resistant gloves when handling.

Mixing

Prior to mixing, ensure material is preconditioned to 65-75°F. Colder temps will increase material viscosity, mixing and set times.

Each unit of VAPORSEAL™ HM PLUS comes pre-measured with 3.16 US Gal of epoxy: 2.16 US Gal of Resin (Part A) and 1 US Gal of hardener (Part B) in a 1 US Gal jug. After opening both containers add all of Part B into the Part A mixing container. Always mix VAPORSEAL™ HM PLUS as a full kit using the pre-measured quantities provided. Using a 300 RPM drill with an epoxy or paint paddle, thoroughly mix the product for at least 3 - 5 minutes to a streak free consistency. After mixing, immediately pour the entire contents on the floor in a ribbon pattern across the pre measured area when done. Do not leave mixed material in the mixing pail for more than 3 minutes after mixing.

24 HOUR EMERGENCY:
CHEMTREC®
1-800-424-9300
NON-TOXIC and NON-FLAMMABLE

Wear nitrile rubber gloves and eye protection while using this product. Avoid eye contact and contact with skin and wash thoroughly after handling. If eye contact occurs, flush with water for 15 minutes and consult a physician. Wash thoroughly after handling. Do not take internally. Keep out of the reach of children. See Safety Data Sheet for complete safety precautions.

If taken internally, call a physician.
Technical Assistance:
Visit our website: floorprep.com or call 1-800-227-3434.

PROPOSITION 65
This material contains components listed by the State of California as components that are known to cause birth defects, cancer, or other reproductive harm.

It is always recommended that other branded products are tested with Dependable's products prior to use.

APPLICATION Continued

Prior to mixing, measure a 400 sq ft area on grade/ 625 sq ft above grade (per kit) for material application. Immediately after the mixed VAPORSEAL™ HM PLUS is spread in ribbon pattern across the measured area, use a straight bladed squeegee to uniformly spread the material. Back roll the applied material with a dual cage foam or solid core (fiber free) roller. Do not introduce excessive air by over rolling. Ensure VAPORSEAL™ HM PLUS is spread uniformly to a 12 mil thickness.

In very rare cases where concrete exhibits extreme out-gassing, contact Technical Services for instructions.

CURE TIME (@ 70ºF)

- 5-6 hrs tack free
- 6+ hrs to apply primer or suitable floor covering adhesives
- 36 hours max recoat window.

When ambient temperatures are high, working and set time will be reduced, when temperatures are cooler set times will lengthen, typically 2x for each 10 degree drop from 73ºF.

Protect the area from foot traffic, dust and dirt until finished floor or underlayment installation is completed.

FLOOR AND UNDERLAYMENT INSTALLATION

After curing to a tack free condition, VAPORSEAL™ HM PLUS may receive floating floor systems without the need of further preparation. If a flooring adhesive is used, ensure the product is compatible with non-porous epoxy surfaces such as VAPORSEAL™ HM PLUS. A test area should always be performed prior to installing the entire floor to ensure compatibility. For subsequent installation of an underlayment, utilize PRIMER A™ NEAT. Reference the PRIMER A™ Data sheet for installation over non-porous surfaces. After PRIMER A™ is applied and dry, apply a suitable Dependable underlayment to realize a full system warranty.

CLEAN-UP

Clean tools and equipment with soap and water or denatured alcohol immediately after using. Wash hands and skin with soap or industrial hand cleaner. Cured material must be removed mechanically.

LIMITATIONS / PRECAUTIONS

VAPORSEAL™ HM PLUS is intended for professional use only. VAPORSEAL™ HM PLUS has a placement time of 20 minutes when immediately spread on the concrete, colder temperatures may extend the working time of the product. Due to the exothermic chemical reaction, Failure to immediately pour mixed VAPORSEAL™ HM PLUS to the substrate will significantly reduce placement time.

- VAPORSEAL™ HM PLUS is not for use as a final wear surface or topping and must be covered by a finished floor.
- For interior applications only
- Not for use over gypsum underlayments
- Do not chemically clean a concrete slab prior to installing VAPORSEAL™ HM PLUS.
- Do not apply VAPORSEAL™ HM PLUS to a concrete slab if adhesive was ever applied to the floor.
- MVER may fluctuate within slab areas and can have significant seasonal variations.
- Do not apply over existing coatings, sealers or floor coverings.
- Do not use in environments where temperature will exceed 100°F.
- Do not apply to concrete slabs with less than 3000 psi compressive strength and 200 psi internal tensile strength when tested per ASTM C1583.
- Concrete slabs must be at least 28 days old prior to material application.
- Terrazzo strips may move and may corrode, therefore VAPORSEAL™ HM PLUS is not warranted over terrazzo strips. Remove Terrazzo strips and patch damaged areas prior to application of VAPORSEAL™ HM PLUS.
- Conform to Building Codes and comply with the requirements of all applicable local, state and federal code jurisdictions.

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MADE IN USA ★ AMERICAN PRODUCT ★

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