

**Guide Specification****PART 1 GENERAL****1.1 SUMMARY**

- A. Provide labor, materials, equipment and supervision necessary to install a fluid-applied vehicular traffic coating system as outlined in this specification to new or existing concrete surfaces.
- B. The manufacturer's application instructions for each product used are considered part of this specification and should be followed at all times.
- C. Related Sections:
  1. Section 03 30 00 - Cast-in-Place Concrete
  2. Section 03 40 00 - Precast Concrete
  3. Section 07 90 00 - Joint Protection

**1.2 SYSTEM DESCRIPTION**

- A. AUTO-GARD® FC shall be a complete system of compatible materials supplied by NEOGARD® to create a seamless waterproof membrane.
- B. AUTO-GARD® FC shall be designated for application on the specific type of deck indicated on the drawings.

**1.3 SUBMITTALS**

- A. Product Data: Submit NEOGARD® product literature and installation instructions.
- B. Project Reference List: Submit list of projects as required by this specification.
- C. Samples: Submit samples of specified vehicular traffic coating system. Samples shall be construed as examples of finished color and texture of the system only.
- D. Applicator Approval: Submit letter from manufacturer stating applicator is approved to install the vehicular traffic coating system.
- E. Warranty: Submit copy of manufacturer's standard warranty.

**1.4 QUALITY ASSURANCE**

- A. Supplier Qualifications: AUTO-GARD® FC, as supplied by NEOGARD®, is approved for use on this project.

- B. Applicator Qualifications: Applicators shall be approved to install specified system.
- C. Requirement of Regulatory Agencies: Materials used in the vehicular traffic coating system shall meet existing Federal, State and local VOC regulations.

**1.5 DELIVERY, STORAGE AND HANDLING**

- A. Delivery: Materials shall be delivered in original sealed containers, clearly marked with supplier's name, brand name and type of material.
- B. Storage and Handling: Recommended material storage temperature is 75°F. Handle products to avoid damage to container. Do not store for long periods in direct sunlight.

**1.6 JOB CONDITIONS**

- A. Environmental Conditions:
  1. Do not proceed with application of materials when deck temperature is less than 40°F.
  2. Proceed with work only when existing and forecasted weather conditions will permit the application to be performed in accordance with the manufacturer's recommendations.
  3. Do not apply materials unless surface to receive coating is clean and dry.

**1.7 WARRANTY**

- A. Upon request, NEOGARD® shall offer the manufacturer's standard warranty upon receipt of a properly executed warranty request form.

**PART 2 PRODUCTS****2.1 MANUFACTURER**

- A. NEOGARD® Division of JONES-BLAIR® Company, 2728 Empire Central, Dallas, TX 75235, Toll Free (800) 321-6588, Fax (214) 357-7532, www.neogard.com.

**2.2 MATERIALS**

- A. Vehicular Traffic Coating Material:
  1. Primer: Concrete and metal primers as required by NEOGARD®.
  2. Flashing Tape: 86218 flashing tape having a minimum thickness of 30 mils.
  3. Aggregate: 7992U (12/20 mesh) silica (quartz) sand or other aggregate approved by NEOGARD®.
  4. Elastomeric Base Coat: FC7500/FC7960 polyurethane coating.
  5. Elastomeric Wear Coat: FC7510/FC7961 polyurethane coating.

6. Elastomeric Topcoat (Interior or Covered Use Only): FC7510/FC7961 series polyurethane coating.
7. Elastomeric Topcoat (Exterior Use): FC7520/FC7962 or FC7540/FC7964 series polyurethane coating.
8. Sealant: 70991 or other polyurethane sealant approved by NEOGARD®.

## 2.3 MATERIAL PERFORMANCE CRITERIA

- A. Typical physical properties of cured vehicular traffic coating system used on this project are:

PERFORMANCE REQUIREMENTS OF CURED FILM			
PHYSICAL PROPERTIES	TEST METHOD	BASE COAT	TOPCOAT
Tensile Strength	ASTM D412	1,500 psi	2,200-5,000 psi
Elongation	ASTM D412	500%	80-350%
Permanent Set	ASTM D412	<20%	<20%
Tear Resistance	ASTM D1004	150 pli	165-400 pli
Water Resistance	ASTM D471	1% @ 7 days	<=3% @ 7 days
MVT @ 20 mils	ASTM E96	5 English	0.4-1.5 English
Taber Abrasion (cs17), max	ASTM D4060	5 mg/1,000 rev	30 mg/1,000 rev
Shore A	ASTM D2240	74-79	84-94
Adhesion	ASTM D4541	400 psi	400 psi
Thermal Shock	Alternate Heat/Cold	No Loss of Adhesion	No Loss of Adhesion
"Standard Specifications for High Solids Content, Cold-Applied Elastomeric Waterproofing Membrane with Integral Wearing Surface"	ASTM C957	System Exceeds Requirements	

## 2.4 ACCESSORIES

- A. Miscellaneous materials such as cleaning agents, adhesives, reinforcing fabric, backer rod, deck drains, etc. shall be a composite part of the deck system and shall be compatible with the specified vehicular traffic coatings.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Concrete: Verify that the work done under other sections meets the following requirements:
1. That the concrete deck surface is free of ridges and sharp projections. If metal forms or decks are used they should be ventilated to permit adequate drying of concrete on exterior exposed deck.
  2. That the concrete was cured for a minimum of 28 days. (Minimum of 4,000 psi compressive strength). Water-cured treatment of concrete is preferred. The use of concrete curing agents, if any, shall be of the sodium silicate base only; others require written approval by NEOGARD®.
  3. That the concrete was finished by a power or hand steel trowel followed by soft hair broom to obtain light texture or "sidewalk" finish.
  4. That damaged areas of the concrete deck be restored to match adjacent areas. Use 100% solids epoxy and sand for filling and leveling.

## 3.2 PREPARATION

### A. Surface Preparation:

1. Cleaning: Surfaces contaminated with oil or grease shall be vigorously scrubbed with a power broom and a strong non-sudsing detergent. Thoroughly wash, clean, and dry. Areas where oil or other contaminants penetrate deep into the concrete may require removal by mechanical methods.
2. Shot Blasting: Required surface preparation method for remedial construction, is also the preferred method for new construction. Mechanically prepare surface by shot blasting to industry standard surface texture (ICRI's CSP3-4) without causing additional surface defects in deck surface. Shot blasting does not remove deep penetrating oils, grease, tar or asphalt stains. Proper cleaning procedures should be followed to insure proper bonding of the deck coating. Note: If shot blasting is not practical, treat concrete surfaces with 10% to 15% solution of muriatic acid to remove laitance and impurities. After acid has stopped foaming or boiling, immediately rinse thoroughly with water. Re-rinse as required to remove muriatic acid solution. Acid etching does not remove deep penetrating oils, grease, tar or asphalt stains. Proper cleaning procedures should be followed to insure proper bonding of the deck coating.
3. Cracks and Cold Joints: Visible hairline cracks (up to 1/16" in width) in concrete and cold joints shall be cleaned, primed as required and treated with thoroughly mixed FC7500/FC7960 polyurethane coating material a minimum distance of 2" on each side of crack to yield a total thickness of 30 dry mils. Large cracks (over 1/16" in width) shall be routed and sealed with 70991 sealant. Sealant shall be applied to inside area of crack only, not applied to deck surface. Detail sealed cracks with thoroughly mixed FC7500/FC7960 polyurethane coating material a distance of 2" on each side of crack to yield a total thickness of 30 dry mils.
4. Control Joints: Seal secondary control joints with 70991 sealant. Sealant shall be applied to inside area of joint only, not applied to deck surface. Detail sealed joints with thoroughly mixed FC7500/FC7960 polyurethane coating material a distance of 2" on each side of joint to yield a total thickness of 30 dry mils.
5. Flashing Tape: Install 86218 flashing tape where indicated on the drawings and/or where required by the manufacturer prior to the application of elastomeric coating.
6. Surface Condition: Surface shall be clean and dry prior to coating.

### 3.3 APPLICATION

- A. Seed and Lock Method (Note: For FC7520/FC7962, do not apply heavier than 40 sf/gal. per coat):
1. Primer: Where required, thoroughly mix primer and apply at a rate of 1/3 gallon per 100 square feet (300 sf/gal) to all concrete surfaces in strict accordance with procedures outlined by NEOGARD®. Within 24 hours of application of primer, base coat must be applied. If base coat cannot be applied within 24 hours, reprime.

2. Base Coat: Thoroughly mix FC7500/FC7960 polyurethane coating material and apply at a rate of 1.25 gallons per 100 square feet (80 sf/gal) to deck surfaces in strict accordance with procedures outlined by NEOGARD®. Extend base coat over cracks and control joints which have received treatment.
3. Wearing Surface Coat: Thoroughly mix FC7510/FC7961 polyurethane coating material and apply at a rate of 1/2 gallon per 100 square feet (200 sf/gal) in strict accordance with procedures outlined by NEOGARD® and immediately broadcast aggregate, evenly distributed, into wet coating at the rate of 10 to 15 pounds per 100 square feet.
4. Topcoat: When dry, remove excess aggregate and recoat surface with thoroughly mixed FC7510/FC7961 for interior or covered use areas. For exterior applications exposed to ultraviolet (UV) light, use FC7520/FC7962 or FC7540/FC7964 polyurethane coating material at a rate of 3/4 gallon per 100 square feet (133 sf/gal) in strict accordance with procedures outlined by NEOGARD®. Total system coating thickness averages 40 dry mils exclusive of aggregate.
5. Double-Texturing: For heavy traffic areas such as ticket booths, spiraled ramps, turn areas, or in other areas subjected to extremely high traffic abrasion, double-texturing is required. In such areas, apply double-texture as follows: After the wearing surface coat to receive aggregate has cured and loose aggregate removed, thoroughly mix FC7510/FC7961 polyurethane coating material and apply at a rate of 3/4 gallon per 100 square feet (133 sf/gal) in strict accordance with procedures outlined by NEOGARD® and immediately broadcast additional aggregate, evenly distributed, into wet coating at the rate of 10 to 15 pounds per 100 square feet. When dry, remove excess aggregate and recoat surface with thoroughly mixed FC7510/FC7961 for interior or covered use areas. For exterior applications exposed to ultraviolet (UV) light, use FC7520/FC7962 or FC7540/FC7964 polyurethane coating material at a rate of 3/4 gallon per 100 square feet (133 sf/gal) in strict accordance with procedures outlined by NEOGARD®. Double-textured areas will yield an average of 52 dry mils exclusive of aggregate.

\*Note to specification writer: Thickness values of cured film are averages and can vary due to finish of surface.

**B. Seed and Backroll Method (Note: For FC7520/FC7962, do not apply heavier than 40 sf/gal, per coat):**

1. Primer: Where required, thoroughly mix primer and

apply at a rate of 1/3 gallon per 100 square feet (300 sf/gal) to all concrete surfaces in strict accordance with procedures outlined by NEOGARD®. Within 24 hours of application of primer, base coat must be applied. If base coat cannot be applied within 24 hours, reprime.

2. Base Coat: Thoroughly mix FC7500/FC7960 polyurethane coating material and apply at a rate of 1.25 gallons per 100 square feet (80 sf/gal) in strict accordance with procedures outlined by NEOGARD®. Extend base coat over cracks and control joints which have received treatment.
3. Heavy Duty Areas (Turns, ramps, etc.): Thoroughly mix FC7510/FC7961 polyurethane coating material and apply at a rate of 3/4 gallon per 100 square feet (133 sf/gal) in strict accordance with procedures outlined by NEOGARD® and immediately broadcast aggregate, evenly distributed, into wet coating at the rate of 10 to 15 pounds per 100 square feet. Note: For parking stalls and non-heavy duty service, skip this step and proceed to item #4.
4. Topcoat: When previous coating application is dry, recoat surface with thoroughly mixed FC7510/FC7961 for interior or covered use areas. For exterior applications exposed to ultraviolet (UV) light, use FC7520/FC7962 or FC7540/FC7964 polyurethane coating material at a rate of 1.25 gallons per 100 square feet (80 sf/gal) and immediately broadcast aggregate at a rate of approximately 15 to 18 pounds per 100 square feet and backroll to encapsulate aggregate. Total system coating thickness for heavy duty areas will average 52 dry mils exclusive of aggregate. All other areas will average 40 dry mils exclusive of aggregate. \*Note to specification writer: Thickness values of cured film are averages and can vary due to finish of surface.

### 3.4 CLEANING

- A. Remove debris resulting from completion of coating operation from the project site.

### 3.5 PROTECTION

- A. After completion of application, do not allow traffic on coated surfaces for a period of at least 24 - 36 hours at 75°F. and 50% R.H., or until completely cured.

END OF SECTION

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