



Guide Specification Static Control Flooring System

PART I - GENERAL

1.01 DESCRIPTION

- A. Specified Work:
1. Paving and Surfacing: Section 0261_____.
 2. Site Improvements: Section 0272_____.
 3. Expansion and Contraction Joints: Section 0315_____.
 4. Cast-in-Place Concrete: Section 0330_____.
 5. Sealants: Section 0790_____.
- B. System Description:
1. The electrostatic dissipating epoxy flooring system is a complete system of compatible materials manufactured by Neogard to create a moderate-duty wearing surface.
 2. The electrostatic dissipating epoxy flooring system is designed for application on the specific type of substrate indicated on the drawings.

1.02 QUALITY ASSURANCE

- A. Supplier: The ESD Epoxy 28 flooring system, as manufactured by Neogard, is approved for use on this project.
- B. Applicator: Applicators shall be approved by Neogard as licensed applicators.

1.03 SUBMITTALS

- A. Product Data: Product data and installation instructions are contained herein.
- B. Samples: Submit samples of specified ESD Epoxy 28 flooring system. Samples shall be construed as examples of finish only.
- C. License Certificate: Submit a currently dated Applicator's License Certificate issued by Neogard. The certificate shall verify the applicator's qualifications to properly install the ESD Epoxy 28 flooring system.
- D. Maintenance Agreement: Upon completion of installation of the ESD Epoxy 28 flooring system, submit joint Neogard/Applicator Maintenance Agreement.

1.04 PRODUCT DELIVERY, STORAGE & 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 (23.8°C). Handle products to avoid damage to container. Do not store for long periods in direct sunlight.

1.05 JOB CONDITIONS

- A. Environmental Conditions:
1. Do not proceed with application of materials when substrate temperature is less than 50°F (10°C).
 2. Do not apply materials unless surface to receive coating is clean and dry.
 3. Moisture content of concrete not to exceed four pounds per 1000 square feet per 24 hours when tested by the referee or the quantitative calcium chloride test method.
- B. Safety and Health Conditions:
1. During coating application, it is **essential** that maximum effort is made to protect the coating mechanic and others near the workplace from breathing vapors and coming in contact of material with skin or eyes.
 2. In confined areas, the best form of protection against organic solvents or other potentially sensitizing vapors is a **fresh air supply**. For maximum protection, it is recommended to use a NIOSH/MSHA-approved, self-contained breathing apparatus with a full-face piece operated in a positive pressure mode.
 3. In unrestricted areas, it is recommended to wear a suitable mask or respirator of a type approved by NIOSH/MSHA.
 4. To prevent excessive skin contact with the material, it is recommended to use fabric coveralls and neoprene or other resistant gloves. To prevent eye contact, wear a full-face mask or OSHA-approved protective goggles.
- B. Protection:
1. Keep products away from heat, sparks and flames. Post "No Smoking" signs.
 2. Vapors from coatings can carry considerable distances and care should be taken to do the following:
 - a. Post warning signs a minimum of 100 feet from the work area.
 - b. Cover all intake vents near the work area.
 - c. Set up windbreaks when needed.
 - d. Minimize or exclude all personnel not directly involved with the coating application.
 - e. Have CO₂ or other dry chemical fire extinguishers available at the jobsite.

- f. Provide adequate ventilation.
- 3. After completion of application, do not allow traffic on coated surfaces for a period of at least 48 hours @ 75°F (23.8°C), or until completely cured 7 days @ 70°F (21.1°C).
- 4. Protect plants, vegetation and animals which might be affected by coating. Use drop cloths or masking as required.

PART II - PRODUCTS

2.01 MATERIALS:

- A. ESD Epoxy Flooring Materials:
 - 1. Primer: 70714/70715 clear.
 - 2. ESD: 70744/70715, medium gray in color.
 - 3. Crack Filler: 70718/70719 flexible epoxy or other flexible epoxy approved by Neogard.
 - 4. Sealant: 70991 sealant or others approved by Neogard.
 - 5. Fillers: Fumed silica and blended aggregates.

2.02 PERFORMANCE CRITERIA:

- A. The minimum performance requirements for the 70744/70715 used on this project are:

CURED RESIN PERFORMANCE		
Description	Test Method	Results
Compressive Strength	ASTM D 695	24,000 psi
Tensile Strength	ASTM D 638	3,500 psi
Elongation @ Break	ASTM D 638	10%
Flexural Strength		
Flexural Modulus		
Shore D Hardness	ASTM D 2280	80
Adhesion	ASTM D 4541	350 psi
Taber Abrasion		
Water Resistance	ASTM D 570	<1%
Moisture Vapor Transmission	ASTM E 96	0.16 PERM @ 10 Mils

STATIC CONTROL PROPERTIES		
Description	Test Method	Results
Surface Resistance	NFPA 99 Test Method, ASTM F 150	500 volts
Static Dissipative Range @ 10 - 500 volts		1 X 10 ⁶ to 1 X 10 ⁹ ohms
Static Charge Decay	Mil-B-81705C (FTMS 101B, Method 4046)	Dissipates a 5,000 volt charge to zero <0.1 sec.

PART III - EXECUTION

3.01 INSPECTION

- A. Verify that the work done under other sections meets the following requirements:
 - 1. That the concrete substrate surface is free of ridges and sharp projections, sound and dry.
 - 2. That the concrete was cured for a minimum of 28 days (Minimum of 3,500 psi compressive strength). The use of concrete curing agents,

if any, shall be of a sodium silicate base only; others require written approval from Neogard.

- 3. That damaged areas of the concrete substrate be restored to match adjacent areas. Use 70714/70715 and oven-dry silica aggregate approved by Neogard for filling and leveling at a ratio of one part epoxy mixed with four parts aggregate by volume.

3.02 PREPARATION

- A. Surface Preparation: Steel shotblast the surface to remove surface contaminants. Proper care and procedure should be taken to leave the concrete surface as unopened as possible. Note: Steel 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 epoxy primer. An improper steel shotblast can cause "pinholes" in concrete surfaces which can result in blister problems during the application of the ESD Epoxy 28 flooring system.
- B. 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.
- C. Moving Cracks: Route all large cracks, remove dust and debris, and fill flush with 70718/70719 or other flexible epoxy approved by Neogard.
- D. Moving Control Joints: Seal secondary control joints with 70991 or other polyurethane sealant approved by Neogard. Re-incorporate expansion joints and control joints into flooring system if conditions require. Consult Neogard for details on moving cracks, expansion joint details and moving control joints.
- E. Non-Moving Cracks or Control Joints: After shotblasting, fill all non-moving cracks and control joints with 70714/70715 mixed with fumed silica to form a paste. The mix ratio is one part resin 70714/70715 to 2 (up to 3) parts fumed silica by volume.
- F. Surface Condition: Surface shall be clean and dry prior to coating. Moisture content of concrete not to exceed four pounds per 1000 square feet per 24 hours when tested by the referee or the quantitative calcium chloride test method.

3.03 APPLICATION

- A. Primer: Mix 70714/70715 at a ratio of 2:1 for three minutes. Apply at a minimum rate of 200 square feet per gallon (8 mils dft). Primer should be tack free prior to applying base.
- B. Base Coat: Mix 70744/70715 at a ratio of 3:1 by volume for three minutes. Apply material at a rate of 130 square feet per gallon (12 mils wft) and allow to cure 8 to 12 hours @ 70°F (21.1°C) or until tack free.

C. TopCoat: Mix 70744/70715 at a ratio of 3:1 by volume for three minutes. Apply material at a rate of 130 square feet per gallon (12 mils wft) and allow to cure for 24 hours @ 70°F (21.1°C) before allowing foot traffic.

3.04 CLEANING

- A. Remove debris resulting from completion of coating operation from the project site.
- B. Reference Seamless Flooring Systems Manual for typical cleaning methods.

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