



Rhino™ 9700

Novolac Epoxy Coating & Lining

Data Sheet



ISO 9001:2000
FM62236

Part # 9700

DESCRIPTION:

Rhino 9700 Novolac 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. Rhino 9700 mixes using the industry standard, 2:1 by volume ratio. Having low odor, Rhino 9700 contains no solvents and is 100% solids that assures ease of application. Rhino 9700 Novolac viscosity is well suited for vertical applications.

FEATURES & BENEFITS:

- Superior chemical and abrasion resistance
- Excellent bonding
- Highly resistant to cratering or blush
- Dries to a high gloss
- Low odor
- 100% solids, no solvents
- Cures in the presence of moisture and humidity with excellent mechanical properties

APPLICATIONS:

- 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
- Chemical tanks and disposal pits or tunnels

CONDITIONS TO AVOID:

- 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 55°F.

APPLICATION PROPERTIES AT 77°F (25°C):

Solids by Volume (%)	100%
Volatile Organic Content (VOC)	0 lbs./gal
Mixing Ratio	2:1 by volume
Viscosity	Thixotropic (for vertical surfaces)
Pot Life (neat coating)	25 – 30 minutes
Application Temperature	55°F minimum, 100°F maximum
Maximum Re-coat Time	24 hours
Dry To Touch	6 – 8 hours
Light Traffic	14 – 16 hours
Return To Service	24 – 36 hours
Full Cure	7 days

Rhino 9700 Novolac complies with ACI Standard 503.1 - 4 and ASTM C-881-90 Type I, II, IV, V, VI and VII. Grade 2, Class B, C, D, E and F. Rhino 9700 cures in presence of moisture and humidity.

PHYSICAL PROPERTIES FOR CURED SYSTEM (cured 7 days at 77°F (25°C)):

Hardness (Shore D)	86±5	
Tensile Strength (psi)	7000 – 8000	ASTM D-638
Tensile Elongation (%)	3.2	ASTM D-638
Flexural Strength (psi)	13000 – 13800	ASTM D-790
Compressive Strength (psi)	12000 – 14000	ASTM D-695
HDT (F)	140	ASTM D-648-264
Water Absorption (% gain) 24 hrs	<1	
Bond Strength (psi) to concrete	>400, w/ 100% concrete failure	

Rhino™ 9700

COLOR STANDARD OF RHINO™ 9700:

Light gray

HOW SUPPLIED:

Rhino 9700 is available in 1 gallon, 15 gallon and 165 gallon kits.

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.

PRIMING:

Rhino 9700 Novolac Epoxy is self priming. For porous substrates such as concrete or other cementitious materials, best results are obtained using Primer 1500 water based epoxy primer first. Allow Primer 1500 to cure for 4 – 6 hours before applying Rhino 9700 Novolac.

MIXING:

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.**

TANK LININGS AND SECONDARY CONTAINMENT COATINGS:

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 may 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).

CHEMICAL RESISTANCE GUIDE (3 week immersion)

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

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

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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