

FORTEC 105

100% SOLIDS HIGH BUILD EPOXY COATING SYSTEM



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

Product Description: FORTEC 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, etc. ANSI /NSF 61-1992 approved for Potable Water Use.

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. Superstick 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
- Superstick 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)

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	
Type:	Moisture Insensitive & Moisture Insensitive Coating
Color: Part A Resin Part B Hardener Admix	Clear Gray Gray
Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure	
Mixing Ratio:	1A to 1 B by Volume
Viscosity: ASTM D-2393 Ad-Mix	4000-8000 cps
*Pot Life @ 75°F:	35 to 50 minutes depending on quantity mixed
Tack-Free Time @ 75°F (Thin Film):	4 hours
Final Cure@ 75°F	7 days
Tensile Properties: ASTM D-638	14 days
Tensile Strength	3500 psi minimum
Tensile Elongation	4%
Immersion and Chemical Exposure:	Minimum cure: 3 days
Adhesion: ASTM D-3359	1 day
Adhesion Classification	4A
Water Absorption:	ASTM D-570 7 days (24 hour immersion) 0.1%
Abrasion Resistance:	ASTM D-968 14 days
Abrasion Coefficient	51 liters/mil
Shelf Life:	1 year in original unopened container.
Storage:	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.
*Pot Life 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 shotblasting, 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 shotblasting, 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-shotblasting 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: Fortec 105 at 6 to 9 mils: approx. 150 to 250 sq.ft. per gal.

Applying the coating:

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 the ambient temperature and surface temperature will be 50° F and rising for, and during the next 24 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 FORTEC 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	1,3	1,3
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
- Color may alter due to variations in lightening and /or UV exposure
- Fortec 105, when cured, creates a non-breathing film. This produces a vapor barrier and should not be applied to surfaces where the transmitted vapor can 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 Fortec 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

CAUTION – Fortec'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.

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The logo for Fortec Stabilization features the word "FORTEC" in a large, bold, black, sans-serif font. Below it, the word "STABILIZATION" is written in a smaller, white, sans-serif font, centered within a solid black rectangular background.

