



Agri-Rok Concrete Overlay for Animal Enclosures



Description Agri-Rok Concrete Overlay is a 1-component, rapid hardening, early strength gaining, cementitious, overlay material for concrete.

Where to Use

- Use on grade, above, and below grade on concrete.
- Easy to use patching material for horizontal repairs of concrete that has chemical attack.
- Has proven to allow a quick cure repair mortar
- Can be used to re slope floors from 4" to feather edge

Advantages

- Epoxy coatings can be applied as early as 7 hrs cure time at 70 F
- Chemical resistant compared to Portland Cement
- Freeze/thaw resistant.
- Easy to use, labor-saving material.
- Semi Self Leveling
- High early strength.
- Open to foot traffic in 4 hours; to vehicle traffic in 7 hours (at 70°F).
- Easily applied to clean, sound substrate.
- Not a vapor barrier.

Coverage Approximately 0.385 cubic foot per pail or 17 square feet at ¼"



Packaging 50 lb. five gallon pail with room for mix and pour

Product Data

- Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)
- Shelf Life 1 year in original, unopened pail.
- Storage Conditions Store dry at 40°-95°F (4°-35°C). For best results, condition material to 65°-75°F before using.
- Color White
- Mixing Ratio Approximately The pail has 50# of dry goods and you add 5# of water (3 Qts) into pail
- Application Life Approximately 20 minutes after adding powder to the water.
- Initial Set, 45 minutes
- Final Set, 12 Hours
- Compressive Strength, psi Mortar - ASTM C-109
 - 1 hour 3500 PSI
 - 48 hours 10,000 PSI

How to Use

Surface Preparation

- Surface must be clean and sound. Remove all deteriorated concrete, dirt, oil, grease, and other bond-inhibiting materials including old polymer topping from the area to be repaired.
- Preparation work should be done by appropriate means. Obtain an exposed aggregate surface with a minimum surface profile of $\pm 1/8$ in. (CSP-6) on clean, sound concrete. To ensure optimum repair results, the effectiveness of decontamination and preparation should be assessed by a pull-off test. Saw cutting of edges is preferred and a dovetail is recommended. Saturate surface to be repaired with clean water. Substrate should be saturated surface dry prior to application.

Priming

- For priming of reinforcing steel use Blome EC-2500 Penetrating Sealer which is a 100% solids two component epoxy polymeric amine which is designed to penetrate marginally prepared surfaces and to tie rust and discontinuities in existing coatings into a firm surface suitable for a variety of top coats.
- Concrete Substrate: If the concrete is marginal prime the prepared substrate with a concrete bonding agent such as Trinic WB10 or BASF Acryl 60. Apply bonding agent and when bonding is still wet or tacky apply



Agri-Rok Overlay directly to the primed surface. Do not allow the primer to dry.

Mixing

- Mechanically mix in an appropriately sized mortar mixer. Wet down all tools and mixer to be used.
- Mix slowly the 2.8- 3.0 Quarts of clean tempered water into the pail
- For applications greater than 1 in. in depth, add 3/8 in. coarse aggregate. The aggregate must be non-reactive (reference ASTM C-1260, C-227 and C-289), clean, well graded, saturated surface dry, have low absorption and high density, and comply with ASTM C-33 size number 8 per Table 2. The addition rate is 6# per pail of **Agri Rok** Overlay aggregate

Application

- Pour the mixed material from the pail onto the prepared concrete, working from the edge and toward the center. After filling repair, float off excess. Mixing, placing, and finishing should not exceed 20 minutes maximum.
- To control setting times, cold water should be used in hot weather and hot water used in cold weather.
- If necessary, protect newly applied material from rain. To prevent from freezing, cover with insulating material.

Limitations

- Minimum ambient and surface temperatures 45°F.
- Minimum application thickness: feather edge as a mortar and 6 in. extended with aggregate.
- Use only potable water.
- Insulate potential areas of metal contact by coating aluminum bars, rails, posts etc. with Bloom EC 2500

Caution Skin/Eye/Respiratory Irritant:

- Avoid breathing dust. Dust may cause respiratory tract irritation.
- First Aid Eyes: Rinse thoroughly with water a minimum of 15 minutes. Consult a physician. Skin: Wash thoroughly with soap and water.
- Store in a cool, dry area. Keep pail tightly closed.

Top Coating

- **Agri-Rok** cures very quickly and has a low water to cement ratio. Moisture tolerant epoxies can be applied to the **Agri-Rok** in a little as 7 hours at 70 F cure time.



- Another solution to quick turnaround is to use Trinic Stamp Shield as a penetrating sealer over **Agri- Rok**. Stamp Shield can be applied to a damp surface (like **Agri- Rok** after 20-30 minutes cure time) at application temps between 35F—95F. The Stamp Shield is water proof in 10 minutes and walkable in 20-30 minutes. Stamp Shield will reduce staining and increase chemical resistance of **Agri- Rok**



Typical Applications

In animal enclosures, especially in the feed manger areas, the silage mixed with moisture, waste and high traffic from skid steers and animal traffic cause the concrete to corrode and wear away fairly quickly. The conventional way of restoring the concrete is to use epoxy based products that can be used to repair concrete from deep repairs greater than 1" to feather edge. The epoxy polymer once applied, is temperature sensitive and can take up to 12-16 hours of cure before the animals can return. Other Cement based products can take up to 28 days before the concrete can be coated with epoxy. Epoxy can cost up to \$5.00/ Square Foot for materials at ¼" thick.

Agri Rok is designed for rapid repair of concrete with a super dense and tough material that will take the abuse in feed manger and other areas. The following are the benefits

- Concrete is power washed clean and visible water removed. Concrete can be left damp and will not cause a stoppage of repair project.
- The product is easy to mix and pour using a heavy duty drill and ribbon mixer (see photo) After placement, a simple float action with a trowel is all that is necessary. The material is semi self-leveling.
- The material is non-hazardous and will not affect the animals negatively from fumes. (see animals near jobsite)

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- **Agri Rok** is a good insulator because it will not allow water (electrolyte) from soaking into the concrete pores. This should reduce stray current from shocking the animals.
- Because of the super density and low porosity of the **Agri Rok** material it becomes very chemical resistant. Use of high grade admixtures in combination with premium aggregates and cement provide better resistance to low pH conditions than high early Portland cement.
- The cure time is very fast. The cows can be brought back to feed in as little time as 5 hours set time. You can barely press a mark within 20 minutes cure time.
- Rapid set is about \$3.30/ Square foot at 1/4" or about 34% less than epoxy mortar

