Neocrete

Table of Contents

Guide Specification

Neocrete SL

Section 09 67 23 Resinous Flooring

PART 1 GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment and supervision necessary to install a heavy duty cementitious polyurethane floor system 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. Neocrete SL shall be a complete system of compatible materials manufactured by Neogard to create a seamless flooring surface.

B. Neocrete SL 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 Neocrete SL cementitious polyurethane flooring 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 Neocrete SL cementitious polyurethane flooring 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: Neocrete SL, 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 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. 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. 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 20 lbs/1,000 sq. ft./24 hours, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 99% when tested by In-situ Probe Test (ASTM F2170).

E. 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.

F. 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.

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. Neocrete SL 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.
   4. Neocrete SL mix (48012):
      a. Resin: 70800 (48019) series, gray, tan, or red in color.
      b. Hardener: 70801 (98010).
      c. Powder: Neocrete SL 70804 (6602209990P038, 38-lb bag).
   5. Optional: Neocrete SL Topcoat mix (4101A):
      a. Resin: 70800 (48019) series, gray, tan, or red in color.
      b. Hardener: 70801 (98010).
      c. Powder: Neocrete SL 70804 (6602209990P008, 8-lb bag).

6. Fumed Silica: P1934 (D261).

2.3 MATERIAL PERFORMANCE CRITERIA

A. Typical physical properties of cured Neocrete SL (70800/70801/70804) polyurethane used on this project are:
1. Compressive Strength, ASTM C579, 7,700 psi
2. Tensile Strength, ASTM C307, 712 psi
3. Flexural Strength, ASTM C580, 2,200 psi
4. Modulus of Elasticity, ASTM C580, 446,700 psi
5. Shore D, ASTM D2240, 84
6. Adhesion to Concrete, ASTM D4541, 400 psi
7. Water Resistance, ASTM C413, 0.42%
8. Density, ASTM C905-01, 121 lbs/ft3
9. Coefficient of Thermal Expansion, ASTM C531, 2.4 x 10-5 in/in/°F
10. Resistance to Fungal Growth, ASTM G21, No Support of Growth
11. Flammability, ASTM D635, Pass

B. 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, closed cell backer rod, deck drains, and others, shall be compatible with the specified Neocrete SL 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. 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 20 lbs/1,000 sq. ft./24 hours, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 99% 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 shot-blasting, 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 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.

F. Key Cuts: Cut 1/8”–1/4” joints around perimeter of floor, drains, penetrations, doorways, and in field of floor to mechanically anchor floor system.

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: Neocrete SL does not require a primer.

C. Cementitious Polyurethane Mix:
1. Pre-mix 70800 for a minimum of one minute before mixing with 70801 hardener.
2. IMPORTANT: To avoid color variation from mix to mix, scrape all of the pre-mixed 70800 from the 70800 can into the mixing container.
3. Mix 141 fluid ounces of 70800 resin (contents of one 2-gallon can) with 90 fluid ounces of 70801 hardener (contents of one 1-gallon can). Slowly add one 38-pound bag of 70804 powder to the resin mix. Mix with a variable speed drill utilizing a Jiffy Mixer to suspend any settled pigment and attain a uniform color. Continue mixing until the powder has been uniformly blended with the resin mix.
4. Pour the cementitious polyurethane mix onto the floor and spread using a gauge rake. Immediately backroll with a spike roller to de-air and level the material.
5. One unit of mixed material covers approximately 32 square feet at 3/16" thickness. Thickness and coverage rate can vary due to finish of substrate.

D. Optional: Neocrete SL Topcoat:
1. Pre-mix 70800 for a minimum of one minute before mixing with 70801 hardener.
2. IMPORTANT: To avoid color variation from mix to mix, scrape all of the pre-mixed 70800 from the 70800 can into the mixing container.
3. Mix 141 fluid ounces of 70800 resin (contents of one 2-gallon can) with 90 fluid ounces of 70801 hardener (contents of one 1-gallon can). Slowly add one 8-pound bag of 70804 powder to the resin mix. Mix with a variable speed drill utilizing a Jiffy Mixer to suspend any settled pigment and attain a uniform color. Continue mixing until the powder has been uniformly blended with the resin mix.
4. Pour the cementitious polyurethane mix onto the floor and spread using a V-notched squeegee; backroll with a 3/8” phenolic-core roller to smooth coating and remove imperfections.
5. One unit of mixed material covers approximately 100 square feet at 16 mils thickness.

E. Allow to cure 6–10 hours at 70°F/21°C before allowing foot traffic.

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.

3.5 PROTECTION

A. After completion of application, do not allow heavy traffic on coated surfaces for a period of at least 18 hours at 75°F/23°C.

END OF SECTION

Issued by: Hempel (USA) – Neogard Neocrete SL

This Guide Specification ("**Guide Spec**") relates to the supplied products/system ("**System**") and is subject to update from time-to-time. Accordingly, the buyer/applicator should refer to the Guide Spec current as of the time of delivery. In addition to the Guide Spec, the buyer/applicator may receive some or all of the specifications, statements and/or guidelines listed below or available at www.neogard.com (the "**Additional Documents**"):

No.	Document Description
1	PDS
2	Guide Specification
3	Application Manual
4	Other Technical Support Information (i.e. summary application tables, troubleshooting guides, maintenance manuals, chemical resistance charts and other technical information)

In the event of a conflict between this Guide Spec and the Additional Documents, the conflict shall be resolved in accordance with the order of priority set forth above. In addition, the buyer/applicator should refer to the relevant Safety Data Sheets current as of the time of delivery of the System and available at www.neogard.com. Buyer/applicator is responsible for determining the suitability of the intended use of the System, and Neogard disclaims all responsibility for any use, handling and storage of any components of the System that are not in accordance with the requirements set forth in the relevant PDS(s), this Guide Spec and the Additional Documents. The terms and provisions hereof apply to this Guide Spec, the Additional Documents and any other documents supplied by Neogard in respect of the System. The System is supplied and all technical assistance is given subject to the General Conditions of Sale of Hempel Products and/or Services available at www.hempel.com. NEOGARD MAKES NO OTHER WARRANTY THAT EXTENDS BEYOND THE WARRANTY REFERENCED THEREIN INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEOGARD WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY OR CONDITION, OR THAT IN ANY WAY ARISE IN RELATION TO THE SYSTEM.
DRAFT NeocreteSL-GSCSI plus Topcoat ksk 09032021.docx

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

Guide Specification

Neocrete RT

Section 09 67 23 Resinous Flooring

PART 1 GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment and supervision necessary to install a heavy duty cementitious polyurethane floor system as outlined in this specification to new or existing concrete surfaces.

B. Manufacturer's application instructions for each product used are considered part of this specification and shall 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. Neocrete RT shall be a complete system of compatible materials manufactured by Neogard to create a seamless flooring surface.

B. Neocrete RT 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 Neocrete RT cementitious polyurethane flooring 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 Neocrete RT cementitious polyurethane flooring 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: Neocrete RT, 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 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. 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. 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 20 lbs/1,000 sq. ft./24 hours, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 99% when tested by In-situ Probe Test (ASTM F2170).

E. 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.

F. 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.

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. Neocrete RT 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.
   4. Neocrete RT mix (48021):
      a. Resin: 70800 (48019) series, gray, tan, or red in color.
      b. Hardener: 70801 (98010).
      c. Powder: 70806 (66023).
   5. Optional: Neocrete SL Topcoat mix (4101A):
      a. Resin: 70800 (48019) series, gray, tan, or red in color.
      b. Hardener: 70801 (98010).
      c. Powder: Neocrete SL 70804 (6602209990P008, 8-lb bag).

6. Fumed Silica: P1934 (D261).

2.3 MATERIAL PERFORMANCE CRITERIA

A. Typical physical properties of cured Neocrete RT (708000/70801/70806) polyurethane used on this project are:
1. Compressive Strength, ASTM C579, 7,700 psi
2. Tensile Strength, ASTM C307, 712 psi
3. Flexural Strength, ASTM C580, 2,200 psi
4. Modulus of Elasticity, ASTM C580, 446,700 psi
5. Shore D, ASTM D2240, 84
6. Adhesion to Concrete, ASTM D4541, 400 psi
7. Water Resistance, ASTM C413, 0.42%
8. Density, ASTM C905-01, 121 lbs/ft3
9. Coefficient of Thermal Expansion, ASTM C531, 2.4 x 10-5 in/in/°F
10. Resistance to Fungal Growth, ASTM G21, No Support of Growth
11. Flammability, ASTM D635, Pass

B. 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, closed cell backer rod, deck drains, and others, shall be compatible with the specified Neocrete RT 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. 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 20 lbs/1,000 sq. ft./24 hrs, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 99% 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 shot-blasting, fill all non-moving cracks with 70714/70715 epoxy, mixed with P1934 fumed silica to form a paste. 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 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.

F. Key Cuts: Cut 1/8”–1/4” joints around perimeter of floor, drains, penetrations, doorways, and in field of floor to mechanically anchor floor system.

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: Neocrete RT does not require a primer.

C. Cementitious Polyurethane Mix:
1. To avoid color variation from mix to mix, scrape all of the pre-mixed 70800 from the 70800 can into the mixing container.
2. Pre-mix 70800 for a minimum of one minute before mixing with 70801 hardener.
3. Mix 141 fluid ounces of 70800 (one 2-gallon can) with 90 fluid ounces of 70801 (one 1-gallon can). Slowly add one 51-pound bag of 70806 powder to the resin mix. Mix with a variable speed drill utilizing a Jiffy Mixer to suspend any settled pigment and attain a uniform color. Continue mixing until the powder has been uniformly blended with the resin mix.
4. Pour the cementitious polyurethane mix onto the floor and spread using a 3/16” gauge rake. Immediately backroll with a loop roller to de-air and level the material.
5. One unit of mixed material covers approximately 36 square feet at 3/16" thickness. Thickness and coverage rate may vary due to finish of substrate.

D. Optional: Neocrete SL Topcoat:
1. Pre-mix 70800 for a minimum of one minute before mixing with 70801 hardener.
2. IMPORTANT: To avoid color variation from mix to mix, scrape all of the pre-mixed 70800 from the 70800 can into the mixing container.
3. Mix 141 fluid ounces of 70800 resin (contents of one 2-gallon can) with 90 fluid ounces of 70801 hardener (contents of one 1-gallon can). Slowly add one 8-pound bag of 70804 powder to the resin mix. Mix with a variable speed drill utilizing a Jiffy Mixer to suspend any settled pigment and attain a uniform color. Continue mixing until the powder has been uniformly blended with the resin mix.
4. Pour the cementitious polyurethane mix onto the floor and spread using a V-notched squeegee; backroll with a 3/8” phenolic-core roller to smooth coating and remove imperfections.
5. One unit of mixed material covers approximately 100 square feet at 16 mils thickness.

E. Allow to cure 6–10 hours at 70°F/21°C before allowing foot traffic.

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.

3.5 PROTECTION

A. After completion of application, do not allow heavy traffic on coated surfaces for a period of at least 18 hours at 75°F/23°C.

END OF SECTION

Issued by: Hempel (USA) – Neogard Neocrete RT

This Guide Specification ("**Guide Spec**") relates to the supplied products/system ("**System**") and is subject to update from time-to-time. Accordingly, the buyer/applicator should refer to the Guide Spec current as of the time of delivery. In addition to the Guide Spec, the buyer/applicator may receive some or all of the specifications, statements and/or guidelines listed below or available at www.neogard.com (the "**Additional Documents**"):

No.	Document Description
1	PDS
2	Guide Specification
3	Application Manual
4	Other Technical Support Information (i.e. summary application tables, troubleshooting guides, maintenance manuals, chemical resistance charts and other technical information)

In the event of a conflict between this Guide Spec and the Additional Documents, the conflict shall be resolved in accordance with the order of priority set forth above. In addition, the buyer/applicator should refer to the relevant Safety Data Sheets current as of the time of delivery of the System and available at www.neogard.com. Buyer/applicator is responsible for determining the suitability of the intended use of the System, and Neogard disclaims all responsibility for any use, handling and storage of any components of the System that are not in accordance with the requirements set forth in the relevant PDS(s), this Guide Spec and the Additional Documents. The terms and provisions hereof apply to this Guide Spec, the Additional Documents and any other documents supplied by Neogard in respect of the System. The System is supplied and all technical assistance is given subject to the General Conditions of Sale of Hempel Products and/or Services available at www.hempel.com. NEOGARD MAKES NO OTHER WARRANTY THAT EXTENDS BEYOND THE WARRANTY REFERENCED THEREIN INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEOGARD WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY OR CONDITION, OR THAT IN ANY WAY ARISE IN RELATION TO THE SYSTEM.
NeocreteRT-GSCSI ksk 12082021.docx

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

Guide Specification

Neocrete SL Broadcast

Section 09 67 23 Resinous Flooring

PART 1 GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment and supervision necessary to install a heavy duty cementitious polyurethane and silica quartz floor system 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. Neocrete SL Broadcast shall be a complete system of compatible materials manufactured by Neogard to create a seamless flooring surface.

B. Neocrete SL Broadcast 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 Neocrete SL Broadcast cementitious polyurethane flooring 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 Neocrete SL Broadcast cementitious polyurethane flooring 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: Neocrete SL Broadcast, 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 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. 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. 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 20 lbs/1,000 sq. ft./24 hours, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 99% when tested by In-situ Probe Test (ASTM F2170).

E. 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.

F. 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.

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. Neocrete SL Broadcast Floor System (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
   4. Neocrete SL mix (48012):
      a. Resin: 70800 (48019) series, gray, tan, or red in color.
      b. Hardener: 70801 (98010)
      c. Powder: Neocrete SL 70804 (66022)
   5. Fumed Silica: P1934 (D261)

6. Aggregate: Blended Silica Quartz 86364 (66030)
7. Topcoat (two options):
   a. Novolac Epoxy: 100% solids 70704/70705 (45020).
   b. Neocrete SL Topcoat mix (4101A):
      1) Resin: 70800 (48019) series, gray, tan, or red in color.
      2) Hardener: 70801 (98010).
      3) Powder: Neocrete SL 70804 (6602209990P008, 8-lb bag).

2.3 MATERIAL PERFORMANCE CRITERIA

A. Typical physical properties of cured Neocrete SL (70800/70801/70804) polyurethane used on this project are:
1. Compressive Strength, ASTM C579, 7,700 psi
2. Tensile Strength, ASTM C307, 712 psi
3. Flexural Strength, ASTM C580, 2,200 psi
4. Modulus of Elasticity, ASTM C580, 446,700 psi
5. Shore D, ASTM D2240, 84
6. Adhesion to Concrete, ASTM D4541, 400 psi
7. Water Resistance, ASTM C413, 0.42%
8. Density, ASTM C905-01, 121 lbs/ft3
9. Coefficient of Thermal Expansion, ASTM C531, 2.4 x 10-5 in/in/°F
10. Resistance to Fungal Growth, ASTM G21, No Support of Growth
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. 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, closed cell backer rod, deck drains, and others, shall be compatible with the specified Neocrete SL Broadcast system.

2.5 MIXING

A. Comply with manufacturer's instructions for mixing procedures. Refer to Neogard Product Data Sheets for detailed mixing instructions.

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. 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 20 lbs/1,000 sq. ft./24 hours, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 99% 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 shot-blasting, 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 by volume.

D. Control and Cold Joints: Fill control and cold joints flush with 70718/70719 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.

F. Key Cuts: Cut 1/8”–1/4” joints around perimeter of floor, drains, penetrations, doorways, and in field of floor to mechanically anchor floor system.

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: Neocrete SL Broadcast does not require a primer.

C. Cementitious Polyurethane Mix:
1. Pre-mix 70800 for a minimum of one minute before mixing with 70801 hardener.
2. IMPORTANT: To avoid color variation from mix to mix, scrape all of the pre-mixed 70800 from the 70800 can into the mixing container.
3. Mix 141 fluid ounces of 70800 resin (contents of one 2-gallon can) with 90 fluid ounces of 70801 hardener (contents of one 1-gallon can). Slowly add one 38-pound bag of 70804 powder to the resin mix. Mix with a variable speed drill utilizing a Jiffy Mixer to suspend any settled pigment and attain a uniform color. Continue mixing until the powder has been uniformly blended with the resin mix
4. Pour the cementitious polyurethane mix onto the floor and spread using a gauge rake. Immediately backroll with a spike roller to de-air and level the material.
5. One unit of mixed material covers approximately 32 square feet at 3/16" thickness. Thickness and coverage rate can vary due to finish of substrate.

D. Aggregate: Immediately broadcast aggregate (blended silica quartz), evenly distributed, in wet cementitious polyurethane mix until refusal at a rate of approximately 40 pounds per 100 square feet. Make sure the aggregate is thrown up into the air so it will fall vertically into the wet cementitious polyurethane mix. Maintain

a 1 to 2 foot wet edge without any aggregate to allow for a smooth transition to the next application of cementitious polyurethane mix.

E. Allow to cure 6–10 hours at 70°F/21°C. After curing, remove excess aggregate and lightly sand with a circular floor sander and #50-60 grit sandpaper to remove any rough spots. All debris from sanding must be removed to provide a clean, moisture-free surface.

F. Topcoat: Choose depending on chemical exposure (see Chemical Resistance Charts at www.neogard.com):
   1. Novolac Epoxy: Mix and apply pigmented 70704/70705 at a rate of 130 sf/gal (12 wet mils) to yield 12 dry mils. Allow to cure until tack free (8–9 hours at 75°F/23°C).
   2. Neocrete SL Topcoat:
      a. Pre-mix 70800 for a minimum of one minute before mixing with 70801 hardener.
      b. IMPORTANT: To avoid color variation from mix to mix, scrape all of the pre-mixed 70800 from the 70800 can into the mixing container.
      c. Mix 141 fluid ounces of 70800 resin (contents of one 2-gallon can) with 90 fluid ounces of 70801 hardener (contents of one 1-gallon can). Slowly add one 8-pound bag of 70804 powder to the resin mix. Mix with a variable speed drill utilizing a Jiffy Mixer to suspend any settled pigment and attain a uniform color. Continue mixing until the powder has been uniformly blended with the resin mix.
      d. Pour the cementitious polyurethane mix onto the floor and spread using a V-notched squeegee; backroll with a 3/8” phenolic-core roller to smooth coating and remove imperfections.
      e. One unit of mixed material covers approximately 100 square feet at 16 mils thickness.
      f. Allow to cure 6–10 hours at 70°F/21°C before allowing foot traffic.

G. 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.

3.5 PROTECTION

A. After completion of application, do not allow heavy traffic on coated surfaces for a period of at least 18 hours at 75°F/23°C.

END OF SECTION

Issued by: Hempel (USA) – Neogard Neocrete SL Broadcast

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

Guide Specification

Neocrete Trowel

Section 09 67 23 Resinous Flooring

PART 1 GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment and supervision necessary to install a heavy duty trowel grade cementitious polyurethane floor system 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. Neocrete Trowel shall be a complete system of compatible materials manufactured by Neogard to create a seamless flooring surface.

B. Neocrete Trowel 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 Neocrete SL Trowel cementitious polyurethane flooring 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 Neocrete Trowel cementitious polyurethane flooring 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: Neocrete Trowel, 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 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. 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. 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 20 lbs/1,000 sq. ft./24 hours, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 99% when tested by In-situ Probe Test (ASTM F2170).

E. 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.

F. 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.

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. Neocrete Trowel 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.
   4. Neocrete Trowel mix (48010):
      a. Resin: 70800 (48019) series, gray, desert or red in color.
      b. Hardener: 70801 (98010).
      c. Powder: Neocrete Trowel 70802 (66020); two bags required for one unit of Neocrete Trowel (48010) mix.
   5. Fumed Silica: P1934 (D261).
   6. Odorless Reducer: 7055 (086JB).
   7. Optional: Neocrete SL Topcoat mix (4101A):

a. Resin: 70800 (48019) series, gray, tan, or red in color.
b. Hardener: 70801 (98010).
c. Powder: Neocrete SL 70804 (6602209990P008, 8-lb bag).

2.3 MATERIAL PERFORMANCE CRITERIA

A. Typical physical properties of cured Neocrete Trowel (70800/70801/70802) polyurethane used on this project are:
1. Compressive Strength, ASTM C579, 6,800 psi
2. Tensile Strength, ASTM C307, 850 psi
3. Flexural Strength, ASTM C580, 1,800 psi
4. Modulus of Elasticity, ASTM C580, 167,000 psi
5. Shore D, ASTM D2240, 80
6. Adhesion to Concrete, ASTM D4541, 400 psi
7. Water Resistance, ASTM C413, 0.5%
8. Density, ASTM C905-01, 132 lbs/ft3
9. Coefficient of Thermal Expansion, ASTM C531, 1.09 x 10-6 in/in°F
10. Resistance to Fungal Growth, ASTM G21, No Support of Growth
11. Flammability, ASTM D635, Pass

B. 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, closed cell backer rod, deck drains, and others, shall be compatible with the specified Neocrete Trowel 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. 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 20 lbs/1,000 sq. ft./24 hours, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 99% 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 shot-blasting, 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 by volume.

D. Control and Cold Joints: Fill control and cold joints flush with 70718/70719 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.

F. Key Cuts: Cut 1/8”–1/4” joints around perimeter of floor, drains, penetrations, doorways, and in field of floor to mechanically anchor floor system.

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: Neocrete Trowel does not require a primer.

C. Trowel Grade Cementitious Polyurethane Mix:
1. IMPORTANT: Pre-mix 70800 for a minimum of one minute before mixing with 70801 hardener. To avoid color variation from mix to mix, scrape all pre-mixed 70800 from 70800 can into mixing container.
2. Mix 141 fluid ounces of 70800 resin (contents of one 2-gallon can) with 90 fluid ounces of 70801 hardener (contents of one 1-gallon can). Slowly add two 44-lb bags of Neocrete Trowel 70802 powder to the resin mix. Continue mixing until the powder has been uniformly blended with the resin mix.
3. Spread the cementitious polyurethane mix onto the floor using a screed box or gauge rake to desired thickness. Smooth and tightly close the surface with hand or power trowels. Apply a light mist of 7055 Odorless Reducer as a trowel lubricant to help smooth and finish the application.
4. One unit of mixed material covers approximately 44 square feet at 1/4" thickness. Thickness and coverage rate can vary due to finish of substrate.
5. Allow to cure 18 hours at 75°F/23°C before allowing foot traffic.

D. Optional: Neocrete SL Topcoat:
1. Pre-mix 70800 for a minimum of one minute before mixing with 70801 hardener.
2. IMPORTANT: To avoid color variation from mix to mix, scrape all of the pre-mixed 70800 from the 70800 can into the mixing container.
3. Mix 141 fluid ounces of 70800 resin (contents of one 2-gallon can) with 90 fluid ounces of 70801 hardener (contents of one 1-gallon can). Slowly add one 8-pound bag of 70804 powder to the resin mix. Mix with a variable speed drill utilizing a Jiffy Mixer to suspend any settled pigment and attain a uniform color. Continue mixing until the powder has been uniformly blended with the resin mix.
4. Pour the cementitious polyurethane mix onto the floor and spread using a V-notched squeegee; backroll with a 3/8” phenolic-core roller to smooth coating and remove imperfections.
5. One unit of mixed material covers approximately 100 square feet at 16 mils thickness.
6. Allow to cure 6–10 hours at 70°F/21°C before allowing foot traffic.

E. 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.

3.5 PROTECTION

A. After completion of application, do not allow heavy traffic on coated surfaces for a period of at least 18 hours at 75°F/23°C.

END OF SECTION

Issued by: Hempel (USA) – Neogard Neocrete Trowel

NeocreteTrowel-GSCSI ksk 09092021.docx

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

Guide Specification

Neocrete V — Cove Base System

Section 09 67 23 Resinous Flooring

PART 1 GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment and supervision necessary to install a cementitious polyurethane cove base system 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. Neocrete V shall be a complete system of compatible materials manufactured by Neogard to create a seamless cove base.

B. Neocrete V 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 Neocrete V cementitious polyurethane cove base 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 Neocrete V cementitious polyurethane cove base 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: Neocrete V, 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. 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 20 lbs/1,000 sq. ft./24 hours, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 99% when tested by In-situ Probe Test (ASTM F2170).

E. 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.

F. 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.

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. Neocrete V 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
   4. Neocrete V mix (48011):
      a. Resin: 70800 (48019) series, gray, tan, or red in color
      b. Hardener: 70801 (98010)
      c. Powder: Neocrete V 70803 (66021); two 42-lb bags required for one unit of Neocrete V mix.
   5. Fumed Silica: P1934 (D261)
   6. Odorless Reducer: 7055 (086JB)

2.3 MATERIAL PERFORMANCE CRITERIA

A. Typical physical properties of cured Neocrete V (70800/70801/70803) polyurethane used on this project are:
   1. Compressive Strength, ASTM C579, 6,800 psi
   2. Tensile Strength, ASTM C307, 850 psi
   3. Flexural Strength, ASTM C580, 1,800 psi
   4. Modulus of Elasticity, ASTM C580, 167,000 psi
   5. Shore D, ASTM D2240, 80
   6. Adhesion to Concrete, ASTM D4541, 400 psi
   7. Water Resistance, ASTM C413, 0.5%
   8. Density, ASTM C905-01, 132 lbs/ft3
   9. Coefficient of Thermal Expansion, ASTM C531, 1.09 x 10-6 in/in°F
   10. Resistance to Fungal Growth, ASTM G21, No Support of Growth
   11. Flammability, ASTM D635, Pass

B. 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, closed cell backer rod, deck drains, and others, shall be compatible with the specified Neocrete V 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. 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 20 lbs/1,000 sq. ft./24 hours, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 99% 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 shot-blasting, 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 by volume.

D. Control and Cold Joints: Fill control and cold joints flush with 70718/70719 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.

F. Key Cuts: Cut 1/8”–1/4” joints around perimeter of floor, drains, penetrations, doorways, and in field of floor to mechanically anchor floor system.

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: Apply a scratch coat of 70800/70801 liquids only at a rate of 350 square feet per gallon.

C. Neocrete V Cementitious Polyurethane Mix:
1. Pre-mix 70800 for a minimum of one minute before mixing with 70801 hardener.
2. IMPORTANT: To avoid color variation from mix to mix, scrape all pre-mixed 70800 from 70800 can into mixing container.
3. Mix 141 fluid oz. of 70800 series resin with 90 fluid oz. of 70801 hardener for one minute. Slowly add two 42-lb bags of Neocrete V 70803 powder to the resin mix. Continue mixing until the powder has been uniformly blended with the resin mix.
4. Apply the cementitious polyurethane 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.
5. One unit of mixed material covers approximately 84 linear feet at 1/8" thickness and 4” in height. Thickness and coverage rate can vary due to finish of wall.
6. Allow to cure 6–10 hours at 70°F/21°C.

D. 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.

3.5 PROTECTION

A. After completion of application, do not allow heavy traffic on coated surfaces for a period of at least 18 hours at 75°F/23°C.

END OF SECTION

Issued by: Hempel (USA) – Neogard Neocrete V

This Guide Specification ("**Guide Spec**") relates to the supplied products/system ("**System**") and is subject to update from time-to-time. Accordingly, the buyer/applicator should refer to the Guide Spec current as of the time of delivery. In addition to the Guide Spec, the buyer/applicator may receive some or all of the specifications, statements and/or guidelines listed below or available at www.neogard.com (the "**Additional Documents**"):

No.	Document Description
1	PDS
2	Guide Specification
3	Application Manual
4	Other Technical Support Information (i.e. summary application tables, troubleshooting guides, maintenance manuals, chemical resistance charts and other technical information)

In the event of a conflict between this Guide Spec and the Additional Documents, the conflict shall be resolved in accordance with the order of priority set forth above. In addition, the buyer/applicator should refer to the relevant Safety Data Sheets current as of the time of delivery of the System and available at www.neogard.com. Buyer/applicator is responsible for determining the suitability of the intended use of the System, and Neogard disclaims all responsibility for any use, handling and storage of any components of the System that are not in accordance with the requirements set forth in the relevant PDS(s), this Guide Spec and the Additional Documents. The terms and provisions hereof apply to this Guide Spec, the Additional Documents and any other documents supplied by Neogard in respect of the System. The System is supplied and all technical assistance is given subject to the General Conditions of Sale of Hempel Products and/or Services available at www.hempel.com. NEOGARD MAKES NO OTHER WARRANTY THAT EXTENDS BEYOND THE WARRANTY REFERENCED THEREIN INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEOGARD WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY OR CONDITION, OR THAT IN ANY WAY ARISE IN RELATION TO THE SYSTEM.
NeocreteV-GSCSI ksk 12082021.docx

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

Guide Specification

Neocrete SL Flake

Section 09 67 23 Resinous Flooring

PART 1 GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment and supervision necessary to install a heavy duty cementitious polyurethane and color flake floor system 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. Neocrete SL Flake shall be a complete system of compatible materials manufactured by Neogard to create a seamless flooring surface.

B. Neocrete SL Flake 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 Neocrete SL Flake cementitious polyurethane and color flake flooring 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 Neocrete SL Flake cementitious polyurethane and color flake flooring 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: Neocrete SL Flake, 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 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. 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. 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 20 lbs/1,000 sq. ft./24 hours, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 80% when tested by In-situ Probe Test (ASTM F2170).

E. 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.

F. 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.

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. Neocrete SL Flake (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.
   4. Neocrete SL mix (48012):
      a. Resin: 70800 (48019) series, gray, tan, or red in color.
      b. Hardener: 70801 (98010).
      c. Powder: Neocrete SL 70804 (6602209990P038, 38-lb bag).
   5. Fumed Silica: P1934 (D261).
   6. Topcoat (two options):
      a. 70817/70818 (57070) clear Chemical Resistant Urethane (CRU).
      b. 70869/70819 (57031) clear Polyaspartic.

7. Color Chips: Integrally colored, random sized chips.

2.3 MATERIAL PERFORMANCE CRITERIA

A. Typical physical properties of cured Neocrete SL (70800/70801/70804) polyurethane used on this project are:
1. Compressive Strength, ASTM C579, 7,700 psi
2. Tensile Strength, ASTM C307, 712 psi
3. Flexural Strength, ASTM C580, 2,200 psi
4. Modulus of Elasticity, ASTM C580, 446,700 psi
5. Shore D, ASTM D2240, 84
6. Adhesion to Concrete, ASTM D4541, 400 psi
7. Water Resistance, ASTM C413, 0.42%
8. Density, ASTM C905-01, 121 lbs/ft3
9. Coefficient of Thermal Expansion, ASTM C531, 2.4 x 10-5 in/in/°F
10. Resistance to Fungal Growth, ASTM G21, No Support of Growth
11. Flammability, ASTM D635, Pass

B. Typical physical properties of cured 70817/70818 clear 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

C. 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

D. 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, closed cell backer rod, deck drains, and others, shall be compatible with the specified Neocrete SL Flake 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. 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 20

lbs/1,000 sq. ft./24 hours, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 80% 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 shot-blasting, 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 by volume.

D. Control and Cold Joints: Fill control and cold joints flush with 70718/70719 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.

F. Key Cuts: Cut 1/8”–1/4” joints around perimeter of floor, drains, penetrations, doorways, and in field of floor to mechanically anchor floor system.

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: Neocrete SL Flake does not require a primer.

C. Cementitious Polyurethane Mix:
1. Pre-mix 70800 for a minimum of one minute before mixing with 70801 hardener.
2. IMPORTANT: To avoid color variation from mix to mix, scrape all of the pre-mixed 70800 from the 70800 can into the mixing container.
3. Mix 141 fluid ounces of 70800 resin (contents of one 2-gallon can) with 90 fluid ounces of 70801 hardener (contents of one 1-gallon can). Slowly add one 38-pound bag of 70804 powder to the resin mix. Mix with a variable speed drill utilizing a Jiffy Mixer to suspend any settled pigment and attain a uniform color. Continue mixing until the powder has been uniformly blended with the resin mix.
4. Pour the cementitious polyurethane mix onto the floor and spread using a gauge rake. Immediately backroll with a spike roller to de-air and level the material.
5. One unit of mixed material covers approximately 32 square feet at 3/16" thickness. Thickness and coverage rate can vary due to finish of substrate.

D. Color Chips: Immediately broadcast blended color chips into wet cementitious polyurethane mix at a rate of 15–20 lbs. by weight per 100 square feet until desired pattern is achieved. Make sure the blended color chips are thrown up into the air so they will fall vertically into the wet cementitious polyurethane mix. Maintain a 1 to 2 foot wet edge without any chips to allow for a smooth transition to the next application of cementitious polyurethane mix.

E. Allow to cure 8–12 hours at 70°F/21°C. After curing, remove excess aggregate and lightly sand with a circular floor sander and #50 grit sandpaper to remove any rough spots. All debris from sanding must be removed to provide a clean, moisture-free surface.

F. Topcoat:
1. CRU: Pre-mix 70817 for 3 minutes. Add 70817 to 70818 and immediately mix for 3 minutes. Apply mixed 70817/70818 at a rate of 125 square feet per gallon to achieve 12 mils DFT to prepared substrate. Allow to cure 8–12 hours at 75°F/23°C before allowing foot traffic.
2. Polyaspartic: NOTE: Do not split kits. Do not thin. Pre-mix 70869 for 3 minutes. Add entire contents of 70819 container to 70869 container and immediately mix for 3 minutes. Mix using a slow-speed drill with a Jiffy Mixer paddle. Take precautions not to introduce air into the material while mixing. Apply mixed 70869/70819 at a rate of 125 square feet per gallon to achieve 12 mils DFT to prepared substrate. Allow to cure 8–12 hours at 75°F/23°C before allowing foot traffic.

G. 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.

3.5 PROTECTION

A. After completion of application, do not allow heavy traffic on coated surfaces for a period of at least 18 hours at 75°F/23°C.

END OF SECTION

Issued by: Hempel (USA) – Neogard Neocrete SL Flake

This Guide Specification ("**Guide Spec**") relates to the supplied products/system ("**System**") and is subject to update from time-to-time. Accordingly, the buyer/applicator should refer to the Guide Spec current as of the time of delivery. In addition to the Guide Spec, the buyer/applicator may receive some or all of the specifications, statements and/or guidelines listed below or available at www.neogard.com (the "**Additional Documents**"):

No.	Document Description
1	PDS
2	Guide Specification
3	Application Manual
4	Other Technical Support Information (i.e. summary application tables, troubleshooting guides, maintenance manuals, chemical resistance charts and other technical information)

In the event of a conflict between this Guide Spec and the Additional Documents, the conflict shall be resolved in accordance with the order of priority set forth above. In addition, the buyer/applicator should refer to the relevant Safety Data Sheets current as of the time of delivery of the System and available at www.neogard.com. Buyer/applicator is responsible for determining the suitability of the intended use of the System, and Neogard disclaims all responsibility for any use, handling and storage of any components of the System that are not in accordance with the requirements set forth in the relevant PDS(s), this Guide Spec and the Additional Documents. The terms and provisions hereof apply to this Guide Spec, the Additional Documents and any other documents supplied by Neogard in respect of the System. The System is supplied and all technical assistance is given subject to the General Conditions of Sale of Hempel Products and/or Services available at www.hempel.com. NEOGARD MAKES NO OTHER WARRANTY THAT EXTENDS BEYOND THE WARRANTY REFERENCED THEREIN INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEOGARD WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY OR CONDITION, OR THAT IN ANY WAY ARISE IN RELATION TO THE SYSTEM.
NeocreteSLFlake-GSCSI ksk 12082021.docx

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

Guide Specification

Neocrete SL Quartz

Section 09 67 23 Resinous Flooring

PART 1 GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment and supervision necessary to install a heavy duty cementitious polyurethane floor system 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. Neocrete SL Quartz shall be a complete system of compatible materials manufactured by Neogard to create a seamless flooring surface.

B. Neocrete SL Quartz 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 Neocrete SL Quartz cementitious polyurethane flooring 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 Neocrete SL Quartz cementitious polyurethane flooring 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: Neocrete SL Quartz, 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 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. 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. 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 20 lbs/1,000 sq. ft./24 hours, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 80% when tested by In-situ Probe Test (ASTM F2170).

E. 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.

F. 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.

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. Neocrete SL Quartz (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.
   4. Neocrete SL mix (48012):
      a. Resin: 70800 (48019) series, gray, tan, or red in color.
      b. Hardener: 70801 (98010).
      c. Powder: Neocrete SL 70804 (6602209990P038, 38-lb bag).
   5. Fumed Silica: P1934 (D261).
   6. Seal Coats (two options):
      a. 70817/70818 (57079/95059) clear Chemical Resistant Urethane (CRU).
      b. 70869/70819 (57039/95055) clear Polyaspartic.

7. Aggregate: Blended Color Quartz.

2.3 MATERIAL PERFORMANCE CRITERIA

A. Typical physical properties of cured Neocrete SL (70800/70801/70804) polyurethane used on this project are:
   1. Compressive Strength, ASTM C579, 7,700 psi
   2. Tensile Strength, ASTM C307, 712 psi
   3. Flexural Strength, ASTM C580, 2,200 psi
   4. Modulus of Elasticity, ASTM C580, 446,700 psi
   5. Shore D, ASTM D2240, 84
   6. Adhesion to Concrete, ASTM D4541, 400 psi
   7. Water Resistance, ASTM C413, 0.42%
   8. Density, ASTM C905-01, 121 lbs/ft3
   9. Coefficient of Thermal Expansion, ASTM C531, 2.4 x 10-5 in/in/°F
   10. Resistance to Fungal Growth, ASTM G21, No Support of Growth
   11. Flammability, ASTM D635, Pass

B. Typical physical properties of cured 70817/70818 clear 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

C. 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

D. 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, closed cell backer rod, deck drains, and others, shall be compatible with the specified Neocrete SL Quartz 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. 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 20

lbs/1,000 sq. ft./24 hours, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 80% 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 shot-blasting, 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 by volume.

D. Control and Cold Joints: Fill control and cold joints flush with 70718/70719 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.

F. Key Cuts: Cut 1/8”–1/4” joints around perimeter of floor, drains, penetrations, doorways, and in field of floor to mechanically anchor floor system.

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: Neocrete SL Quartz does not require a primer.

C. Cementitious Polyurethane Mix:
1. Pre-mix 70800 for a minimum of one minute before mixing with 70801 hardener.
2. IMPORTANT: To avoid color variation from mix to mix, scrape all of the pre-mixed 70800 from the 70800 can into the mixing container.
3. Mix 141 fluid ounces of 70800 resin (contents of one 2-gallon can) with 90 fluid ounces of 70801 hardener (contents of one 1-gallon can). Slowly add one 38-pound bag of 70804 powder to the resin mix. Mix with a variable speed drill utilizing a Jiffy Mixer to suspend any settled pigment and attain a uniform color. Continue mixing until the powder has been uniformly blended with the resin mix.
4. Pour the cementitious polyurethane mix onto the floor and spread using a gauge rake. Immediately backroll with a spike roller to de-air and level the material.
5. One unit of mixed material covers approximately 32 square feet at 3/16" thickness. Thickness and coverage rate can vary due to finish of substrate.

D. Aggregate: Immediately broadcast aggregate (blended color quartz), evenly distributed, in wet cementitious polyurethane mix until refusal at a rate of approximately 40 pounds per 100 square feet. Make sure the aggregate is thrown up into the air so it will fall vertically into the wet cementitious polyurethane mix. Maintain a one to two foot wet edge without any aggregate to allow for a smooth transition to the next application of cementitious polyurethane mix.

E. Allow to cure 8–12 hours at 70°F/21°C. After curing, remove excess aggregate and lightly sand with a circular floor sander and #50 grit sandpaper to remove any rough spots. All debris from sanding must be removed to provide a clean, moisture-free surface.

F. Seal Coats:
1. CRU:
   a. First Seal Coat: Pre-mix 70817 for 3 minutes. Add 70817 to 70818 and immediately mix for 3 minutes. Mix using a slow-speed drill with a Jiffy Mixer paddle. Apply mixed 70817/70818 at a rate of 160 square feet per gallon to achieve 10 mils DFT. Allow to cure 6 to 8 hours at 75°F/23°C.
   b. Second Seal Coat: Pre-mix 70817 for 3 minutes. Add 70817 to 70818 and immediately mix for 3 minutes. Mix using a slow-speed drill with a Jiffy Mixer paddle. Apply mixed 70817/70818 at a rate of 200 square feet per gallon to achieve 8 mils DFT and allow to cure 8–12 hours at 75°F/23°C before allowing foot traffic.
2. Polyaspartic: (NOTE: Do not split kits. Do not thin.)
   a. First Seal Coat: Pre-mix 70869 for 3 minutes. Add entire contents of 70819 container to 70869 container and immediately mix for 3 minutes. Mix using a slow-speed drill with a Jiffy Mixer paddle. Apply mixed 70869/70819 at a rate of 160 square feet per gallon to achieve 10 mils DFT. Allow to cure 8–12 hours at 75°F/23°C before allowing foot traffic.
   b. Second Seal Coat: Pre-mix 70869 for 3 minutes. Add entire contents of 70819 container to 70869 container and immediately mix for 3 minutes. Mix using a slow-speed drill with a Jiffy Mixer paddle. Apply mixed 70869/70819 at a rate of 200 square feet per gallon to achieve 8 mils DFT. Allow to cure 8–12 hours at 75°F/23°C before allowing foot traffic.

G. 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.

3.5 PROTECTION

A. After completion of application, do not allow heavy traffic on coated surfaces for a period of at least 18 hours at 75°F/23°C.

END OF SECTION

Issued by: Hempel (USA) – Neogard Neocrete SL Quartz

NeocreteSLQuartz-GSCSI ksk 12082021.docx

Guide Specification

Neocrete RT Broadcast

Section 09 67 23 Resinous Flooring

PART 1 GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment and supervision necessary to install a heavy duty cementitious polyurethane floor system as outlined in this specification to new or existing concrete surfaces.

B. Manufacturer's application instructions for each product used are considered part of this specification and shall 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. Neocrete RT Broadcast shall be a complete system of compatible materials manufactured by Neogard to create a seamless flooring surface.

B. Neocrete RT Broadcast 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 Neocrete RT Broadcast cementitious polyurethane flooring 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 Neocrete RT Broadcast cementitious polyurethane flooring 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: Neocrete RT Broadcast, 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 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. 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. 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 20 lbs/1,000 sq. ft./24 hrs, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 99% when tested by In-situ Probe Test (ASTM F2170).

E. 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.

F. 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.

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. Neocrete RT Broadcast 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.
   4. Neocrete RT mix (48021):
      a. Resin: 70800 (48019) series, gray, tan, or red in color.
      b. Hardener: 70801 (98010).
      c. Powder: 70806 (66023).
   5. Fumed Silica: P1934 (D261).
   6. Aggregate: Blended Silica Quartz 86364 (66030).
   7. Topcoat (two options):
      a. Novolac Epoxy: 100% solids 70704/70705 (45020).

b. Neocrete SL Topcoat mix (4101A):
   1) Resin: 70800 (48019) series, gray, tan, or red in color.
   2) Hardener: 70801 (98010).
   3) Powder: Neocrete SL 70804 (6602209990P008, 8-lb bag).

2.3 MATERIAL PERFORMANCE CRITERIA

A. Typical physical properties of cured Neocrete RT (70800/70801/70806) polyurethane used on this project are:
   1. Compressive Strength, ASTM C579, 7,700 psi
   2. Tensile Strength, ASTM C307, 712 psi
   3. Flexural Strength, ASTM C580, 2,200 psi
   4. Modulus of Elasticity, ASTM C580, 446,700 psi
   5. Shore D, ASTM D2240, 84
   6. Adhesion to Concrete, ASTM D4541, 400 psi
   7. Water Resistance, ASTM C413, 0.42%
   8. Density, ASTM C905-01, 121 lbs/ft3
   9. Coefficient of Thermal Expansion, ASTM C531, 2.4 x 10-5 in/in/°F
   10. Resistance to Fungal Growth, ASTM G21, No Support of Growth
   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. 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, closed cell backer rod, deck drains, and others, shall be compatible with the specified Neocrete RT Broadcast 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. 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 20 lbs/1,000 sq. ft./24 hrs, when tested by the quantitative calcium chloride test method (ASTM F1869). Relative Humidity is not to exceed 99% 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 shot-blasting, fill all non-moving cracks with 70714/70715 epoxy, mixed with P1934 fumed silica to form a paste. 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 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.

F. Key Cuts: Cut 1/8”–1/4” joints around perimeter of floor, drains, penetrations, doorways, and in field of floor to mechanically anchor floor system.

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: Neocrete RT Broadcast does not require a primer.

C. Cementitious Polyurethane Mix:
1. To avoid color variation from mix to mix, scrape all of the pre-mixed 70800 from the 70800 can into the mixing container.
2. Pre-mix 70800 for a minimum of one minute before mixing with 70801 hardener.
3. Mix 141 fluid ounces of 70800 (one 2-gallon can) with 90 fluid ounces of 70801 (one 1-gallon can). Slowly add one 51-pound bag of 70806 powder to the resin mix. Mix with a variable speed drill utilizing a Jiffy Mixer to suspend any settled pigment and attain a uniform color. Continue mixing until the powder has been uniformly blended with the resin mix.
4. Pour the cementitious polyurethane mix onto the floor and spread using a 3/16” gauge rake. Immediately backroll with a loop roller to de-air and level the material.
5. One unit of mixed material covers approximately 36 square feet at 3/16" thickness. Thickness and coverage rate may vary due to finish of substrate.
6. Allow to cure 6–10 hours at 70°F/21°C before allowing foot traffic.

D. Aggregate: Immediately broadcast aggregate (blended silica quartz), evenly distributed, in wet cementitious polyurethane mix until refusal at a rate of approximately 40 pounds per 100 square feet. Make sure the aggregate is thrown up into the air so it will fall vertically into the wet cementitious polyurethane mix. Maintain a 1 to 2 foot wet edge without any aggregate to allow for a smooth transition to the next application of cementitious polyurethane mix.

E. Allow to cure 6–10 hours at 70°F/21°C. After curing, remove excess aggregate and lightly sand with a circular floor sander and #50-60 grit sandpaper to remove any rough spots. All debris from sanding must be removed to provide a clean, moisture-free surface.

F. Topcoat: Choose depending on chemical exposure (see Chemical Resistance Charts at www.neogard.com):
   1. Novolac Epoxy: Mix and apply pigmented 70704/70705 at a rate of 130 sf/gal (12 wet mils) to yield 12 dry mils. Allow to cure until tack free (8–9 hours at 75°F/23°C).
   2. Neocrete SL Topcoat:
      a. Pre-mix 70800 for a minimum of one minute before mixing with 70801 hardener.
      b. IMPORTANT: To avoid color variation from mix to mix, scrape all of the pre-mixed 70800 from the 70800 can into the mixing container.
      c. Mix 141 fluid ounces of 70800 resin (contents of one 2-gallon can) with 90 fluid ounces of 70801 hardener (contents of one 1-gallon can). Slowly add one 8-pound bag of 70804 powder to the resin mix. Mix with a variable speed drill utilizing a Jiffy Mixer to suspend any settled pigment and attain a uniform color. Continue mixing until the powder has been uniformly blended with the resin mix.
      d. Pour the cementitious polyurethane mix onto the floor and spread using a V-notched squeegee; backroll with a 3/8” phenolic-core roller to smooth coating and remove imperfections.
      e. One unit of mixed material covers approximately 100 square feet at 16 mils thickness.
      f. Allow to cure 6–10 hours at 70°F/21°C before allowing foot traffic.

G. 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.

3.5 PROTECTION

A. After completion of application, do not allow heavy traffic on coated surfaces for a period of at least 18 hours at 75°F/23°C.

END OF SECTION

Issued by: Hempel (USA) – Neogard Neocrete RT Broadcast

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