

PI.225 – PRODUCT INFORMATION: Using E100-VB5™ Epoxy Vapor Barrier

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E100-VB5™ Epoxy Vapor Barrier is a two component, waterborne, premium quality, 100% reactive, medium viscosity, moisture-insensitive, non-shrink, modified epoxy vapor barrier primer. E100-VB5™ is formulated to penetrate the capillaries of concrete and fill pores within the surface structure. E100-VB5™ has excellent penetration and adhesion to the aggregate and cures under dry conditions.

1. DESCRIPTION and USES:

E100-VB5™ is engineered and formulated for use as a primer for new, old, interior or exterior concrete where vapor emission is an existing or potential problem.

E100-VB5™ is a waterborne, two component, epoxy resin with virtually no odor during or after use.

E100-VB5™ protects concrete surfaces and other coatings, paints, urethanes, epoxies, and polymer overlays from rising damp and vapor emission, normally associated with concrete.

E100-VB5™ is designed as a surface primer specifically for products such as E100-PT1™, E100-PT4™, E100-UV™, E100-PT3™ and SPARTIC-ALL™ RM.

E100-VB5™ is also an excellent primer for protecting polymer modified concrete overlays such as TEXTURE-PAVE™ and THIN-FINISH™ Overlays. However, when using as a vapor barrier primer for cementitious overlays, a **second coat must** be applied flooded with 40 sieve, rounded silica quartz/sand to the point of even and complete rejection. The sand must then be scrubbed with a stiff bristle broom AND vacuumed off the surface once the epoxy is completely dry.

E100-VB5™ must be applied to dry, clean concrete at a rate of 250 to 300 sq. ft. per gallon for typical coats and 200 to 250 sq. ft. for sand to rejection coats.

2. LIMITATIONS:

E100-VB5™ must not be applied to wet or dirty concrete, concrete which has sealer, paint, other densifiers, coatings, dirt, oil or other contaminants which will interfere with penetration.

E100-VB5™ is not recommended for use as a finished wear surface and must be coated with approved coatings.

E100-VB5™ must be allowed to dry completely prior to being recoated with a second coat or other coating. Although one coat is often times sufficient, in some cases it may become necessary to apply a second coat. The need for a second coat is evident when there are visual breaks, voids or bubbles in the dry finish.

3. CHEMICAL COMPOSITION:

E100-VB5™ is a waterborne epoxy resin solution of aliphatic and cycloaliphatic amines. Solids reduction is required prior to application with clean, potable water.

4. APPLICABLE STANDARDS:

E100-VB5™ complies with all applicable air quality management regulations including those restricting VOC content to less than 150 g/L.

5. PACKAGING:

E100-VB5™ is available from stock in 2 gallon and 10 gallon kits. Larger custom sizes are available upon request.

6. COVERAGE:

Recommended cover is 250 to 300 sq. ft. per gallon for typical coats and 200 to 250 sq. ft. for sand to rejection coats.

7. SHELF LIFE:

When stored in temperature controlled areas, shelf life is one year for unopened containers. It is recommended to rotate stock as formula improvements may be made when technology becomes available.

8. CAUTIONS:

Although E100-VB5™ has little or no odor and carries a very low VOC, E100-VB5™ should only be used with adequate ventilation. Avoid contact with eyes and skin. DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. Ensure fresh air entry during application. If you experience watering eyes, headaches, or dizziness or if air monitoring demonstrates vapor levels are above applicable limits, wear a properly fitted respirator (NIOSH/MSHA TC 23C approved) during and after application. Follow respirator manufacturer's directions for use.

Read the Material Safety Data Sheet – MSDS.447 E100-VB5™ for additional information.

9. APPLICATION EQUIPMENT:

Protective gear should be worn when using equipment and materials during preparation and installation.

A high quality adhesive roller is recommended for most applications of E100-VB5™ to apply an even coating.

10. APPLICATION:

Cover surrounding areas, walls, equipment, furniture and adjacent surfaces with masking to protect from spills and tracking. The entire work area should be roped off.

Test Concrete for Vapor Emission –

1. It is recommended that a vapor transmission test(s) be completed before accepting any project.
2. To obtain useful data the concrete must be cleaned in the same manner as it is planned for the complete project.
3. Consult with an Elite Crete Systems Trained Technician for advice on testing and solving vapor transmission problems.

Preconditioning Epoxy Resins - When temperatures drop epoxy resins typically thicken and becomes harder to flow or to spread. When the temperatures are warmer they typically become thinner. To improve the product flow-ability maintain temperature at about 20°C (73°F) before mixing.

Mixing - E100-VB5™ must be properly mixed prior to application. Failure to mix properly may result in uneven sealing and allow vapor emission throughout the finish. Pre-mix Component "A", then pour Component "B" into "A" and mix for 60 seconds (until one even color develops) with a low speed paddle attached to a drill (400-600rpm). Now add 2 pints of clean, potable water per mixed gallon and mix for another 60 seconds. The mixed product is ready for immediate placement.

Laying the Product - Application must be made at the coverage rates recommended in section 6. COVERAGE, using the equipment and methods described. E100-VB5™ should be applied on a dry day when the surface and ambient temperatures are between 40° and 90° F and will not fall below 32° within the next 6 to 8 hours. Do not apply E100-VB5™ on foggy, rainy to extremely humid weather conditions. On hot, dry days, application should be made during the cooler part of the day and when the surface is cool.

1. Pour the mixed E100-VB5™ onto the floor and spread evenly over the surface at the recommended coverage rate.

2. Back roll the wet epoxy into the surface of the concrete with an adhesives roller. Work the material into the concrete by pressing down onto the roller with extra pressure.
3. Leave a wet film of epoxy on the surface of the concrete after rolling.
4. Inspect all areas to ensure that the concrete has absorbed the epoxy.
5. E100-VB5™ must not be allowed to puddle or collect in joints, resulting in a prolonged cure.
6. E100-VB5™ must be applied evenly while maintaining a wet edge and overlapping must be controlled.
7. Do not broadcast aggregate, metal granules or glass beads into the first coat. Aggregate can be broadcast in a second coat once the first coat has completely cured.

Curing -

1. Allow the epoxy to cure 5 to 6 hours before recoating.
2. Carefully inspect the entire area to ensure that the E100-VB5™ film is solid without film breaks, voids or concrete surface protrusions.
3. If film break or protrusion(s) occur apply a second coat of E100-VB5™.
4. Allow epoxy to become tack-free, and immediately apply the finished wear coating, tile, carpet or other floor product selected to protect the floor.
5. Expect the cured E100-VB5™ to be clear but have a slight greenish tint.

11. CAUTION:

Component "A"- Irritant
Contains epoxy resins. Prolonged contact with skin may cause irritation.
Avoid contact with eyes.

Component "B" - Corrosive

Contains aliphatic and cycloaliphatic amines. Contact with skin may cause severe burns. Avoid eye contact. Product is a strong sensitizer.

Important Information:

Use of safety goggles, chemical-resistant gloves, adequate ventilation and NIOSH/MSHA approved respirator is recommended.

12. CLEAN UP:

In case of spills wear suitable protective equipment, contain spill, and collect with absorbent material, place in suitable container. Ventilate area. Avoid contact. Dispose according to applicable local, state, and federal regulations.

13. FIRST AID:

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. For respiratory problems, remove person to fresh air. Contact Physician Immediately. Wash clothing before re-use.

14. PRODUCT AVAILABILITY:

E100-VB5™ is marketed nationwide and internationally, directly to trained installers through strategically located authorized distributor and suppliers.

15. PRODUCT COST:

At an application rate of 250 to 300 sq. ft. per gallon, the material cost per coat is approximately \$0.22 to \$0.29 per sq. ft.

16. OTHER SEALER OPTIONS:

Additional information is available in the Elite Crete Systems Technical Data TD-414 Protective Sealers and Coating Options.

17. WARRANTY SUMMARY:

For the complete warranty statement and important limitations, read the Material Safety Data Sheet and Warranty. Generally, Elite Crete Systems, Incorporated represents and warrants only that its products are of consistent quality. No other oral or written statement is authorized. Any liability is limited to refund or replacement of the defective product. The end user shall determine product's suitability and assume all risks and liability.