Guide Specification

RTS Vehicular System — PMMA/PUMA

Section 07 18 16 Vehicular Traffic Coatings

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 Vehicular System shall be a complete system of compatible materials supplied by Neogard to create a seamless coating with integral wearing surface.

B. Neogard RTS Vehicular System 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 vehicular traffic coating system.

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

1.4 QUALITY ASSURANCE

A. Supplier Qualifications: Neogard RTS Vehicular System, 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. Vehicular Traffic Coating Materials (Hempel product numbers in parentheses):
1. 800 RTS PMMA Cleaning Agent (66ZJB).
2. Filler: 900 RTS PMMA Filler (63ZJB).
3. Initiator: 600 RTS PMMA/PUMA Initiator (95UJB).
4. Primer: 100 RTS Concrete and Metal Primer (256JB).
5. Reinforcing Fabric (as needed): 86220 (63BJB) reinforcing fabric (Tietex T-272).
6. Aggregate: 7992 16/30 mesh silica quartz sand (66010).
7. Membrane: 200 RTS Membrane PUMA coating (870JB).
8. Body Coat: 300 RTS Flexible Body Coat PMMA coating (871JB).
9. Topcoat: 400 RTS Topcoat PMMA coating (872JB).
10. Pigment: 700 RTS series pigments (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. Low-temperature crack bridging, Pass at 40/60/80 mils, ASTM C1305

C. Typical physical properties of cured 300 RTS used on this project are:
   1. Tensile strength, 615 psi, ASTM D638
   2. Elongation, 204%, ASTM D638
   3. Shore A, 91, ASTM D2240
   4. Shore D, 41, ASTM D2240
   5. Low-temperature crack bridging, Pass at 40/60/80 mils, ASTM C1305
   6. Permeance, 0.53 US/0.35 Metric Perms, ASTM D1653
   7. MVT, 143.0mg m^2 1 hour/3.43g m^2 24 hours, ASTM E96

D. 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 m^2 1 hour/3.83g m^2 24 hours, ASTM E96

E. RTS Vehicular System meets Class A requirements for ASTM E108, "Standard Test Methods for Fire Tests of Roof Coverings."

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

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.

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 (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. Cracks, Cold Joints an Control Joints:
1. Moving Cracks: Apply 100 RTS PMMA Concrete and Metal Primer and fill with 200 RTS Membrane.
2. Non-Moving Cracks: Apply 100 RTS PMMA Concrete and Metal Primer and fill with 300 RTS Flexible Body Coat.
3. Strike coating flush with adjacent surfaces.

3.3 APPLICATION

A. 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. Garage, Turn Areas, Ramps, Drive Lanes System:
1. Primer: Apply 100 RTS at a rate of 90 sf/gal to yield 17 mils to all surfaces. Allow to dry approximately 45 minutes.
   a. Fine mesh aggregate (30-50 mesh or similar) may be broadcast into wet primer.
2. Membrane: Mix 200 RTS with 700 RTS series pigment at 0.25 lbs/gallon (2 color packs of 700 RTS per pail of 200 RTS). Apply at a rate of 26 sf/gal to yield 60 dry mils.
3. Flexible Body Coat: Mix 300 RTS with 900 RTS PMMA Filler at approximately 10 lbs/gallon (1 bag of 900 RTS per pail of 300 RTS). Apply mixture at a rate of 32 sf/gal to yield 50 dry mils. Immediately broadcast aggregate, evenly distributed, to refusal into wet coating (approximately 50 lbs/100 sf). When dry, remove excess aggregate.
4. Topcoat: Mix 400 RTS with 700 RTS series pigment at 0.25 lbs/gallon (2 color packs of 700 RTS per pail of 400 RTS). Apply at a rate of 64 sf/gal to yield 25 dry mils.
   a. Light colors may require 2 coats; system mockup will determine required coverage.

D. Extreme Service System:
1. Primer: Apply 100 RTS at a rate of 90 sf/gal to yield 17 mils to all surfaces. Allow to dry approximately 45 minutes.
   a. Fine mesh aggregate (30-50 mesh or similar) may be broadcast into wet primer.
2. Membrane: Mix 200 RTS with 700 RTS series pigment at 0.25 lbs/gallon (2 color packs of 700 RTS per pail of 200 RTS). Apply at a rate of 26 sf/gal to yield 60 dry mils.
3. Flexible Body Coat: Mix 300 RTS with 900 RTS PMMA Filler at approximately 10 lbs/gallon (1 bag of 900 RTS per pail of 300 RTS). Apply mixture at a rate of 18 sf/gal to yield 90 dry mils. Immediately broadcast aggregate, evenly distributed, to refusal into wet coating (approximately 90 lbs/100 sf). When dry, remove excess aggregate.
4. Topcoat: Mix 400 RTS with 700 RTS series pigment at 0.25 lbs/gallon (2 color packs of 700 RTS per pail of 400 RTS). Apply at a rate of 64 sf/gal to yield 25 dry mils.
   a. Light colors may require 2 coats; system mockup will determine required coverage.

E. 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.

B. Refer to the Neogard Vehicular Deck Coating Systems Maintenance Manual for typical cleaning methods.

3.5 PROTECTION

A. System may be opened to traffic 1 hour after application.

END OF SECTION

Issued by: Hempel (USA) – Neogard RTS Vehicular System

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.
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