Epoxy 700 Plus
Data Sheet

Part # E700P, E700P-CO

DESCRIPTION: Epoxy 700 Plus is a high quality Bis-F epoxy novolac coating and lining system which has superior chemical and abrasion resistance versus Bis-A type epoxy resins. This tightly crosslinked epoxy system cures in the presence of moisture and humidity with excellent mechanical properties. Epoxy 700 Plus mixes using the industry standard, 2:1 by volume ratio. Having low odor, Epoxy 700 Plus contains no solvents and is 100% solids that assures ease of application. Epoxy 700 Plus viscosity is well suited for vertical applications.

TYPICAL USES:

- Recommended for vertical applications where increased resistance to acids, bases and solvents is desired
- Great coating in areas where high concentrations of chemicals are used
- Primary and secondary containment

FEATURES & BENEFITS:

- Superior chemical and abrasion resistance
- Highly resistant to cratering or blush
- Low odor
- 100% solids, no solvents
- Cures in the presence of moisture and humidity with excellent mechanical properties
- Excellent bonding
- Dries to a high gloss
- Complies with ACI Standard 503.1 - 4
- Complies with ASTM C-881-90 Type I, II, IV, V, VI and VII Grade 2, Class B, C, D, E and F

CHEMICAL PROPERTIES*:	Result
Viscosity, Mixed (cps)	Thixotropic (for vertical surfaces)
Solids by Volume/Weight	100%
Volatile Organic Compounds	0 lbs/gal
Mix Ratio by Volume	2A (resin) : 1B (hardener)
Pot Life (neat coating)	25 – 30 minutes
Recoat, maximum	24 hrs
Tack-free	6 – 8 hrs
Walk on Time (light foot traffic)	14 – 16 hrs
Return to Service Time (vehicle traffic)	24 – 36 hrs
Full Cure	7 days
Coverage Rate per Gallon	70 – 100 sq. ft.
Recommended Application Temperature	minimum 50°F (10°C), maximum 100°F (38°C)
Odor	low
Color	clear, standard colors
Shelf Life - unopened containers	12 months

*Properties were tested at 77°F (25°C).

TYPICAL PHYSICAL PROPERTIES*:	Test	Result
Bond Strength (psi) to concrete		>400, w/100% concrete failure
Hardness (Shore D)	ASTM D-2240	86±5
Tensile Strength (psi)	ASTM D-638	7000 – 8000
Flexural Strength (psi)	ASTM D-790	13000 – 13800
Elongation (%)	ASTM D-638	3.2
HDT	ASTM D-648-264	140°F (60°C)
Compressive Strength (psi)	ASTM D-695	12000 – 14000
Water Absorption, gain in 24 hrs (%)	ASTM D-570	<1

*Cured 7 days at 77°F (25°C).

MOISTURE VAPOR TESTING: All concrete floors not poured over a proper moisture barrier are subject to possible moisture vapor transmission or hydrostatic pressure problems. These problems can cause a coating system to blister or fail. Before applying a coating system over a concrete floor which is on-grade or below grade, a moisture test is recommended to ensure that moisture content meets industry recommended standards.

CONCRETE SOLUTIONS® EPOXY 700 PLUS *(continued)*:

SURFACE PREPARATION: Substrate surfaces must be structurally sound and free from contaminants such as dust, oil or dirt. Surfaces must be shot blasted or mechanically abraded to achieve a minimum 5-mil profile. Free-standing water must be removed. Do not apply over previously applied epoxies or coatings. Epoxy 700 Plus is self priming. For porous substrates such as concrete or other cementitious materials, best results are obtained using WB Epoxy Color water based epoxy primer first. Allow WB Epoxy Color to cure for 6 – 8 hours before applying Epoxy 700 Plus.

MIXING INSTRUCTIONS: A thorough and complete mixing is critical. First mix each component separately. Proportion each component at the ratio of 2 parts A (resin) to 1 part B (hardener) by volume or if using 1-gallon kits, pour all of Part B (hardener) into Part A (resin). Mix for 3 – 5 minutes, scraping the mixing container sides and bottom regularly. **Mix no more material than may be applied in 20 minutes.**

APPLICATION INSTRUCTIONS: Apply mixed product by brush or roller at the rate of 15 mils (approx. 100 sq ft per gallon). Once the first coat has tacked, but not fully cured, an additional 15 mil coating should be applied. Allow the material to cure 48 hours minimum before exposure to any chemicals (product will continue to cure for 7 days to full properties).

NOT RECOMMENDED FOR: Do not apply to concrete less than 28 days old. Do not apply to concrete with curing or sealing membranes. Do not apply to base concrete at a temperature less than 55ºF (13°C).

CHEMICAL RESISTANCE (3 week immersion):

Reagent	% weight gain (loss)	Reagent	% weight gain (loss)
Xylene	0.0	Synthetic Gasohol	0.0
Toluene	2.3	5% Detergent Solution	0.0
1,1,1 Trichloroethane	0.0	10% Sodium Hydroxide	0.0
MEK	2.3	50% Sodium Hydroxide	(0.2)
EB (Ethylene Glycol Monobutyl Ether)	2.4	10% Sulfuric Acid	0.0
Ethyl Alcohol	6.9	70% Sulfuric Acid	0.2
Water (deionized)	1.2	10% Hydrochloric Acid	0.1
Diethylene Glycol Monomethyl Ether	0.0	5% Acetic Acid	2.6
Skydrol	(0.03)	10% Acetic Acid	5.4
Mogas, Diesel	0.0	JP-4, JP-5, JP-7, JP-8	0.0

Follow general surface preparation and application procedures specified in ACI 503.1-4.

COLOR OPTIONS: Clear and light gray. Limited custom colors are available by special order.

HOW SUPPLIED: Epoxy 700 Plus clear is packaged in 1 ½, 3 gallon kits and Epoxy 700 Plus color is packaged in 1 ½, 3, 15 gallon kits for convenient use in a 2:1 mixing ratio.

STORAGE: ≥50°F (10°C)

SAFETY PRECAUTIONS: Health Considerations: Consult the Rhino Linings® Safety Data Sheets (SDS)

Chemical systems require the use of proper safety equipment and procedures. Please follow the Rhino Linings® product SDS and Safety Manual for detailed information and handling guidelines.

For Your Protection: The information and recommendations in this publication are, to the best of our knowledge, reliable. Suggestions made concerning the products and their uses, applications, storage and handling are only the opinion of Rhino Linings Corporation. Users should conduct their own tests to determine the suitability of these products for their own particular purposes and of the storage and handling methods herein suggested. The toxicity and risk characteristics of products made by Rhino Linings Corporation will necessarily differ from the toxicity and risk characteristics developed when such products are used with other materials during a manufacturing process. The resulting risk characteristics should be determined and made known to ultimate end-users and processors.

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