



## Guide Specification Chemical Resistant 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 chemical resistant flooring system is a complete system of compatible materials manufactured by Neogard to create a seamless, chemical and abrasion resistant wearing surface.
2. The chemical resistant flooring system is designed for application on the specific type of substrate indicated on the drawings.

#### 1.02 QUALITY ASSURANCE

A. Supplier: The CG-32 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 CG-32 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 CG-32 flooring system.

D. Limited Warranty: Upon completion of installation of the CG-32 flooring system, submit Limited Warranty.

#### 1.04 PRODUCT DELIVERY, STORAGE & HANDLING

A. Delivery: Materials shall be delivered in original sealed containers, clearly marked with suppliers 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 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 1,000 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 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.

##### C. 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 CO<sub>2</sub> or other dry chemical fire extinguisher available at the jobsite.
  - f. Provide adequate ventilation.
3. After completion of application, do not allow heavy 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. CG-32 Flooring Materials:
  1. Primer: 70714/70715 clear epoxy.
  2. Epoxy: 70714/70715 clear or pigmented.
  3. Crack Filler: 70718/70719 or other flexible epoxy approved by Neogard.
  4. Sealant: 70991 or others approved by Neogard.
  5. Fillers: Fumed silica and blended aggregates.
  6. Texture: Neogrip spheres.

### 2.02 PERFORMANCE CRITERIA:

- A. Minimum performance requirements for the 70714/70715 used on this project are:

CURED RESIN PERFORMANCE		
Description	Test Method	Results
Compressive Strength	ASTM D 695	25,300 psi
Tensile Strength	ASTM D 638	3,700 psi
Elongation @ Break	ASTM D 638	25%
Flexural Strength	ASTM D 790	3,180 psi
Flexural Modulus	ASTM D 790	57,700 psi
Shore D Hardness	ASTM D 2240	78
Adhesion	ASTM D 4541	350 psi
Impact Resistance	Mil-D-3134 Sec. 4.7.3.	Passes 16 ft/lbs
Taber Abrasion	ASTM D 4060	25 mg/1000 cs <sup>17</sup>
Water Resistance	ASTM D 570	0.21%
MVT	ASTM E 96	0.16 Perm @ 10 mils
Fungus & Bacteria Resistance	Mil-F-52505	No Support of Growth Under TT-P-34

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

### 3.02 PREPARATION

- A. Surface Preparation: Steel shot-blast 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 flooring. An improper steel shot-blast can cause “pinholes” in the concrete surfaces which can result in blister problems during the application of the CG-32 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 70718/70719 flexible epoxy 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 shot-blasting, fill all non-moving cracks with 70714/70715 mixed with fumed silica to form a paste. The mix ratio is one part 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 is not to exceed four pounds per 1,000 square feet per 24 hours when tested by the referee or quantitative calcium chloride test method.

### 3.03 APPLICATION

- A. Primer: Mix 70714/70715 clear epoxy at a ratio of 2:1 for three minutes. Apply at a minimum of 200 square feet per gallon (8 mils dft). Primer should be tack free before applying base coat.
- B. Base Coat: Mix 70714/70715 clear or pigmented at a ratio of 2:1 by volume for three minutes. Apply material at a minimum rate of 130 square feet per gallon (12 mils dft) and allow to cure 8 to 12 hours @ 70°F (21.1°C) or until tack free.
- C. Top Coat: Mix 70714/70715 clear or pigmented at a ratio of 2:1 for three minutes. Apply material at a minimum rate of 130 square feet per gallon (12 mils dft) and allow to cure for 24 hours @ 70°F (21.1°C) before allowing foot traffic.
- D. Optional Neogrip Textured Finish: To achieve a cleanable limited slip-resistant surface, add Neogrip Spheres to a third topcoat. The coverage rate for the final topcoat must be applied at 350 to 400 square feet per gallon to yield an average nominal thickness of 4 mils dft. Note: Installing the Neogrip Spheres thicker than 4 mils dft will cause the Neogrip Spheres to sink into the 70714/70715 coating, thus eliminating the desired Neogrip slip-resistant texture.

### 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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