



Rhino™

Rhino™ 2000 General Purpose Epoxy Binder (Available in Clear or Gray)

Data Sheet



ISO 9001:2000
FM62236

DESCRIPTION:

Premium quality, 100% solids epoxy resin binder specifically designed for aggregate filled flooring systems. Contains no solvents (zero VOC) or carcinogens and has minimal odor to assure low toxicity and ease of application. Excellent wetting ability and provides an exceptional bond to concrete surfaces. As an aggregate filled binder, develops high compressive and flexural strength for optimum performance.

SUGGESTED USES:

- Moisture tolerant concrete primer
- Binder for aggregate filled mortars
- Self-leveling slurry binder
- Crack repairs
- May be used to bond wood, steel, and other dissimilar products to concrete substrate

TECHNICAL DATA:

Solids By Volume	100%
Volatile Organic Content (VOC)	0 lbs/gal
Mixing Ratio	2:1 by volume
Viscosity	Low
Pot Life	25 – 30 min at 77°F
Application Temperature	40°F minimum, 100°F max
Maximum Re-coat Time at 77	24 hours
Dry To Touch at 77°F	6 – 8 hours
Light Traffic at 77°F	14 – 16 hours
Full Cure at 77°F	7 Days

Complies with ACI Standard 503.1-4 and ASTM C-881-90 Type I, II, IV, V, VI and VII. Grade 1, Class B,C,D,E and F. Cures in presence of moisture and humidity. Resin non-crystallizing.

PHYSICAL PROPERTIES OF CURED SYSTEM (CURED 7 DAYS AT 77°F):

Compressive Strength (psi)	10,000 – 11,000	ASTM D695
Flexural Strength (psi)	13,000 – 13,800	ASTM D790
Tensile Strength (psi)	7,000 – 8,000	ASTM D638
Tensile Elongation (%)	5.0	ASTM D638
HDT (F) ASTM	122	D648-264
Bond Strength (psi) to concrete	400, w/ 100% concrete failure	
Water Absorption (% gain) 24 hrs	< 1	
Shore D Hardness	82	

HOW SUPPLIED:

Rhino 2000: 3-Gallon, 15-Gallon and 165-Gallon Kits. FOB San Diego, CA.

COVERAGE RATE:

ITEM	Nominal Thickness	Average Coverage
Priming	8 – 9 mils	175 – 200 sq. ft. / gal.
1:1 Slurry	32 mils	50 sq. ft. / gal.
1/4" thick sand aggregate trowel	250 mils	6.4 sq. ft. / gal.
1/2" thick sand aggregate trowel	500 mils	3.2 sq. ft. / gal.

DIRECTIONS FOR USE:

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

CONDITIONS TO AVOID:

- Do not apply to concrete less than 30 days old.
- Do not apply to concrete with curing or sealing membranes.
- Do not apply to base concrete at a temperature less than 50°F

SURFACE PREPARATION:

Concrete 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. Coated surfaces must be mechanically cleaned and abraded with 60 – 80 mesh sandpaper and approved by the manufacturer before coating. A calcium chloride test is recommended and hydrostatic pressure must be <5psi before epoxy coatings application. Free-standing water must be removed.

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MIXING OF RHINO™ 2000:

Thorough and complete mixing is critical, a Jiffy mixer is recommended. 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) and mix at 400 – 600 RPM for 3 – 5 minutes. In case of pigmented material, no stripes or color variation should be visible. Use an up and down motion, scraping the mixing container sides and bottom. Mix no more material than may be applied in 20 minutes.

RESIN REQUIREMENT:

DESCRIPTION	NOMINAL THICKNESS	COVERAGE	RESIN REQUIRED
Priming	8 – 9 mils	175 – 200 sq. ft. / gal.	175 – 200 sq. ft. / gal.
1:1 Slurry	30 mils	50 sq. ft. / gal.	40 sq. ft. / gal.
5:1 Mortar, 1/4"	250 mils	6.4 sq. ft. / gal.	32 sq. ft. / gal.

PRIMING:

Prime surfaces with 2000 by roller, brush or squeegee. Normally applied at a rate of 175 – 200 sq.ft. per gallon. Application of mortar can proceed while primer is still wet. Allow primer to become tacky before applying a slurry or mortar.

MORTARS AND GROUTS:

Mix Rhino 2000 parts "A" and "B" thoroughly first, then add 3 – 7 parts suitable aggregate (such as B-23 washed river rock) and mix until the aggregate is completely wetted and uniform. Apply by trowel to desired thickness. Chemical resistance and appearance is enhanced by applying a neat coat of Rhino 2000 over the cured mortar prior to top coat application. Note that product working life is extended when mixed with aggregate, dependent on batch size and temperature.

SLURRIES:

Mix Rhino 2000 parts "A" and "B" thoroughly first, then add 1 part by volume suitable slurry filler (such as "marble-white") and mix until uniform. Apply the slurry by squeegee.

CRACK REPAIRS:

Rhino 2000 is suitable for repairing of cracks in concrete slabs. It may be poured or injected..

CHEMICAL RESISTANCE GUIDE (SPLASH & SPILLAGE):

LEGEND: [E = Excellent, G = Good, F = Fair]

Reagent	Rating/Comment	Reagent	Rating/Comment
Xylene	E	Toluene	E
1,1,1 Trichloroethane	E	MEK	G
EB (Ethylene Glycol Monobutyl Ether)	F	Ethyl Alcohol	F
Methyl Alcohol	G	Water (de-ionized)	E
5% Detergent Solution	E	10% Sodium Hydroxide	E
50% Sodium Hydroxide	E	10% Sulfuric Acid	E
70% Sulfuric Acid	G	10% Hydrochloric Acid	E
5% Acetic Acid	G	10% Acetic Acid	F
Skydrol	F	Synthetic Gasohol	E

SAFETY PRECAUTIONS:

Health Considerations: Consult the Rhino Linings® Material Safety Data Sheets.

This chemical system requires the use of proper safety equipment and procedures. Please follow the Rhino Linings® product MSDS 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. Because of numerous factors affecting results, **Rhino Linings Corporation makes no warranty of any kind, express or implied**, other than that the material conforms to its applicable current Standard Specifications. Rhino Linings Corporation hereby disclaims any and all other warranties, including but not limited to those of merchantability or fitness for a particular purpose. No statements made herein may be construed as a representation or warranty. The liability of Rhino Linings Corporation for any claims arising from or sounding in breach of warranty, negligence, strict liability, or otherwise shall be limited to the purchase price of the material.

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