PART 1 GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment and supervision necessary to install a highly durable wall and ceiling 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 40 00: Precast Concrete
2. Section 04 22 00: Concrete Unit Masonry
3. Section 09 20 00: Plaster and Gypsum Board

1.2 SYSTEM DESCRIPTION

A. Wall-Gard HD shall be a complete system of compatible materials supplied by Neogard to create a high performance, seamless, durable, vertical and overhead coating system.

B. Wall-Gard HD 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 Wall-Gard HD wall and ceiling 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 Wall-Gard HD wall and ceiling 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: Wall-Gard HD, 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. Gypsum drywall is only suitable for dry areas. Water-resistant gypsum board is suitable in occasionally wet areas.

E. 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.

F. 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.

G. Provide adequate ventilation.

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

I. 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.

2.2 MATERIALS

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

B. Drywall Primer: Polyvinyl Acetate (PVA).

C. Base Coat: 70724/70715 (251J1) high build epoxy mastic.

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

E. Reinforced Fabric: 63UJB fiberglass mesh.

2.3 MATERIAL PERFORMANCE CRITERIA

A. Typical physical properties of cured 70724/70715 epoxy used on this project are:
1. Tensile Strength, ASTM D638, 5,000 psi
2. Elongation at Break, ASTM D638, 10%
3. Water Resistance, ASTM D570, 0.15%
4. MVT (10 mils), ASTM E96, 0.15
5. Taber Abrasion, ASTM D4060, 50mg (1,000 CS-17)
6. Shore D, ASTM 2240, 80
7. Adhesion, ASTM D4541, 300 psi
8. 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, ASTM D4060, 20 mg (1,000 CS-17)
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. Concrete or Block Wall: Verify that the work done under other sections meets the following requirements:
1. Wall and ceiling substrates are free of ridges and sharp projections, sound and dry.
2. Concrete or block surface pH level must not be higher than 11 prior to coating.
3. Damaged areas of the concrete, including bug holes and voids, should be repaired to a smooth finish prior to application of the system.
4. All loose concrete or mortar is removed.
5. Concrete substrate must be free of hydrostatic, capillary or moisture vapor pressure.
6. Concrete shall be cured for a minimum of 28 days and have a minimum compressive strength of 3,500 psi. Concrete curing agents shall be of a sodium silicate base only; others require written approval from Neogard.

B. Drywall: Verify that the work done under other sections meets the following requirement:
1. Surfaces consist of 1/2”–5/8” tapered-edge drywall.
2. Existing Painted Surfaces:
3. Ensure that existing paint is fully adhered and sound.

3.2 PREPARATION

A. Concrete or Block Wall:
   1. Remove any loose concrete or mortar.
   2. Cleaning: Surfaces must be free of dust, dirt, oil, grease or other contaminants. Areas where oil or other contaminants have penetrated deep into the concrete may require removal by mechanical methods.
   3. High-Pressure Water Blast: Required method for remedial construction; preferred method for new construction. Surface must match medium grit sandpaper texture (ICRI CSP 3). Note: Use abrasive blast on hard, dense surfaces.
   4. Repair any holes, spalled or damaged concrete with appropriate Neogard repair materials. Smooth out any irregularities on concrete surfaces before application.

B. Drywall, New Construction:
   1. Drywall must be finished to Level 4 or 5 (ASTM C840).
   2. Existing Painted Surfaces:
   3. Abrade surface using 100-grit screen or sandpaper.
   4. Thoroughly remove all dust and debris.

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. Concrete or Block Wall:
   1. Series 1: Standard
      a. Primer: Mix 70714/70715 clear epoxy at a ratio of 2:1 for three minutes. Apply at a minimum rate of 320 sf/gal (6 mils WFT to yield 6 DFT) to prepared substrate and allow to cure 8–12 hours at 70°F (21°C) or until tack-free.
      b. Base Coat: Mix 70724/70715 epoxy mastic at a ratio of 3:1 for three minutes. Apply at a minimum rate of 100 sf/gal (16 mils WFT to yield 16 DFT) and allow to cure 8–12 hours at 70°F (21°C) or until tack free.
      c. First Topcoat: Mix 70900/70910 series water based urethane at a ratio of 3:1 (70900 or 70901/70910) or 2:1 (70902/70910) for three minutes. Apply at a rate of 200–267 sf/gal (6–8 mils WFT to yield 3–6 mils DFT) and allow to cure for 4–6 hours at 70°F (21°C) or until tack free.
      d. Second Topcoat: Mix 70900/70910 series water based urethane at a ratio of 3:1 (70900 or 70901/70910) or 2:1 (70902/70910) for three minutes. Apply at a rate of 200–267 sf/gal (6–8 mils WFT to yield 3–6 mils DFT) and allow to cure 4–6 hours at 70°F (21°C).
      e. Do not exceed 24 hours between Topcoat applications. If this recoat window is missed, surface must be lightly abraded.
   2. Series 2: Fabric Reinforced
      a. Primer: Mix 70714/70715 clear epoxy at a ratio of 2:1 for three minutes. Apply at a minimum rate of 320 sf/gal (6 mils WFT to yield 6 DFT) to prepared substrate and allow to cure 8–12 hours at 70°F (21°C) or until tack-free.
      b. Base Coat: Mix 70724/70715 epoxy mastic at a ratio of 3:1 for three minutes. Apply at a minimum rate of 100 sf/gal (16 mils WFT to yield 16 DFT). Embed 63UJB fiberglass mesh into wet base coat material. Allow to cure 8–12 hours at 70°F (21°C) or until tack-free. Apply a second coat of 70724/70715 epoxy mastic over mesh at a rate of 100 sf/gal (16 mils WFT to yield 16 mils DFT) and allow to cure for 8–12 hours at 70°F (21°C) or until tack free. Note: Prior to application of the Topcoat, surface may need to be sanded to ensure a smooth surface appearance.
      c. First Topcoat: Mix 70900/70910 series water based urethane at a ratio of 3:1 (70900 or 70901/70910) or 2:1 (70902/70910) for three minutes. Apply at a rate of 200–267 sf/gal (6–8 mils WFT to yield 3–6 mils DFT) and allow to cure for 4–6 hours at 70°F (21°C) or until tack free.

d. Second Topcoat: Mix 70900/70910 series water based urethane at a ratio of 3:1 (70900 or 70901/70910) or 2:1 (70902/70910) for three minutes. Apply at a rate of 200–267 sf/gal (6–8 mils WFT to yield 3–6 mils DFT) and allow to cure 4–6 hours at 70°F (21°C).
e. Do not exceed 24 hours between Topcoat applications. If this recoat window is missed, surface must be lightly abraded.

C. Drywall
1. Series 1: Standard
a. Primer: Prime drywall with a Polyvinyl Acetate (PVA) primer. Follow manufacturer's recommendations for coverage rates.
b. First Topcoat: Mix 70900/70910 series water based urethane at a ratio of 3:1 (70900 or 70901/70910) or 2:1 (70902/70910) for three minutes. Apply at a rate of 200–267 sf/gal (6–8 mils WFT to yield 3–6 mils DFT) and allow to cure 4–6 hours at 70°F (21°C) or until tack free.
c. Second Topcoat: Mix 70900/70910 series water based urethane at a ratio of 3:1 (70900 or 70901/70910) or 2:1 (70902/70910) for three minutes. Apply at a rate of 200–267 sf/gal (6–8 mils WFT to yield 3–6 mils DFT) and allow to cure for 4–6 hours at 70°F (21°C).
d. Do not exceed 24 hours between Topcoat applications. If this recoat window is missed, surface must be lightly abraded.
2. Series 2: Fabric Reinforced
a. Primer: Prime drywall with a Polyvinyl Acetate (PVA) primer. Follow manufacturer's recommendations for coverage rates.
b. Base Coat: For anticipated mechanical abuse (or if requested): Mix 70724/70715 epoxy mastic at a ratio of 3:1 for three minutes. Apply at a minimum rate of 100 sf/gal (16 mils WFT to yield 16 DFT). Embed 63UJB fiberglass mesh into wet base coat material. Allow to cure 8–12 hours at 70°F (21°C) or until tack-free. Apply a second coat of 70724/70715 epoxy mastic over mesh at a rate of 100 sf/gal (16 mils WFT to yield 16 mils DFT) and allow to cure for 8–12 hours at 70°F (21°C) or until tack free. Note: Prior to application of the Topcoat, surface may need to be sanded to ensure a smooth surface appearance.
c. First Topcoat: Mix 70900/70910 series water based urethane at a ratio of 3:1 (70900 or 70901/70910) or 2:1 (70902/70910) for three minutes. Apply at a rate of 200–267 sf/gal (6–8 mils WFT to yield 3–6 mils DFT) and allow to cure 4–6 hours at 70°F (21°C) or until tack free.
d. Second Topcoat: Mix 70900/70910 series water based urethane at a ratio of 3:1 (70900 or 70901/70910) or 2:1 (70902/70910) for three minutes. Apply at a rate of 200–267 sf/gal (6–8 mils WFT to yield 3–6 mils DFT) and allow to cure for 4–6 hours at 70°F (21°C).
e. Do not exceed 24 hours between Topcoat applications. If this recoat window is missed, surface must be lightly abraded.

D. 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 Wall-Gard HD

This Guide Specification supersedes those previously issued.

Neogard®, A part of Hempel
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