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THERMO MATERIALS®
Since 1948
Eco-friendly, Sustainable Building Restoration Specialists

THERMOTHANE™ PEDESTRIAN CONCRETE DECK RESTORATION SYSTEM GUIDE SPECIFICATION

PART 1 GENERAL

1.1 SUMMARY

A. Provide labor, materials, equipment and supervision necessary to install a fluid-applied pedestrian traffic system to an existing or new concrete surface as outlined in this specification.

B. The manufacturer's application instructions for each product used are considered part of this specification and should be followed at all times.

C. Related Sections:
1. Section 03 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. **THERMOTHANE™ PEDESTRIAN CONCRETE DECK RESTORATION SYSTEM** shall be a complete system of compatible materials supplied by Thermo Materials® to create a seamless waterproof membrane.

B. **THERMOTHANE™** shall be designated for application on the specific type of deck indicated on the drawings.

1.3 SUBMITTALS

A. Product Data:
1. Submit Thermo Materials® product literature and installation instructions.

B. Project Reference List:
1. Submit list of projects as required by this specification.

C. Samples:
1. Submit samples of specified fluid-applied membrane pedestrian traffic system.
2. Samples shall be construed as examples of finished color and texture only.

D. Applicator Approval:
1. Submit letter from manufacturer stating applicator is approved to install the **THERMOTHANE™ PEDESTRIAN CONCRETE DECK RESTORATION SYSTEM**.

E. Warranty:
1. Submit a copy of the manufacturer's standard warranty.

1.4 QUALITY ASSURANCE

A. Supplier Qualifications:
1. **THERMOTHANE™ PEDESTRIAN CONCRETE DECK RESTORATION SYSTEM**, as supplied by Thermo Manufacturing Systems, is approved for use on this project.

B. Applicator Qualifications:
1. A single installer shall perform the work.

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2. The Applicator shall be approved by Thermo Manufacturing Systems to install the specified fluid-applied membrane system.
3. Manufacturer's written verification of applicator approval is required.

C. Requirement of Regulatory Agencies:
1. Materials used in the fluid-applied membrane pedestrian traffic system shall meet existing Federal, State and local VOC regulations.

D. Field Quality Control:
1. Upon completion of the **THERMOTHANE™ PEDESTRIAN CONCRETE DECK RESTORATION SYSTEM** installation, an inspection by Thermo Manufacturing Systems or its designated third party inspection company may be required.
2. Contact Thermo Manufacturing Systems for details.

1.5 DELIVERY, STORAGE AND HANDLING

A. Delivery:
1. Materials shall be delivered in manufacturer's original sealed containers with labels intact.

B. Storage and Handling:
1. Recommended material storage temperature is 40°F - 80°F. DO NOT FREEZE.
2. Handle products to avoid damage to containers.
3. Do not store for long periods in direct sunlight.
4. Keep product away from heat, sparks and open flame.

1.6 JOB CONDITIONS

A. Environmental Conditions:
1. Do not proceed with application of the fluid-applied membrane when deck temperature is less than 40°F.
2. Fluid-applied membrane shall not be applied during precipitation or when there is a probability of precipitation during application.
3. Do not apply materials unless surface to receive fluid-applied membrane is clean and dry.
4. Coordinate waterproofing 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 fluid-applied membrane to cure adequately.

B. Protection
1. Take all measures necessary to protect unrelated surfaces from fluid-applied membrane overspray or spillage.
2. Maintain work area in a neat and orderly condition. Remove empty containers, rags and rubbish daily from site.

1.7 WARRANTY

A. Applicator must be eligible for and submit application to Thermo Manufacturing Systems prior to job start/order acceptance to determine eligibility for warranty.

B. Upon request and after the project's completion and acceptance, following individual warranty guidelines, a fully executed specified warranty from Thermo Manufacturing Systems LLC shall be delivered to the Owner.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Thermo Manufacturing Systems, LLC, 301 Walnut Springs Road, PO Box 218, Lindale TX 75771, Toll Free (800) 882-7007, Fax (903) 881-8787, **www.thermomaterials.com**

2.2 MATERIALS

A. Fluid-Applied Membrane Pedestrian Concrete Deck Materials:

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1. Primer: Thermothane™ Clear Coat.
2. Flashing Mastic: Thermothane™ or Thermolene® SEBS Sealant. Standard colors are gray or white.
3. Aggregate: 16/30 mesh (Silica) sand or other aggregate approved by Thermo Materials®.
4. Base/Intermediate/Surface Fluid-Applied Membrane: Thermothane™. Standard colors are gray or white.

B. Physical properties of the fluid-applied membrane used on this project are:

PROPERTY	VALUE
Weight per Gallon	11.5 lbs ± 0.5 lbs
Solids Content by Weight	64% ± 2%
Viscosity (KU)	> 140
Viscosity (cPs)	9,000

2.3 ACCESSORIES

A. Miscellaneous materials such as cleaning agents, adhesives, backer rod, deck drains, etc. shall be a composite part of the deck system and shall be compatible with the specified fluid-applied membrane system.

B. All materials shall be applied and/or installed in accordance with its manufacturer's recommendations.

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 on exterior exposed deck.
   2. That the concrete has cured for a minimum of 28 days. (Minimum of 3,000 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 Thermo Materials®.
   3. That the concrete was finished by a power or hand steel trowel followed by soft hair broom to obtain light texture or "sidewalk" finish.
   4. That damaged areas of the concrete deck be restored to match adjacent areas. Use Thermothane™ and 16/30 aggregate for filling and leveling.

3.2 PREPARATION

A. Protection:
   1. Keep products away from heat, sparks and flames. Do not allow the use of spark producing equipment during application until vapors are gone. Post "No Smoking" signs.
   2. The overspray and/or solvents from spraying fluid-applied membrane materials can carry considerable distances and care should be taken to do the following:
      a. Post warning signs a minimum of 100 feet from work area.
      b. Set up windbreaks when needed.
      c. Minimize or exclude all personnel not directly involved with the fluid-applied membrane application.
      d. Have CO_2 or other dry chemical fire extinguishers available at the jobsite.
   3. Protect plants, vegetation and animals which might be affected by the fluid-applied membrane installation. Use drop cloths or masking as required.

B. Surface Preparation:
   1. Cleaning: Surfaces contaminated with oil or grease shall be vigorously scrubbed with a power broom and a strong non-bubbling detergent. Thoroughly wash, clean, and dry. Areas where oil or other contaminants penetrate deep into the concrete may require removal by mechanical methods.
   2. 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 deck surface. (NOTE: If shot-blasting is not practical, treat concrete surfaces with 10%-15% solution of muriatic acid to remove laitance and impurities. After acid has stopped foaming or boiling, immediately rinse thoroughly with water. Re-

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rinse as required to remove muriatic acid solution.) Shot-blasting and acid etching does not remove deep penetrating oils, grease, tar or asphalt stains. Proper cleaning procedures should be followed to insure proper bonding of the deck fluid-applied membrane.

3. Cracks and Cold Joints: Visible hairline cracks (up to 1/16" in width) in concrete and cold joints shall be cleaned, primed and treated with Thermothane™ a minimum distance of 2" on each side of crack to yield a total thickness of 30 dry mils. Large cracks (over 1/16" in width) shall be routed and sealed with Thermolene® SEBS Sealant. Thermolene® SEBS Sealant shall be applied to inside area of crack only, not applied to deck surface. Detail sealed cracks with Thermothane™ a distance of 2" on each side of crack to yield a total thickness of 30 dry mils.
4. Control Joints: Seal secondary control joints with Thermolene® SEBS Sealant. Thermolene® SEBS Sealant shall be applied to inside area of joint only, not applied to deck surface. Detail sealed joints with Thermothane™ a distance of 2" on each side of joint to yield a total thickness of 30 dry mils.
5. Surface Condition: Surface shall be clean and dry prior to fluid-applied membrane application.

3.3 APPLICATION

A. Seed and Lock Technique:
   1. Primer: Apply Thermothane™ Clear Coat at a rate of 1/3 gallon per 100 square feet (300 sf/gal) to all concrete surfaces in strict accordance with procedures outlined by Thermo Materials® and allow to cure. Within 24 hours of application of Thermothane™ Clear Coat, Thermothane™ base fluid-applied membrane must be applied. If Thermothane™ base fluid-applied membrane cannot be applied within 24 hours, re-prime surface after inspecting for surface contaminants and cleaning surface as necessary.
   2. Base Fluid-Applied Membrane: Thoroughly mix Thermothane™ and apply at a rate of 1-½ gallons per 100 square feet (66 sf/gal) to deck surfaces in strict accordance with procedures outlined by Thermo Materials®. Extend Thermothane™ base fluid-applied membrane over cracks and control joints which have received treatment. Allow to cure.
   3. Intermediate Fluid-Applied Membrane: Thoroughly mix Thermothane™ and apply at a rate of ½ gallon per 100 square feet (200 sf/gal) in strict accordance with procedures outlined by Thermo Materials® and immediately broadcast 16/30 aggregate, evenly distributed, into wet Thermothane™ at the rate of 10 pounds per 100 square feet. Allow to cure.
   4. Surface Fluid-Applied Membrane: When intermediate fluid-applied membrane is dry, remove excess aggregate and re-coat surface with thoroughly mixed Thermothane™ at a rate of 1 gallon per 100 square feet (100 sf/gal) in strict accordance with procedures outlined by Thermo Materials®. Total system thickness averages 38 DFT exclusive of aggregate.

Thickness values of cured film are averages and can vary due to finish of surface.

3.1 CLEANING

A. Surfaces not intended to receive the fluid-applied membrane shall be protected during the application of the system.

B. Should this protection not be effective, or not be provided, the respective surfaces shall be restored to their proper conditions by cleaning, repairing or replacing.

C. Remove debris resulting from the completion of the fluid-applied membrane installation from the project site.

3.2 PROTECTION

A. After completion of application, do not allow traffic on fluid-applied membrane surface for a period of at least 48 - 72 hours at 75°F, and 50% R.H., or until completely cured.

END OF SECTION

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