

## **PART 1 GENERAL**

### **1.1 SUMMARY**

- A. Provide labor, materials, equipment and supervision necessary to install a seamless epoxy cove base 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 07 92 00: Joint Sealants
  - 3. Section 07 95 00: Expansion Control

### **1.2 SYSTEM DESCRIPTION**

- A. Integral Troweled Epoxy Cove Base shall be a complete system of compatible materials manufactured by Neogard to create a seamless cove base.
- B. Integral Troweled Epoxy Cove Base 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 Integral Troweled Epoxy Cove Base. 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 Integral Troweled Epoxy Cove Base..
- 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: Integral Troweled Epoxy Cove Base, as manufactured 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 10 linear 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). 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.

## **1.6 PROJECT CONDITIONS**

- A. Read and follow the SDS and container labels for detailed health and safety information.
- B. Apply materials only when substrate temperature is 50°F (10°C) or greater, and to a clean, dry surface. Do not apply if precipitation is imminent, or to a damp, unclean or frosty surface. Maintain a minimum substrate temperature of 50°F (10°C) for a minimum of 48 hours before, during and after installation, or until cured.
- C. Apply materials only if ambient temperature between 50°F (10°C) and 85°F (29°C). Ambient temperature must be a minimum of 5°F (3°C) above dew point. Cure times, flow/leveling, cured physical properties, and overall appearance will be adversely affected if products are applied outside of these temperature ranges.
- D. Coordinate flooring work with other trades. Applicator shall have sole right of access to the specified area for the time needed to complete the application and allow the flooring 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, and others 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, (214) 353-1600, [www.neogard.com](http://www.neogard.com).

## **2.2 MATERIALS**

- A. Integral Troweled Epoxy Cove Base materials (Hempel product numbers in parentheses):
  - 1. Crack and Joint Filler: 70718/70719 (25000) flexible epoxy.
  - 2. Sealant: 70991 (47XJB) or other polyurethane sealant approved by Neogard.
  - 3. Epoxy (100% Solids): 70714/70715 (45060), clear or pigmented.
  - 4. Aggregates: 86364 (66030) 20/40 mesh silica sand or blended colored quartz.
  - 5. Fumed Silica: P1934 (D261).
  - 6. Odorless Reducer: 7055 (086JB).
  - 7. Topcoat (four choices):
    - a. 70704/70705 (45020) novolac epoxy.
    - b. 70734/70735 (45040) low yellowing epoxy.
    - c. 70817/70818 (57070) clear chemical-resistant urethane (CRU).
    - d. 70869/70819 (57031) clear polyaspartic.

## **2.3 MATERIAL PERFORMANCE CRITERIA**

- A. Typical physical properties of cured 70714/70715 epoxy used on this project are:
  - 1. Compressive Strength, ASTM D695, 25,000 psi

2. Elongation, ASTM D638, 25%
  3. Tensile Strength, ASTM D638, 3,700 psi
  4. Flexural Strength, ASTM D790, 3,180 psi
  5. Flexural Modulus, ASTM D790, 57,700 psi
  6. Shore D, ASTM D2240, 78
  7. Adhesion to Concrete, ASTM D4541, 350 psi
  8. Water Resistance, ASTM D570, 0.21%
  9. MVT (10 mils) ASTM E96, 0.16
  10. Taber Abrasion, ASTM D4060, 25 mg (1,00 CS-17)
  11. Flammability, ASTM D635, Pass
- B. Typical physical properties of cured 70704/70705 novolac epoxy used on this project are:
1. Compressive Strength, ASTM D695, 10,000 psi
  2. Tensile Strength, ASTM D638, 8,500 psi
  3. Elongation at Break, ASTM D638, 6%
  4. Flexural Strength, ASTM D790, 11,800 psi
  5. Modulus of Elasticity, ASTM D790, 134,000 psi
  6. Shore D, ASTM D2240, 84
  7. Adhesion, ASTM D4541, 300 psi
  8. Water Resistance, ASTM D570, 0.15%
  9. MVT (10 mils), ASTM E96, 0.15 Perm
  10. Flammability, ASTM D635, Pass
  11. Taber Abrasion, ASTM D4060, 40 mg (1,000 CS-17)
- C. Typical physical properties of cured 70734/70735 epoxy used on this project are:
1. Compressive Strength, ASTM D695, 11,000 psi
  2. Tensile Strength, ASTM D638, 8,000 psi
  3. Elongation at Break, ASTM D638, 14%
  4. Flexural Strength, ASTM D790, 10,000 psi
  5. Flexural Modulus, ASTM D790, 400,000 psi
  6. Modulus of Elasticity, ASTM D790, 170,000 psi
  7. Shore D, ASTM D2240, 82
  8. Adhesion, ASTM D4541, 400 psi
  9. Water Resistance, ASTM D570, < 2%
  10. MVT (20 mils), ASTM E96, 0.10 Perm
  11. Flammability, ASTM D635, Pass
  12. Taber Abrasion, ASTM D4060, 89 mg (1,000 CS-17)
- D. Typical physical properties of cured 70817/70818 clear/tinted CRU used on this project are:
1. Tensile Strength, ASTM D2370, 7,500 psi
  2. Elongation, ASTM D2370, 12%
  3. Shore D, ASTM D2240, 70
  4. Water Resistance, ASTM D471, < 1% (7 days)
  5. Taber Abrasion, ASTM D4060, 23 mg (1,000 CS-17)
  6. Anti-Microbial, JIS Z 2801-2010, Pass
- E. Typical physical properties of cured 70869/70819 clear polyaspartic used on this project are:
1. Tensile Strength, ASTM D2370, 3,362 psi
  2. Elongation, ASTM D412, 63%
  3. Taber Abrasion, ASTM D4060, 55 mg (1,000 CS-17)
  4. Shore D, ASTM D2240, 70
  5. Anti-Microbial, JIS Z 2801-2010, Pass
- F. 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](http://www.neogard.com).

## **2.4 ACCESSORIES**

- A. Miscellaneous materials such as cleaning agents, adhesives, closed cell backer rod, deck drains, and others, shall be compatible with the specified Integral Troweled Epoxy Cove Base 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.

### **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. Surface Preparation:
  - 1. Concrete block/concrete walls: Proper preparation is critical to ensure an adequate bond and system performance. The substrate must be dry and properly prepared utilizing mechanical methods such as diamond grinding. Questions regarding substrate preparation should be directed to your local Neogard representative or Technical Services.
  - 2. Drywall: Drywall should be clean/dust free and drywall paper should be completely adhered.

### **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 and apply by brush or roller 70714/70715 clear epoxy at a rate of 250 sf/gal. Immediately lightly broadcast 86364 aggregate into wet primer, creating an anchor profile for mortar mix. Allow to tack or fully cure before applying cove base mix.
- C. Epoxy Cove Base Mix:
  - 1. Mix and apply 70714/70715 clear or pigmented epoxy with 86364 aggregate or blended colored quartz at a ratio of 1 part mixed epoxy, 1 part P1934 (fumed silica) to 4 parts aggregate by volume. If using blended colored quartz, use 70714/70715 clear epoxy.
  - 2. Apply epoxy cove base mix using a margin trowel to place material onto the wall. Smooth and tightly close the surface by hand with a coving trowel. Apply a light mist of 7055 Odorless Reducer as a trowel lubricant to help smooth and finish the application.
  - 3. Example: One gallon of mixed 70714/70715, one gallon of P1934 (fumed silica) and 4 gallons of aggregate covers approximately 40-50 linear feet at 1/8" thickness and 4" in height. Thickness and coverage rate can vary due to finish of wall.
  - 4. Note: Metal or plastic termination strip is recommended to be installed at the desired height prior to the application of the cove base mix in order to have a clean and proper thickness termination.

# Guide Specification

## Integral Troweled Epoxy Cove Base

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- D. Topcoat: Apply topcoat by brush or roller at a rate of 200-300 sf/gal (8 wet mils). Topcoat will typically take two or three applications in order to achieve a smooth finish texture. A smooth finish texture helps reduce buildup of dirt, grease or other contaminant and allows for ease of cleaning. Take precautions to avoid sagging or runs when applying.
  - 1. Contact Neogard for topcoat recommendations.
- E. Allow to cure 8-12 hours at 70°F (21°C)
- F. Applicator is responsible for applying sufficient coating to the substrate.

### 3.4 CLEANING

- A. Remove debris resulting from completion of flooring operation from the project site.
- B. Refer to the Preventive Maintenance Manual for Neogard Floor Coating Systems for typical cleaning methods.

## END OF SECTION

Issued by: Hempel (USA) – Neogard Integral Epoxy Cove Base

This Guide Specification supersedes those previously issued.

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Neogard®, A part of Hempel  
2728 Empire Central - Dallas, Texas 75235 - Phone (214) 353-1600 - Fax (214) 357-7532 - [www.neogard.com](http://www.neogard.com)