Guide Specification

Floor-Gard HD High Traffic System

Section 09 67 23 Resinous Flooring

PART 1 GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment and supervision necessary to install a highly durable floor coating system as outlined in this specification.

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 07 90 00: Joint Protection
3. Section 07 95 00: Expansion Control

1.2 SYSTEM DESCRIPTION

A. Floor-Gard HD High Traffic System shall be a complete system of compatible materials supplied by Neogard to create a high performance, seamless, durable, floor coating system.

B. Floor-Gard HD High Traffic System shall be designated for application on the specific type of substrate indicated on the drawings.

1.3 SUBMITTALS

A. Technical Data: Submit manufacturer's product data, Safety Data Sheets (SDS) and installation instructions.

B. Samples: Submit samples of the Floor-Gard HD High Traffic System floor coating system. Samples shall be construed as examples of finished color and texture of the system only.

C. Applicator Approval: Submit letter from manufacturer stating applicator is approved to install the Floor-Gard HD High Traffic System floor coating system.

D. Warranty: Submit copy of manufacturer's standard sample warranty, identifying the terms and conditions stated in section 1.7 Warranty.

1.4 QUALITY ASSURANCE

A. Supplier Qualifications: Floor-Gard HD High Traffic System, 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: Specified materials shall meet existing Federal, State and local VOC regulations.

D. Field Sample:
1. Install a field sample of at least 100 square feet at the project site or pre-selected area as agreed to by owner's representative, applicator and manufacturer.
2. Apply material in accordance with manufacturer’s written application instructions.
3. Field sample will be standard for judging color and texture on remainder of project.
4. Maintain field sample during construction for workmanship comparison.
5. Do not alter, move, or destroy field sample until work is completed and approved by Owner’s representative.

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 (23°C). Water based products must be protected from freezing. Handle products to prevent damage to container. All materials shall be stored in compliance with local fire and safety requirements. Do not store at high temperatures or in direct sunlight.

C. Read and follow the SDS and container labels for detailed health and safety information.

1.6 PROJECT CONDITIONS

A. Proceed with application of materials only when substrate temperature is above 50°F (10°C). Attempt to maintain a minimum substrate temperature of 50°F (10°C) for a minimum of 48 hours before, during, and after installation, or until cured.

B. Concrete must be free of hydrostatic, capillary or moisture vapor pressure. Substrates must have a properly installed, effective vapor barrier.

C. Only install materials if surface to receive coating is clean and dry.

D. Coordinate work with other trades. Applicator shall have sole right of access to specified area for time needed to complete the application and allow system to cure adequately.

E. Protect adjacent surfaces from damage resulting from installation of the system. If necessary, mask and/or cover adjacent surfaces, fixtures, equipment, etc. by suitable means.

F. Provide adequate ventilation.

G. Provide a suitable work station to mix coating materials.

H. Maintain work area in a neat and orderly condition, removing empty containers, rags and trash daily from the site.

1.7 WARRANTY

A. Upon request, Neogard shall offer a manufacturer's standard warranty for institutional, commercial, industrial, and high-rise/multi-family residential projects only, upon substantial completion of the application and receipt of a properly executed warranty request form.

PART 2 MATERIALS

2.1 MANUFACTURER

A. Neogard, A part of Hempel, 2728 Empire Central, Dallas, TX 75235, (800) 321-6588, www.neogard.com.

2.2 MATERIALS

A. Primer: 70714/70715 (45060) clear epoxy.

B. Base Coat: 70714/70715 (45060) pigmented epoxy.

C. Aggregate: #220 grit aluminum oxide (contact Neogard for source of supply).

D. Topcoats:
1. 70900/70910 (47DJB) series water-based urethane, gloss finish.
2. 70901/70910 (47VJB) series water-based urethane, semi-gloss finish.
3. 70902/70910 (47ZJB) series water-based urethane, satin finish.

2.3 MATERIAL PERFORMANCE CRITERIA

A. Typical physical properties of cured 70714/70715 epoxy used on this project are:
1. Tensile Strength, ASTM D638, 3,700 psi

2. Elongation, ASTM D638, 25%
3. Compressive Strength, ASTM D695, 25,300 psi
4. Flexural Strength, ASTM D790, 3,180 psi
5. Flexural Modulus, ASTM D790, 57,700 psi
6. Water Resistance, ASTM D570, 0.21%
7. MVT (10 mils), ASTM E96, 0.16
8. Taber Abrasion, ASTM D4060, 25 mg (1,000 CS-17)
9. Shore D, ASTM D2240, 78
10. Adhesion, ASTM D4541, 350 psi
11. Flammability, ASTM D635, Pass

B. Typical physical properties of cured 70900/70910 urethane used on this project are:
1. Impact Resistance, ASTM D2794, 120 lbs/in
2. Taber Abrasion, ASTM D4060, 15 mg (1,000 CS-17)
3. Pencil Hardness, ASTM D3363, 4H Gouge

C. Typical physical properties of cured 70901/70910 urethane used on this project are:
1. Impact Resistance, ASTM D2794, 160 lbs/in
2. Taber Abrasion, ASTM D4060, 67 mg (1,000 CS-17)
3. Pencil Hardness, ASTM D3363, 4H Gouge

D. Typical physical properties of cured 70902/70910 urethane used on this project are:
1. Taber Abrasion (1,000 cycles CS-17), ASTM D4060, 20 mg loss
2. Pencil Hardness, ASTM D3363, 4H Gouge

E. The above tested results are typical values. Individual lots may vary up to 10% from the typical value. Further technical information can be found at www.neogard.com.

2.4 ACCESSORIES

A. Miscellaneous materials such as cleaning agents, adhesives, sealants, backer rods, and others shall be compatible with the specified interior wall and ceiling coating system.

2.5 MIXING

A. Comply with manufacturer's instructions for mixing procedures.

PART 3 EXECUTION

3.1 EXAMINATION

A. 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, 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 the sodium silicate base only; others require written approval by 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 epoxy mixed with four parts aggregate by volume.
4. That due to hydrostatic, capillary and moisture vapor pressure, substrates in contact with ground must have a properly installed, effective vapor barrier. Moisture vapor emission of concrete not to exceed 3 lbs/1,000 sq. ft./24 hrs, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 75% when tested by In-situ Probe Test (ASTM F2170).

3.2 PREPARATION

A. 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. Do not apply materials unless surface is clean and dry.

B. 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 substrate. Shot-blasting does not remove deep penetrating oils, grease, tar or asphalt stains. Proper cleaning procedures should be followed to ensure proper bonding of the deck coating. Note: If shot-blasting is not practical, contact Neogard Technical Service.

C. Cracks: After shotblasting, fill all non-moving cracks with 70714/70715 epoxy, mixed with P1934 fumed silica to form a paste. The mix ratio is one part 70714/70715 epoxy to 3 parts P1934 fumed silica by volume.

D. Control and Cold Joints: Fill control and cold joints flush with 70718/70719 (25009/95048) flexible epoxy at 3/4" depth. Install backer rod if necessary to limit depth to 3/4".

E. Expansion and Isolation Joints: Expansion and isolation joints =/< 1" in width, shall be sealed with 70991 sealant. Sealant shall be applied to inside of joint only, not applied to floor surface.

3.3 APPLICATION

A. Factors That Affect Dry Film Thickness: Volume solids, thinning, surface profile, application technique and equipment, overspray, squeegee, brush and roller wet out, container residue, spills and other waste are among the many factors that affect the amount of wet coating required to yield proper dry film thickness. To ensure that specified dry film thickness is achieved, use a wet mil gauge to verify actual thickness of wet coating applied, adjusting as needed for those factors which directly affect the dry film build.

B. Primer: Mix 70714/70715 clear at a ratio of 2:1 by volume for three minutes. Apply at a rate of 200 sf/gal. (8 WFT) to yield 8 DFT. Allow to cure until tack-free for 8-9 hours at 75°F (23°C).

C. Base Coat: Mix 70714/70715 pigmented at a ratio of 2:1 for three minutes. Apply at a rate of 200 sf/gal. (8 WFT) to yield 8 DFT. Allow to cure for 8-9 hours at 75°F (23°C) or until tack free.

D. Topcoat: Mix 70900/70910 or 70901/70910 at a ratio of 3:1, or 70902/70910 at a ratio of 2:1. Mix for three minutes. Add 24 ounces of #220 grit aluminum oxide by volume per mixed gallon and apply at a rate of 350–400 sf/gal. Allow to cure 4-6 hours at 75°F (23°C).

E. Do not exceed 24 hours between applications. If this recoat window is missed, surface shall be lightly abraded.

F. Floor-Gard HD High Traffic with #220 grit aluminum oxide can be applied as a final top coat over most Neogard flooring systems by following the steps outlined above. Consult Neogard Technical Services for any questions regarding using Floor-Gard HD High Traffic as a final top coat.

G. Applicator is responsible for applying sufficient coating to the substrate.

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 contact with coated surfaces for a period of at least 48 hours at 75°F (23°C) and 50% relative humidity, or until completely cured.

END OF SECTION

Issued by: Hempel (USA) – Neogard Floor-Gard HD High Traffic System

This Guide Specification supersedes those previously issued.

Neogard®, A part of Hempel
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