Guide Specification

RTS Water Feature Waterproofing - PUMA

Section 07 14 16 Cold Fluid-Applied Waterproofing

PART 1 GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment and supervision necessary to install a fluid-applied coating 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 03 40 00: Precast Concrete
3. Section 07 90 00: Joint Protection

1.2 SYSTEM DESCRIPTION

A. Neogard RTS Water Feature Waterproofing shall be a complete system of compatible materials supplied by Neogard to create a seamless coating.

B. Neogard RTS Water Feature Waterproofing shall be designated for application on the specific type of deck indicated on the drawings.

1.3 SUBMITTALS

A. Technical Data: Submit manufacturer's product data and Safety Data Sheets (SDS) on each product.

B. Samples: Submit samples of specified coating system. Samples shall be construed as examples of finished color and texture of the system only.

C. Applicator Approval: Submit letter from manufacturer stating applicator is approved to install the specified coating system.

D. Warranty: Submit copy of manufacturer's standard warranty.

1.4 QUALITY ASSURANCE

A. Supplier Qualifications: Neogard RTS Water Feature Waterproofing, as supplied by Neogard, is approved for use on this project.

B. Applicator Qualifications: Applicator shall be approved to install specified system.

C. Requirement of Regulatory Agencies: Comply with applicable codes, regulations, ordinances and laws regarding use and application of coating systems.

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 77°F (25°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. Prior to starting work, read and follow the SDS and container labels for detailed health and safety information.

B. Only apply to dry surfaces. Do not apply to damp or frosty surfaces. Do not proceed with application of materials if precipitation is imminent.

C. Ambient temperature should be a minimum 23°F (-5°C). Contact Neogard if applying below 23°F (-5°C). Special precautions are to be taken when ambient and/or substrate temperatures are approaching, at, or above 100°F (38°C) and it may be necessary to limit material application to evening hours for exterior exposed decks.

D. Coordinate coating work with other trades. Applicator shall have sole right of access to the specified area for the time needed to complete the application.

E. Protect plants, vegetation or other surfaces not to be coated against damage or soiling.

F. Keep products away from spark or flame. Do not allow the use of spark-producing equipment during application and until all vapors have dissipated. Post "No Smoking" signs.

G. Maintain work area in a neat and orderly condition, removing empty containers, rags and rubbish daily from the site. All waste PUMA/PMMA liquids shall be catalyzed for proper disposal.

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, after substantial completion of the application and receipt of a properly executed warranty request form.

PART 2 MATERIALS

2.1 MANUFACTURER

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

2.2 MATERIALS

A. Fluid-Applied Waterproofing Coating Materials (Hempel product numbers in parentheses):
1. Cleaner: 800 RTS PMMA Cleaning Agent (66ZJB).
2. Initiator: 600 RTS PMMA/PUMA Initiator (95UJB).
3. Primer: 100 RTS Concrete and Metal Primer (256JB).
4. Cab-O-Sil: thickener for vertical coating application
5. Membrane: 200 RTS Membrane PUMA coating (870JB).
6. 400 RTS Topcoat PMMA coating (872JB)
7. Pigment: 700 RTS series pigments, 1 lb bag (63YJB).

B. Typical physical properties of cured 200 RTS used on this project are:
1. Tensile strength, 354 psi, ASTM D638
2. Elongation, 282%, ASTM D638
3. Shore A, 75, ASTM D2240
4. Shore D, 25, ASTM D2240
5. Crack bridging, Pass at 40/60/80 mils, ASTM C1305

C. Typical physical properties of cured 400 RTS used on this project are:
1. Tensile strength, 2,017 psi, ASTM D638

2. Elongation, 9%, ASTM D638
3. Shore A, 95, ASTM D2240
4. Shore D, 60, ASTM D2240
5. Taber abrasion, 33 mg/1,000 CS-17, ASTM D4060
6. Permeance, 0.48 US/0.31 Metric Perm, ASTM 1653
7. MVT, 159.5mg m2 1 hour/3.83g m2 24 hours, ASTM

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.

2.3 ACCESSORIES

A. Miscellaneous materials such as cleaning agents, adhesives, reinforcing fabric, backer rod, deck drains, etc., shall be compatible with the specified vehicular traffic coating system.

2.4 MIXING

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

PART 3 EXECUTION

3.1 EXAMINATION

A. Concrete: 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. If metal forms or decks are used they should be ventilated to permit adequate drying of concrete.
   2. That the concrete was finished by a power or hand steel trowel followed by soft hair broom to obtain light texture or “sidewalk” finish.
   3. That the concrete was cured for a minimum of 28 days. (Minimum of 4,000 psi compressive strength). Water-cured treatment of concrete is preferred. The use of concrete curing agents, if any, shall be of the sodium silicate base only; others require written approval by Neogard.
   4. That moisture content in the concrete must be less than 6% as measured using a Tramex CME 4 Moisture Meter. Only apply to dry surfaces. Do not apply to damp surfaces.

3.2 PREPARATION

A. Cleaning: Surfaces contaminated with oil or grease shall be vigorously scrubbed with a stiff bristle broom and a strong non-sudsing detergent such as 8500 BioDegradable Cleaner (Hempel 089JB). Thoroughly wash, clean, and dry. Areas where oil or other contaminants penetrate deep into the concrete may require removal by mechanical methods.

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–CSP4) 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.

C. Hydro-Blasting: Alternative if shot-blasting is not practical. Use a minimum of 4,000 psi spray at tip, within 6” of substrate to prepare surface by hydro-blasting to industry standard surface texture (ICRI’s CSP3–CSP4) without causing additional surface defects in deck. Rinse thoroughly to ensure all residue is removed from the surface. Allow deck to completely dry prior to application of deck coating materials.

D. Cracks, Cold Joints and Control Joints: Prime with 100 RTS PMMA Concrete and Metal Primer and filled with 200 RTS Membrane coating. Strike coating flush with adjacent surfaces.

3.3 APPLICATION

A. Important: Clean tools with Neogard 800 PMMA Cleaning Agent only. Other solvents may contaminate PMMA/PUMA coatings, and cause coating to cure improperly.

B. Add appropriate dosage of Neogard 600 RTS BPO Initiator to all materials and mix thoroughly before applying. Refer to Neogard BPO Initiator Dosage Chart for correct amounts. BPO Initiator Dosage Chart also available in Neogard PMMA/PUMA Product Data Sheets.

C. Primer: Apply 100 RTS Concrete and Metal Primer at a rate of 90 sf/gal to yield 17 mils to all surfaces. Allow to dry approximately 45 minutes.

D. Membrane: As needed, add Cab-O-Sil to coating at a rate up to 2 parts RTS to 1 part Cab-O-Sil. Mix 200 RTS Membrane with 700 RTS series pigment at 0.50 lbs/gallon (2 color packs of 700 RTS per pail of 400 RTS), apply at a rate of 40 sf/gal to yield 40 dry mils. When cured, apply a second coat of membrane at a rate of 40 sf/gal to yield 40 dry mils. Vertical Surfaces will require minimum of 2 coats to achieve proper thickness. Cured film is a total of 80 dry mils.

E. Top Coat: Topcoat: As needed, add Cab-O-Sil to coating at a rate up to 2 parts RTS to 1 part Cab-O-Sil. Mix 400 RTS with 700 RTS series pigment at 0.50 lbs/gallon (2 color packs of 700 RTS per pail of 400 RTS) . Apply mixture at a rate of 64 sf/gal to yield 25 dry mils. May require 2 coats to achieve proper thickness.

F. Allow to cure for a minimum of two hours before filling with water.

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

3.4 CLEANING

A. Remove debris resulting from completion of coating operation from the project site.

3.5 PROTECTION

A. Feature may be filled with water a minimum of two hours after application.

END OF SECTION

Issued by: Hempel (USA) – Neogard RTS Water Feature Waterproofing

This Guide Specification supersedes those previously issued.

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