

PE-VRM: MOISTURE VAPOR BARRIER EPOXY

TECHNICAL DATA SHEET

DESCRIPTION

PurEpoxy PE-VRM is a clear two-component, 100% solids, low odor, low viscosity epoxy formulated specifically as a moisture barrier coating to treat new and existing concrete floors with high moisture vapor transmission rates. PE-VRM is a one-coat moisture vapor barrier coating suitable for various types of concrete. The low viscosity formula promotes deeper concrete penetration for superior substrate adhesion and generates a higher propensity for sealing and blocking moisture drive than standard epoxy flooring products.

PurEpoxy PE-VRM is suitable for concrete substrates indicating relative humidity levels up to 99% when measured in accordance with ASTM F2170.

PurEpoxy PE-VRM conforms to and is approved for ASTM F3010 applications for vinyl tile, LVP, sheet goods, and other floor coverings sensitive to substrate moisture.

ADVANTAGES

- 100% solids, low VOC and odor, suitable for interior applications
- Effective MVT control on concrete substrates
- Easy to apply, one coat system
- Low viscosity for deep concrete penetration
- Available in climate adjusted formulas for easy use in a wide range of temperatures

RECOMMENDED USES

- Manufacturing & Warehouse floors
- Mechanical Rooms
- Shop Floors
- Pharmaceutical
- Residential
- Laboratories
- Institutional
- Retail Spaces
- Animal Care
- Beneath many types of flooring products, including:
 - Carpet
 - Vinyl Tile
 - LVP
 - Vinyl Sheet goods
 - Rubber
 - Wood & Laminates

TECHNICAL DATA

PACKAGING	3 US gal (18.9 L) or 15 US gal (56.78 L) Complete A/B kits
COLOR	Clear only
RECOMMENDED THICKNESS	16 mils (100 ft ² /gal)
SHELF LIFE	12 months in original unopened factory sealed container. Protect from freezing. Keep away from extreme cold, heat, or moisture. Keep out of direct sunlight and away from fire hazards.
MIX RATIO, BY VOLUME	Packaged as complete units only. Mix full units only, do not break down
POT LIFE, 16 oz (500g) MASS	~10 - 12 minutes
VOC	<5 g/l
THINNING	Not Recommended
SOLIDS CONTENT BY WEIGHT	100%

PROPERTIES

@ 73°F (23°C) AND 50% RH.

CURE TIME	CURE TO RECOAT:
BOND STRENGTH ASTM D4541	>350 PSI (CONCRETE SUBSTRATE FAILURE)
TENSILE STRENGTH ASTM D2370	7,500 PSI (51.7 MPa)
COMPRESSIVE STRENGTH ASTM D695	10,000 PSI (68.9 MPa)
FLEXURAL STRENGTH ASTM C580	2,300 PSI (15.8 MPa)
IMPACT RESISTANCE	160 in/lb
RESISTANCE TO MOLD GROWTH	10 (Highest)
HARDNESS SHORE D	70 - 80
THERMAL COMPATIBILITY ASTM C884	PASS

CONCRETE MOISTURE

Test for concrete moisture in accordance with ASTM F2170-19 (Wagner® RapidRH™ or similar.) If moisture is indicated to be in excess of 85%, apply **PurEpoxy PE-VRM** system in accordance with the published technical data sheet.

Alternately, test for excessive concrete moisture in accordance with ASTM F2659. Moisture content of concrete substrate must be ≤ 4 % by mass as measured with an impedance type (Tramex® CME/CMExpert) concrete moisture meter on prepared surface. Do not apply to concrete substrate with moisture levels > 4 %. If moisture content of concrete substrate is > 4 %, use **PurEpoxy PE-VRM** system in accordance with the published technical data sheet. Do not utilize resistance type moisture meters (Delmorst & similar).

SURFACE PREPARATION

Concrete substrates should be cured for a minimum of 30 days and have a minimum compressive strength of 3,000 psi. Surfaces must be clean, sound and properly prepared. Suitable preparation methods are recirculating abrasive shot-blasting, and/or diamond abrasive grinding. Remove all surface contamination before preparation. All soil, grease, oil, wax, or curing-agents, must be removed.

Any preparation method should produce a uniform surface profile of CSP-3 (ICRI Guide 03732,) or greater. Acid etching of concrete is unacceptable and will void Manufacturer's warranty.

Do not apply to wet or damp substrates. Test for concrete moisture before application (see Concrete Moisture.)

Thoroughly vacuum prepared surface to remove all dust just prior to application. Protect prepared surface against contamination prior to application of product.

MIXING

Precondition all components for 24 hours to ambient temperatures. In clean mixing pail, mix entire unit, A & B. Units are premeasured for correct ratio, **do not break down units**, product performance will be effected.

Mechanically mix only, do not mix by hand. Do not mix more material than can be distributed and applied in the working time window. Using a Jiffy/Jiffler, or similar type mixing attachment, slowly mix the components being careful not to introduce excessive air.

Mix for 3 minutes. Ensure all material is scraped by side wall and bottom of mixing container. Apply material to floor immediately after mixing. Delay in distributing product will result in exothermic heat buildup in container.

APPLICATION

The recommended application method is the use of non-marking rubber squeegee and roller application.

18-inch rollers are recommended on larger area floors to reduce lap marks. Roller should have solvent-resistant phenolic core, high quality non-shedding fiber cover. Use 1/4-inch to 3/8-inch nap, depending on final finish and thickness desired. Quality brushes or wall-edgers may be used for cutting in margins.

Distribute material evenly with non-marking (gray EPDM type, or similar) rubber flat squeegee. Apply an even film at 16 mils wet film thickness. Roll material in two directions to achieve uniform film.

LIMITATIONS

- Prior to application, measure and confirm the ambient temperature and humidity conditions of air and substrate
- Stated MVT resistance is assuming otherwise sound concrete condition
- Measure and confirm temperature of material. Precondition material for 24 hours prior to mixing
- Minimum/Maximum substrate temperature at application: 45°F (7.2°C) / 85°F (30°C)
- Maximum relative humidity during application and curing : 80%
- Substrate must be 5°F (3°C) above dew point. Ensure conditions will not change during application and curing
- Observe concrete moisture limitations stated in Concrete Moisture section
- On porous, non-concrete substrates, ensure that there will be no moisture penetration on positive side
- Protect from moisture and condensation for 24 hours after application
- Do not apply to substrates exhibiting or tested positive for alkali silica reaction (ASR) or have shown indications of near surface alkali reaction (NSAR.)
- Do not use propane or kerosene fueled heaters. Permanent discoloration of coating may occur
- For professional use only by experienced personnel

HEALTH & SAFETY

Read and fully understand all of these instructions before beginning mixing and application. Read and understand product SDS and other safety warnings.

Obtain and wear all required personal protection equipment (PPE.)

In case of skin contact, wash with water and soap. In case of eye contact, immediately rinse with water for at least 15 minutes. Consult with a doctor. For respiratory problems, transport victim to fresh air. Remove contaminated clothes and clean before reuse.

• KEEP CONTAINER TIGHTLY CLOSED • KEEP OUT OF REACH OF CHILDREN • NOT FOR INTERNAL CONSUMPTION

Prior to each use of any product manufactured by A.P Nonweiler/PurEpoxy, its subsidiaries or affiliates, the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at <https://purepoxy.com/documentations/> or by calling A.P Nonweiler. Nothing contained in any A.P Nonweiler/PureEpoxy literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the A.P. Nonweiler/PurEpoxy product.

WARRANTY STATEMENT

AP Nonweiler/PurEpoxy ("we," "us," or "our") warrants this product for one year from the date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. No warranty shall be in effect until our Terms and Conditions of Sales are met in full. NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL WE OR OUR AFFILIATES BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES OF ANY NATURE, REGARDLESS OF THE FORM OF ACTION OR THEORY OF LAW, INCLUDING, WITHOUT LIMITATION, BREACH OF ANY OBLIGATION OR WARRANTY IMPOSED ON US HEREUNDER OR IN CONNECTION HERewith. AP Nonweiler/PurEpoxy SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. AP Nonweiler/PurEpoxy SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.



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