



# Guide Specification

## Decorative Flooring System

### Neoflake 45 Broadcast

#### PART 1 - GENERAL

##### 1.01 SUMMARY

- A. Provide labor, materials, equipment and supervision necessary to install a decorative flooring system as outlined in this specification to new or existing concrete surfaces.
- B. The manufacturers application instructions for each product used are considered part of this specification and should be followed at all times.
- C. Related Sections:
  1. Expansion and Contraction Joints: Section 0315\_\_\_\_\_.
  2. Cast-in-Place Concrete: Section 0330\_\_\_\_\_.
  3. Sealants: Section 0790\_\_\_\_\_.

##### 1.02 SYSTEM DESCRIPTION

- A. Neoflake 45 Broadcast shall be a complete system of compatible materials manufactured by Neogard to create a decorative, seamless flooring surface.
- B. Neoflake 45 Broadcast shall be designated for application on the specific type of substrate indicated on the drawings.

##### 1.03 SUBMITTALS

- A. Product Data: Product data and installation instructions are contained herein.
- B. Project Reference List: Submit list of projects as required by this specification.
- C. Samples: Submit samples of specified decorative flooring system. Samples shall be construed as examples of finish only.
- D. Applicator Approval: Submit letter from manufacturer stating applicator is approved to install the decorative flooring system.
- E. Warranty: Submit copy of manufacturers product warranty to cover a period of one year.

##### 1.04 QUALITY ASSURANCE

- A. Supplier Qualifications: Neoflake 45 Broadcast, as supplied by Neogard, is approved for use on this project.
- B. Applicator Qualifications: Applicators shall be approved to install specified system.

##### 1.05 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 (23.8°C). Handle products to avoid damage to container. Do not store for long periods in direct sunlight.

##### 1.06 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 three 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.
- C. Protection:
  1. Keep products away from heat 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 extinguishers 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 at 75°F (23.8°C) or until completely cured for 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 2 - PRODUCTS

### 2.01 MATERIALS:

#### A. Decorative Flooring Material:

1. Epoxy Resin: 70734/70735 clear and pigmented.
2. Epoxy Seal Coat: 70734/70735 clear
3. Crack Filler: 70718/70719 flexible epoxy or other flexible epoxy approved by Neogard.
4. Sealant: 70991 polyurethane sealant or other sealant approved by Neogard.
5. Fillers: Fumed silica and blended aggregates.
6. Color Chips: Neoflake colored plastic flakes.
7. Glass Beads: Neogrip spheres.

### 2.02 PERFORMANCE CRITERIA:

- A. The minimum performance requirements for the 70734/70735 used on this project are:

PERFORMANCE REQUIREMENTS OF CURED FILM		
PHYSICAL PROPERTIES	TEST METHOD	RESULTS
Compressive Strength	ASTM D695	11,000 psi
Tensile Strength	ASTM D638	8,000 psi
Elongation	ASTM D638	14%
Flexural Strength	ASTM D790	10,000 psi
Flexural Modulus	ASTM D790	400,000 psi
Shore D Hardness	ASTM D2240	82
Adhesion	ASTM D4541	400 psi
Impact Resistance	Mil-D-3134 Sec. 4.7.3	Passes 16 ft/lbs
Taber Abrasion (cs17)	ASTM D4060	89 mg/1,000 rev
Water Resistance	ASTM D570	<2%
MVT @ 20 mils	ASTM E96	0.10 Perm
Fungus & Bacteria Resistance	Mil-F-52505	No Support of Growth Under TT-P-34

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- 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 70734/70735 clear 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 flooring. An improper steel shotblast can cause "pinholes" in concrete surfaces which can result in blister problems during the application of the Neoflake 45 Broadcast 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 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 70734/70735 clear mixed with fumed silica to form a paste. The mix ratio is one part 70734/70735 clear 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 three 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 70734/70735 clear at a ratio of 2:1 for three minutes. Apply at a rate of 200 square feet per gallon (8 mils wft), depending on the porosity of the substrate. Primer must be tack-free prior to applying 70734/70735 pigmented base coat.
- B. Base Coat: Mix 70734/70735 pigmented at a ratio of 2:1 by volume for three minutes. Apply mixed 70734/70735 pigmented at a minimum rate of 80 square feet per gallon (20 mils wft). Backroll applied material with a high quality, short-napped phenolic core roller cover to ensure a uniform texture. De-air and finish leveling with a spiked roller.
- C. Color Chips: Broadcast blended color chips into wet base coat until desired pattern is achieved. Color chips must be applied by walking onto the wet 70734/70735 pigmented base wearing spiked

shoes. Allow 1 to 2 feet for a wet working edge without any color chips to allow for a smooth transition to the next pass of neat epoxy. Allow system to cure 12 to 16 hours at 70°F (21.1°C). Lightly sand with a circular floor sander using 60-grit paper to remove any rough spots, followed by sweeping and vacuuming.

- D. First Seal Coat: Mix 70734/70735 at a ratio of 2:1 for three minutes. Apply first seal coat of 70734/70735 at a rate of 200 square feet per gallon (8 mils wft) and allow to cure 10 to 14 hours @ 70°F (21.1°C) or until tack free.
- E. Second Seal Coat: Mix 70734/70735 at a ratio of 2:1 for three minutes. Apply second seal coat of 70734/70735 at a rate of 200 square feet per gallon (8 mils wft) and allow to cure 24 hours @ 70°F (21.1°C) before allowing foot traffic.
- F. Optional Textured Finish: To achieve a cleanable, limited slip-resistant surface, a third topcoat of 70734/70735 must be applied. Add one and one-half ounces by volume of Neogrip Spheres to one gallon of 70734. Mix the one gallon of 70734 with the Neogrip Spheres added to one-half gallon of 70735. Mix for three minutes. 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 wft. Note: Installing the textured finish thicker than 4 mils wft will cause the Neogrip Spheres to sink into the 70734/70735 epoxy coating, thus eliminating the desired 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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