

Vanberg Specialized Coatings

Armor-Flex Membrane Data Sheet



PROFESSIONAL COATINGS

PRODUCT DESCRIPTION:

ARMOR-FLEX MEMBRANE is a two-component, 100% solids and 100% reactive specialty epoxy resin combination that cures to a semi-flexible membrane with approximately 100% elongation. **ARMOR-FLEX** Epoxy meets all of the USDA guidelines for use in federally inspected facilities. It is available in clear and a selection of colors using **VSC COLORANTS**. **ARMOR-FLEX** can also be used as a flexible **ARMOR-GRIT** or **ARMOR-ROCK** system.

RECOMMENDED USAGE:

ARMOR-FLEX Epoxy is intended for use beneath various VSC coatings and resurfacers to help bridge fine cracks and to aid in waterproofing concrete floor areas. It is designed for use in upper level mechanical equipment rooms and other concrete floor areas requiring waterproofing and resistance to damage from vibration or impact. It is an excellent tank lining as it exhibits very good chemical resistance. The **ARMOR-GRIT** and **ARMOR-ROCK** systems are ideal for high traffic areas such as parking garages and livestock floors. Also it can be used as an "Anti-Fatigue" coating. It is an excellent high build wood floor coating.

FEATURES:

- **Ultimate Elongation of 60%**
- **100% Solids**
- **Solvent Free - Odorless**
- **Easy Mixing Ratio**
- **Good Chemical Resistance**
- **Wide Range of Colors**
- **VOC Compliant**
- **Very Durable**
- **No Induction Time**

PACKAGING:

- 2 gallon unit (7.6L) packaged in a single carton #EF139-2 (Clear) #EF139G-2 (Med. Gray)
- 10 gallon unit (38L) packaged in two 5 gallon (19L) pails #EF139-10 (Clear) #EF139G-10 (Med. Gray)

GENERAL PRODUCT DATA

FEATURE	ADVANTAGE
Shelf Life	1 year unopened (between 60 - 85°F) (16 - 29°C)
Application Temp & Humidity	60 - 85° F (16 - 29°C) @ less than 85% R.H. indoors.
Mixing Ratio (Hardener to Resin)	1 to 1 by volume
Coverage	32 - 160 sq. ft. per gallon (3.68 m ² /L)
Pot Life	15 - 25 minutes @ 70°F (21°C)
Application Method	Straight Squeegee & 3/8" (.95 cm) Nap Roller
Ready for Recoat	8 - 12 hours @ 70°F (21°C)
Ready for Foot Traffic	12 - 24 hours @ 70°F (21°C)
Ready for Heavy Traffic	24+ hours @ 70°F (21°C)
Bond Strength	400+ psi (2758 kPa) w/ concrete failure (ASTM D-4541)
% Solids by Volume	100% (ASTM D-1464)
Flash Point	>200°F (93°C) (PMCC)
UV Light Resistance	Good (QUV)
Hardness (Shore D)	58
VOC	0 g/l (EPA Method 24)
Gloss (60°)	70
Flexural Strength	2,600 psi (ASTM D-4790)
Compressive Strength	4,100 psi (ASTM D-695)
Abrasion Resistance	0.06 mg loss (Taber abraser CS-10 callibrase wheel with 1000 gram total load and 500 cycles)
Tensile Strength	2,450 psi (ASTM D-638)
Adhesion	450 psi @ elcometer (concrete failure, no delamination)
Viscosity	1000 - 1700 cps (typical)

COVERAGE:

This product can be applied at the rate of 32 - 150 sq. ft. per gallon (3.68 m²/L, which is approximately 50 - 10 mils. As with all coatings, coverage is dependent on the smoothness and porosity of the surface.

SURFACE PREPARATION:

The substrate must be clean, dry and sound with new concrete cured for at least 30 days at 70°F (21°C). Remove dust, laitance, grease, curing compounds, waxes, foreign particles, disintegrated or soft base materials, and any previously applied potentially incompatible coatings. Create a surface profile on concrete by either steel shot blasting or acid etching. Repair cracks and joints with VSC's **EPO-STONE AB** or **JOINT-FILL EPOXY**. For additional concrete preparation information and methods, refer to VSC's Surface Preparation Guide. If the concrete surface is not prepared properly, product adhesion will fail and warranties will be voided.

FOR BEST RESULTS:

- For Interior Use Only.
- New concrete must cure for at least 30 days @ 70°F (21°C).
- DO NOT thin the **ARMOR-FLEX** Epoxy.
- DO NOT use when humidity exceeds 70% indoors.
- DO NOT allow material to puddle during application.
- Allow each coat to dry tack-free before recoating.
- Apply each coat within 24 hours of previous coat.
- Discard any material subjected to freezing.
- DO NOT apply to structurally unsound surfaces.
- Apply a test patch to ensure adhesion to old paint.

PRIMING:

For optimum results, prime the prepared concrete floor first with a selected VSC primer. Allow the VSC primer to dry thoroughly before mixing and applying the next coating. The primed floor should be tack free.

Review VSC'S Material Safety Data Sheets (MSDS) for this product prior to mixing and applying. In addition, thoroughly review the Data Sheet and product labels

MIXING:

Avoid mixing and application of this product if the floor temperature is below 60°F (16°C) or above 85°F (29°C). Also avoid application if the humidity is higher than 85% R.H. The temperature of the floor, materials and air in the area of the installation all play a role in how the product will apply and cure. Do NOT turn buckets upside down, as unmixed material may wind up on the floor, and never cure. **For 2 gallon (7.6 L) and 10 gallon (38 L) units:** Portion out equal volumes of Hardener and Resin into a suitable mixing vessel. The ratio of Hardener to Resin is 1:1 by volume. Blend thoroughly for 2 to 3 minutes with a spiral mixing blade (available from VSC) attached to a low-speed (400-600 RPM) electric drill. Take care not to induce air into the material when mixing. This will cause "bubbles" in the coating when applied.

POT LIFE:

At 70°F and 50% R.H., the **ARMOR-FLEX** Epoxy has a useful working time or pot life of approximately 15-25 minutes. Using any product beyond this time will result in variable results and therefore any mixed product beyond the pot life should be discarded. Apply all material to the floor as quickly as possible to increase working time.

APPLICATION:

The recommended application of this product involves pouring it in a narrow line directly onto the concrete surface and then spreading it with a squeegee. Spread the coating in a continuous manner from one side of the area being coated to the other. Immediately follow with a 3/8" (.95 cm) nap shed resistant roller. The **ARMOR-FLEX** Epoxy must be rolled as evenly as possible. To do this, roll forward in a straight line and then roll the same column backwards to eliminate spike shoe marks. Overlap the next column to be rolled by 1/2" (1.3 cm) with the previously rolled column. Avoid excess agitation of the liquids with the roller. This will lessen chances of bubbling of the final film. To achieve a smooth surface, it is recommended to re-roll the coating with a spiked roller to eliminate all subsurface bubbles, and alleviate fish eyes. For water-proofing a layered fiberglass mesh should be imbedded between 2 coats of **ARMOR-FLEX** Epoxy. The first coat will be at about 150 sq ft/ gal (3.68 m²/L). The second coat at about 75 sq ft/gal (1.84 m²/L). The individual(s) applying the **ARMOR-FLEX** Epoxy should be wearing "spiked sandals" available from VSC. The **ARMOR-FLEX** Epoxy can be applied at the rate of 150 sq. ft. per gallon (3.68 m²/L). Allow the **ARMOR-FLEX** Epoxy to dry thoroughly before mixing and applying the next coat. It should be tack before recoating (this takes between 8 - 12 hours @ 70°F (21°C) and 50% R.H.).

CLEAN UP:

Application equipment should be cleaned using soap and water immediately after use, or solvent if necessary.

DISPOSAL:

Empty containers may contain product residue, including flammable or combustible vapors. Do not cut, puncture or weld near these containers. Label warnings must be observed until containers have been commercially cleaned or reconditioned. Containers to be thrown out must be disposed in accordance with federal, state and local regulations. Use only licensed hazardous waste disposal companies.

MAINTENANCE:

For optimal floor appearance and performance following installation, refer to VSC's Floor Maintenance Instructions.

CUSTOMER NOTE:

For information on application situations not covered above, contact the VSC corporate office at 1-800-874-0631.

WARRANTY STATEMENT

Information about VSC products is given to the best of our knowledge, based on tests and experience. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you will make your own tests to determine the suitability of the product for your particular purpose. As products are often applied or used under conditions beyond our control, VSC cannot guarantee anything but the quality of its products. VSC warrants that its products meet the specifications set forth by VSC, but we reserve the right to change any given specification without prior notice. VSC DISCLAIMS ALL WARRANTIES RELATING TO THE PRODUCTS AND THEIR APPLICATION, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Receipt of VSC products constitutes acceptance of the terms of this limited warranty and the terms and the conditions set out in our invoice, contrary provisions of buyer's purchase documents notwithstanding. Upon receipt of merchandise, purchaser has 30 days to notify VSC in writing that materials are defective. In the event VSC finds that the product delivered is off specification, VSC will, at its sole discretion, either replace the product or refund the purchase price thereof, and VSC's choice of one of these remedies is the buyer's sole remedy. In no event shall the liability of VSC exceed the purchase price of shipped merchandise. Claims must be in writing. Claims after 30 days are void. VSC will under no circumstances be liable for special, incidental or consequential damages. This warranty supercedes all other guarantees, whether oral or written, and whether expressed, implied or statutory. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sale of our products. Certain products may contain chemicals which may cause serious physical injury. Before using, please read the Material Safety Data Sheet and follow all precautions to prevent bodily harm.



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