

# 105

## E-BOND 105 100% SOLIDS HIGH BUILD EPOXY COATING SYSTEM



FOR PROFESSIONAL USE ONLY; NOT FOR SALE TO OR USE BY THE GENERAL PUBLIC

PRODUCT DATA

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105 100% SOLIDS HIGH BUILD EPOXY COATING

### DESCRIPTION

E-BOND 105 SUPERSTICK HI-BUILD is a 2 component epoxy resin based coating which is Solvent-Free, 100% Solids and 100% Reactive. Superstick Hi-Build is a "tile like" high build protective coating providing a corrosion resistance, damp-proofing waterproofing vapor barrier system for concrete masonry concrete block, brick, steel, etc.

ANSI /NSF 61-1992 approved for Potable Water Use.

Conforms to VDOT EP-3T/3B; ASTM C-881, Type VII, Grade 2, Class D, E & F

### FEATURES AND BENEFITS

- Convenient easy to use 1:1 by volume mixing ratio
- Excellent bond to most structural materials
- Easy to apply, creamy paint-like viscosity. Superstik Hi-Build lays up with a roller or brush to an average thickness of between approximately 6 and 9 mils. (ASTM-D-638)
- Provides a hard dense tile like finish
- Good resistance to many chemicals for long-term protection
- Abrasion resistant for long term wear
- 105 Hi-Build has a tensile modulus of approximately 90,000 psi and when cured it has a tensile strength in excess of 3,000 psi.
- After cure approved for contact with potable water. (ANSI /NSF 61-1992 approved)
- Zero VOC – Fully Reactive, No low boiling constituents

### WHERE TO USE

- Hi Build Epoxy corrosive resistant protective coating masonry, block, brick and similar surfaces
- For containment areas surrounding storage tanks
- Coating of potable water tanks and fountain areas
- To provide a base coat for seamless flooring
- Coating of exposed concrete on bridge, seawall and splash zone areas

### FOR BEST PERFORMANCE

- Precondition the components to 75°F (23°C) for 24 hours before use.
- Minimum ambient surface and epoxy temperatures should be 50°F (10°C) and rising at the time of application.
- Do not add solvents or water to epoxy material.
- Do not alter or change the recommended proportions when blending the components
- Apply when slab is cooling; near the end of the day.



## TYPICAL DATA

All components conditioned cured and tested at 75°F (23°C) unless specified otherwise.

<b>Type:</b>	Moisture Insensitive & Moisture Insensitive Coating		
<b>Color:</b>	Part A Resin		Clear
	Part B Hardener		Gray
	Admix		Gray
	Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure		
<b>Mixing Ratio:</b>	1A to 1 B by Volume		
<b>Viscosity:</b>	ASTM D-2393/ISO2555 Type A Ad-Mix		40-150 ps
<b>Gel Time @ 75°F:</b>	35 to 50 minutes depending on quantity mixed		
<b>Tack-Free Time @ 75°F:</b>	Thin Film		4 hours
	Final Cure		7 days
<b>Tensile Properties:</b>	ASTM D-638 14 days		
	Tensile Strength		3500 psi (24 Mpa) minimum
	Tensile Elongation		4% minimum
<b>Bond Strength:</b>	ASTM C-882 14 days Moist Cure		1400 psi (10Mpa)
<b>Deflection Temp:</b>	ASTM D-648 14 days		128°F (53°C)
<b>Compressive Strength:</b>	ASTM D-695 36 hours		4000 psi (27Mpa) minimum
	72 hours		5000 psi (34Mpa) minimum
<b>Contact Strength:</b>	ASTM C-882 14 days		1200 psi (8Mpa)
<b>Water Absorption:</b>	ASTM D-570 7 days (24 hour immersion)		0.4%
<b>Abrasion Resistance:</b>	ASTM D-968 14 days		Abrasion Coefficient 51 liters/mil
<b>Immersion and Chemical Exposure:</b>	Minimum cure: 3 days		
<b>Shelf Life:</b>	1 year in original unopened container.		
<b>Storage:</b>	Store Dry at 40°F (4.4°C)-95°F(35°C) . Condition to 75°F (23°C) before using. Protect from inclement weather and freezing.		

\*Gel Time varies with temperature and quantity mixed. Faster in warm weather and larger quantities mixed; Slower in cooler weather and in small quantities mixed.

### HOW TO USE 105 100% SOLIDS HIGH BUILD EPOXY COATING SYSTEM

#### **SURFACE PREPARATION**

Concrete - All surfaces must be prepared to a structurally dense surface with exposed coarse aggregate to reveal an open texture surface by shot-blasting, Ultra-High Pressure Water Blasting (min. 5000 psi) or other mechanical means. Remove weak, contaminated deteriorated concrete, asphalt materials, oils, dirt, rubber, curing compounds, paint, carbonation, laitance, and other potentially detrimental materials by shot-blasting, ultra-high pressure water blasting, bush hammering or other suitable mechanical means. Surface preparation by bush hammering, grinding, and milling can create minute fractures or micro cracking in the substrate, which may require re-shot blasting to a structurally dense surface with an ICRI profile of CSP #5. Interior Surface may be dry or damp and free of standing water.

Steel - Steel should be cleaned and prepared by sandblasting to conform to SSPC-SP10 Specification with a 4 mil (0.1mm) minimum anchor profile. If flash rust appears, the surface must be re-blasted to obtain minimum anchor profile.

## MIXING

For best results, prior to mixing condition the components to 75°F (23°C) for 24 hours. Stir each component prior to blending. Proportion one (1) part by volume of Component A and one (1) part of Component B into a clean container with flat wall and bottom. Mix thoroughly for a minimum of three minutes using a low speed drill (600 rpm) and a mixing paddle (e.g. a Jiffy® and/or Plunge Mixer™). Keep the paddle below the surface of the material to avoid entrapment of air. Thorough mixing of both components is important to obtain optimum results. Carefully scrape the sides and bottom to ensure thorough mixing. Only mix a quantity which can be utilized within the pot life of the material.

## APPLICATION

### Coverage rate:

(Theoretical for estimating purposes only)

Coverage varies in accordance with technique used, surface, etc.

The following is a theoretical yield based at a given thickness. It does not account for loss of material, for application at greater thicknesses:

E-Bond 105 at 6 to 9 mils: approx. 150 to 250 sq.ft. per gal.

### Applying the coating:

Avoid applying in direct sunlight as the heat of the sun may cause outgassing. Green concrete will also cause this to happen as the air escapes from the concrete as it is curing. Application of any epoxy on concrete should only be done after 28 days. It is suggested that 105 top coat be applied during the late afternoon/early evening hours when the temperature is dropping and the concrete is constricting keeping outgassing to a minimum.

Only apply to properly prepared surfaces as described above. Use airless sprayer, brush or a roller with 3/8 or 7/16 inch nap. We recommend two coats at a thickness of 6 to 9 mils with a brush or roller, and 4 to 6 mils with sprayer.

Coating should be applied to surfaces when substrate temperature will be 50° F and rising for, and during the next 5 hours. The second coat may be applied after the first coat is tack free. Use S-6 and T-6 to clean tools.

Due to many variables in bonding epoxy coating to damp or wet surfaces, be certain to test application under the same conditions as the full scale work.

When bonding to, on slightly wet surfaces, be certain to test if dampness or moisture is caused by hydrostatic pressure prevalent in, on, or below grade applications. Moisture passing through the substrate by pressure during application and curing of epoxy could cause bond failure.

### CONSIDERATIONS FOR SURFACE PREPARATION TO AVOID EPOXY INTER-COAT ADHESION PROBLEMS

#### Amine Blush:

Due to humidity and temperatures during curing of epoxies a phenomenon may occur creating an Amine Blush to appear on the cured surface of the epoxy. This may appear as a wax-like or greasy film. If the blush is slight it may be hard to detect visually or by touch. Blush will be more noticeable in cool, damp or humid conditions. Amine blush can hinder bonding of subsequent epoxy layers. The "blush" must be removed before applying additional layers of epoxy. An Amine blush is usually formed after the initial set of the epoxy. As a general rule if a second layer of epoxy cannot be applied within 12 hours after the previous application, it is recommended that the surface be properly prepared to remove any blush that may have occurred.

Light sandblasting between coat applications is the recommended procedure for surface preparation to remove blush or contaminants that may create inter-coat adhesion problems.

Amine blush may also be removed by wet sanding.

Some amine blushes may be water soluble. Test with a pressure wash at a minimum 750 psi with injection of sufficient Dawn® Dishwashing Detergent (usually 2-3%) to remove and clean the surface of contaminates. As an alternative wash down and thoroughly scrub the surface between applications with the solution of Dawn® Dishwashing Detergent. Rinse with plenty of fresh water to thoroughly remove the dissolved blush and allow to dry completely before application of the next layer of epoxy.

**Note:** Most contractors have advised wash down and scrub with Dawn® Dishwashing Detergent and water is easy and does not create a mess. Do not use solvents.

It is important that the user evaluate a small test area for proper preparation and bond before proceeding with a full scale operation.

### PACKAGING

Available in 2 gallon units. Available in non-stock 10 gallon units on request.

### CLEAN UP

Ventilate area. Confine spill. Collect with absorbent material. Dispose of in accordance with current, applicable local, state and federal regulations. Uncured material can be removed with approved solvent. Cured material can only be removed mechanically.

### CHEMICAL RESISTANCE EVALUATION E-BOND 105 HIGH BUILD EPOXY COATING SYSTEM

SAMPLE: TWO COATS (10 MILS), CURED 7 DAYS SUBSTRATE: CEMENT

CHEMICAL	TEST TEMP.	TIME ELAPSED AND EVALUATION				
		1 Day	1 Month	2 Months	6 Months	1 Year
Water	75° F	1	1	1	1	1
	100° F	1	1	1	1	1
	140° F	1	1	1	1, 3	1, 3
Sodium Chloride Solution (Saturated)	75° F	1	1	1	1	1
	100° F	1	1	1	1	1
Detergent Solution (5% Ajax)	75° F	1	1	1	1	1
	140° F	1	1	1	1, 3	1, 3
Cement Water (Saturated)	75° F	1	1	1	1	1
Sodium Hydroxide (30%)	75° F	1	1	1	1	1
Citric Acid (10%)	75° F	1	1, 3	1, 3	1, 3	1, 3
Hydrochloric Acid (10%)	75° F	1	1	1	1	1
Oxalic Acid (10%)	75° F	1	1, 3	1, 3	1, 3	1, 3
Sulfuric Acid (10%)	75° F	1	1	1	2	2
Unleaded Gasoline	75° F	1	1	1	1	1, 3
Home Heating Fuel Oil	75° F	1	1	1	1	1, 3
Iso-Octane	75° F	1	1	1	1	1, 3
Toluol	75° F	1	1	1	1	1, 3
Silage	75° F	1	1	1, 3	1, 3	2, 3
Synthetic Silage	75° F	1	1	2, 3	2, 3	2, 3
Ethyl Alcohol	75° F	1	4	-	-	-

1: Resistant

2: Temporary Immersion, Spillage

3: Discolored

4: Destroyed

## FIRST AID

Inhalation: Remove person to fresh air. Skin: Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water Eyes: Flush thoroughly with water for 15 minutes. Ingestion: Do not induce vomiting. In all cases, contact a physician immediately if symptoms persist.

## LIMITATIONS

- Material is a vapor barrier after cure, test on-grade substrates for moisture-vapor transmission prior to application (Ref. ASTM F-1869; ASTM D-4263).
- Do not apply over wet, shimmering surface.
- Minimum age of concrete prior to application is 21-28 days ,depending on curing and drying conditions
- For applications on exterior on-grade substrates, consult Technical Service.
- Do not thin with solvents
- Not an aesthetic product. Color may alter due to variations in lightening and /or UV exposure
- E-Bond 105, when cured, creates a non-breathing film. This produces a vapor barrier and should not be applied to surfaces where the transmitted vapor cans condensate under coating and freeze. Do not completely encapsulate mortar or concrete subjected to freezing
- Proper application is the responsibility of the user. Field visits by E-Bond personnel are for the purpose of making technical recommendations only and are not for supervising or providing quality control on the jobsite.
- **CAUTION** - READ DATA SHEET & MSDS BEFORE OPENING CONTAINERS

Prior to each use of any E-Bond product, the user must always read and follow the warnings and instructions on the product's most current Technical Data Sheet, product label and Material Safety Data Sheet which are available by calling E-Bond Epoxies at 954 566.6555 (Sales). Nothing contained in any E-Bond materials relieves the user of the obligation to read and follow the warnings and instructions for each E-Bond Product as set forth in the current Technical Data Sheet, product label and Material Safety Data Sheet prior to product use.

**CAUTION** - E-Bond's epoxies contain alkaline amines. Strong sensitizer; MAY CAUSE SKIN SENSITIZATION or allergic response ranging from a mild wheezing to a severe asthmatic type attack. Avoid contact with skin or eyes. IN CASE OF CONTACT immediately wash skin with soap and water. Flush eyes with water and obtain medical attention. Wear protective clothing, goggles, and barrier cream on all exposed skin.

**LIMITED WARRANTY NOTICE:** E-BOND EPOXIES, INC warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within the shelf life of one (1) year from manufacture date. Satisfactory results depend not only on quality products but also upon many factors beyond our control. The purchaser must examine the product when received and promptly notify E-BOND EPOXIES, INC in writing of any nonconformity before the product is used and no later than 30 days after such non-conformity is first discovered. If E-BOND, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty.

The information in this data sheet supersedes all other sales information received by the customer during the sales process. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.

E-BOND shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injury), or economic losses of any kind; or for any special ,incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if E-BOND could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose

E-BOND EPOXIES, INC.  
501 N.E. 33<sup>RD</sup> ST  
P.O. BOX 23069  
FT. LAUDERDALE, FL 33307  
TOLL FREE : (877) 265-0011  
PHONE: (954) 566-6555  
FAX: (954) 566-6663  
E-Mail: [info@ebondepoxies.com](mailto:info@ebondepoxies.com)  
[www.ebondepoxies.com](http://www.ebondepoxies.com)

