

RECOAT GUIDELINES

STANDARD & FAST-CURE COATING SYSTEMS



NEOGARD[®]
CONSTRUCTION COATINGS



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The following is a general recoating guideline to help develop a set of specifications to meet general project requirements. This information covers many of the problems and respective repair methods that are encountered in existing traffic bearing coating systems and may or may not be present at the particular facility you are dealing with. If there are specific project requirements that are not covered below, please contact NEOGARD for special instructions.

SECTION 1

Inspection of Existing Coating System, Exposed Concrete & Metal Substrates

1. Inspect existing coating system and remove all existing surface applied membrane material that is loose or marginally bonded.
2. Check exposed concrete surfaces for soundness. Concrete spalls can be detected by tapping with a hammer and listening for a hollow sound. All spalled portions must be removed before further preparation. Removal can be completed with chipping hammers or other suitable tools.
3. Where concrete was removed, follow ICRI guidelines for preparation and installation of repair materials.
4. For smaller repairs such as divots, popouts, etc., epoxy mortars have many advantages. Such mortars have a paste like consistency allowing application by hand or trowel.

A two-part epoxy bonding agent is mixed with selected sand to form the mortar. In using these mortars it is important to match the characteristics of the concrete being repaired. If a sand-to-binder ratio of approximately 4 to 1 or as much as 5 to 1 by weight is maintained, the thermal coefficient of expansion of the mix will closely approximate that of concrete. This prevents failure of the bond caused by freeze-thaw cycles or wide fluctuations in temperature.

Protrusions, such as fins or mortar spatter are easily removed by grinding or impact.

5. After the new concrete or epoxy patching material has been placed and properly cured, solvent clean existing membrane perimeter adjacent to patch a minimum distance of one inch.

When patching concrete, new concrete patches must be prepared by shotblasting or a cup grinder prior to application of primer.

Verify dryness of new concrete patches for a dry surface in accordance with ASTM D4263-83 "Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method".

6. All exposed metals to be coated should be mechanically prepared to a clean, white metal finish. Apply appropriate NEOGARD primer (Mist coat II for non-ferrous metals and Chem-O-Pon for ferrous metals).

SECTION 2

Cleaning of Existing Coating System

1. Clean existing deck coating by power washing, (600 to 800 psi), with 8500 Biodegradable Cleaner or other detergent. The use of stiff bristle street brooms may be required to help remove some contaminants. Rinse deck thoroughly with clean potable water and allow to dry completely. All low spots where water puddles must be vacuumed dry to remove any contaminants left by the rinsing operation.
2. Visually inspect deck for oil or grease deposits and remove by chemical cleaning with detergents, caustic sodas solutions, or trisodium phosphate. A vigorous scrubbing action should be carried out during the washing procedure. It is important to thoroughly flush the water to remove all traces of the loosened oil as well as the cleaning solution itself. If any residue remains, it will interfere with the bond of the new membrane.

SECTION 3

Repairing Cracks & Installing Base Coat on Exposed Concrete Surfaces

1. Inspect all surfaces for cracks and cold joints. Cold joints and visible hairline cracks (up to 1/16" in width) in existing membrane or new patching material shall be cleaned, primed (on concrete or patching material) and treated with 30 dry mils of polyurethane deck coating material. Large cracks (over 1/16" in width) shall be routed and sealed with polyurethane sealant or FC7500 as recommended by NEOGARD. Sealant shall be applied to inside area of crack only, not applied to deck surface. Detail sealed cracks with 30 dry mils of polyurethane deck coating material.
2. Apply NEOGARD primer to new concrete or cementitious patching material only. Apply NEOGARD base coat to yield 20 dry mils. Solvent-based coating to be applied at a rate of 60 sf/gal. FC base coat to be applied at 80 sf/gal. Allow to cure.

SECTION 4

Adhesion Testing

1. Often, it is important to conduct field adhesion tests to confirm the proper procedure for recoating an existing coating system.
2. If compatibility between two systems is ever a question, we recommend performing one of the following adhesion tests. It is more useful to conduct adhesion testing in the field than in the lab as it represents the actual job conditions.
 - ASTM D4541: This test requires the use of an elcometer and provides a "pull off" value.
 - Instructions for this test are provided by the testing equipment manufacturer and follow the guidelines set by ASTM D4541.
 - ASTM D903: Standard Test Method for Peel or Stripping of Adhesive Bonds. This test is also known as the "Adhesion in Peel" test and results in a quantitative value stated in lbs.

- The surface is prepared as required. The primer is applied and allowed to cure. The coating is applied and a fiberglass cloth or similar fabric is worked in to the coating. The fabric is not to be placed “under” the coating. Allow a strip of the fabric, a minimum of 6” in length, to remain free of the coating. When coating has cured, generally after 7-10 days a spring scale is attached to the fabric and pulled 180°.
- Rag Test: This test gives an indication of bond with no value. It is typically the recommended procedure for field adhesion tests.
 - The surface is prepared as required. The primer is applied and allowed to cure. The coating is applied and a fiberglass cloth or similar fabric is worked into the coating. The fabric is not to be placed “under” the coating. Allow a strip of the fabric, a minimum of 6” in length, to remain free of the coating. When coating has cured, generally after 7-10 days, pull the free strip of fabric back towards the test area for indication of bond strength.

SECTION 5

Recoat Existing NEOGARD Solvent-Based System with Solvent-Based System

1. Clean and prepare surfaces per the guidelines in Sections 1 - 3 of this document.
2. Apply one coat of 7400 series polyurethane coating material at a rate of 100 square feet per gallon to yield an average of 12 dry mils and immediately broadcast properly graded, evenly distributed, hard (6.5+ on Moh’s scale) aggregate at the rate of 15 pounds per 100 square feet.
3. For heavy duty areas such as ramps, ticket spitters and turn areas, apply double texturing as follows: Repeat step 2 above before applying final topcoat.
4. Apply final topcoat of 7400 series polyurethane coating material at a rate of 100 square feet per gallon to yield an average of 12 dry mils. Allow to cure 48-72 hours before opening to vehicular traffic.

SECTION 6

Recoat Existing NEOGARD FC & other 2K Systems with Solvent-Based System

1. Clean and prepare surfaces per the guidelines in Sections 1 - 3 of this document.
2. If required, apply NEOGARD 7795/7796 primer to existing coating at a rate of approximately 500 sf/gal, taking care to keep primer thin or 70714/70715-09 100% solids epoxy at a rate of approximately 275 sf/gal. Allow primer to dry. Drying time is approximately 2-12 hours depending on temperatures.
3. Apply one coat of 7400 series polyurethane coating material at a rate of 100 square feet per gallon to yield an average of 12 dry mils and immediately broadcast properly graded, evenly distributed, hard (6.5+ on Moh’s scale) aggregate at the rate of 15 pounds per 100 square feet.
4. For heavy duty areas such as ramps, ticket spitters and turn areas, apply double texturing as follows: Repeat step 2 above before applying final topcoat.

5. Apply final topcoat of 7400 series polyurethane coating material at a rate of 100 square feet per gallon to yield an average of 12 dry mils. Allow to cure 48-72 hours before opening to vehicular traffic.

SECTION 7

Recoat Existing NEOGARD Solvent-Based System with NEOGARD FC System

1. Clean and prepare surfaces per the guidelines in Sections 1 - 3 of this document.
2. If required, apply NEOGARD 7795/7796 primer to existing coating at a rate of approximately 500 sf/gal, taking care to keep primer thin or 70714/70715-09 100% solids epoxy at a rate of approximately 275 sf/gal. Allow primer to dry. Drying time is approximately 2-12 hours depending on temperatures.
3. Apply NEOGARD FC topcoat at a rate of 133 sf/gal to yield 12 dry mils and broadcast aggregate at a rate of 10-15 lbs per 100 sf.
4. For heavy duty areas such as ramps, ticket spitters and turn areas, apply double texturing as follows: Repeat step 3 above before applying final topcoat.
5. Apply final topcoat of NEOGARD FC coating at a rate of 133 sf/gal to yield 12 dry mils. Allow to cure 24-36 hours before opening to vehicular traffic.

SECTION 8

Recoat Existing NEOGARD FC System with NEOGARD FC System

1. Clean and prepare surfaces per the guidelines in Sections 1 - 3 of this document.
2. If required, apply NEOGARD 7795/7796 primer to existing coating at a rate of approximately 500 sf/gal, taking care to keep primer thin or 70714/70715-09 100% solids epoxy at a rate of approximately 275 sf/gal. Allow primer to dry. Drying time is approximately 2-12 hours depending on temperatures.
3. Apply NEOGARD FC topcoat at a rate of 133 sf/gal to yield 12 dry mils and broadcast aggregate at a rate of 10-15 lbs per 100 sf.
4. For heavy duty areas such as ramps, ticket spitters and turn areas, apply double texturing as follows. Repeat step 3 above before applying final topcoat.
5. Apply final topcoat of NEOGARD FC coating at a rate of 133 sf/gal to yield 12 dry mils. Allow to cure 24-36 hours before opening to vehicular traffic.

SECTION 9

Recoat Existing Non-NEOGARD System with NEOGARD FC System

1. Clean and prepare surfaces per the guidelines in Sections 1 - 3 of this document.

2. If required, apply NEOGARD 7795/7796 primer to existing coating at a rate of approximately 500 sf/gal, taking care to keep primer thin or 70714/70715-09 100% solids epoxy at a rate of approximately 275 sf/gal. Allow to dry. Drying time is approximately 2-12 hours depending on temperature.
3. Apply NEOGARD FC base coat material at a rate of 80 sf/gal to yield 20 dry mils. (Please contact your NEOGARD Regional Manager in competitive situations).
4. Apply NEOGARD FC topcoat at a rate of 133 sf/gal to yield 12 dry mils and broadcast aggregate at a rate of 10-15 lbs per 100 sf.
5. For heavy duty areas such as ramps, ticket spitters and turn areas, apply double texturing as follows. Repeat step 4 above before applying final topcoat.
6. Apply final topcoat of NEOGARD FC coating at a rate of 133 sf/gal to yield 12 dry mils. Allow to cure 24-36 hours before opening to vehicular traffic.

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