



THERMOLASTIC® SOLAR SHIELD® CSPE HYPALON® ROOF RESTORATION SYSTEM GUIDE SPECIFICATION

PART 1 GENERAL

1.1 SUMMARY

- A. Provide labor, materials, equipment and supervision necessary to install a seamless, fully adhered, fluid-applied roofing system over new or existing fully-adhered and/or mechanically-fastened single-ply roof membranes as outlined in this specification. Note: Not intended for use over ballasted single-ply roof membranes. Contact THERMO MATERIALS® for recommendations.
- 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. Cast-in-Place Concrete: Section 03 30 ___.
 - 2. Metal Decking: Section 05 30 ___.
 - 3. Wood Decking: Section 06 15 ___.
 - 4. Thermal Protection: Section 07 20 ___.
 - 5. Membrane Roofing: Section 07 50 ___.
 - 6. Flashing & Sheet Metal: Section 07 60 ___.
 - 7. Roof Accessories: Section 07 72 ___.
 - 8. Sealants: Section 07 92 ___.

1.2 SYSTEM DESCRIPTION

- A. THERMOLASTIC® SOLAR SHIELD® CSPE HYPALON® ROOF RESTORATION SYSTEM shall be a complete system of compatible materials to create a seamless waterproof roofing membrane.
- B. THERMOLASTIC® SOLAR SHIELD® CSPE HYPALON® ROOF RESTORATION SYSTEM shall be designated for application on the specific type of deck indicated on the drawings.

1.3 SUBMITTALS

- A. Product Data: Submit THERMOLASTIC® SOLAR SHIELD® CSPE HYPALON® ROOF RESTORATION SYSTEM product literature and installation instructions.
- B. Project Reference List: Submit list of projects as required by this specification.
- C. Samples: Submit samples of specified fluid-applied roof system. Samples shall be construed as examples of finished color and texture only.
- D. Applicator Approval: Submit letter from manufacturer stating applicator is approved to install the THERMOLASTIC® SOLAR SHIELD® CSPE HYPALON® ROOF RESTORATION SYSTEM.
- E. Warranty: Submit copy of manufacturer's standard warranty.

1.4 QUALITY ASSURANCE

- A. Supplier Qualifications: THERMOLASTIC® SOLAR SHIELD® CSPE HYPALON® ROOF RESTORATION SYSTEM, as supplied by THERMO MATERIALS® is approved for use on this project.
- B. Applicator Qualifications: Applicators shall be approved to install specified system.

- C. Requirements of Regulatory Agencies:
1. The fluid-applied roof membrane system shall be rated Class "A" (Spread of Flame) per ASTM E108.
 2. Materials used in the fluid-applied roof membrane system shall meet Federal, State and local VOC regulations.
- D. Field Quality Control: Upon completion of the THERMOLASTIC® SOLAR SHIELD® CSPE HYPALON® ROOF RESTORATION SYSTEM installation, an inspection by THERMO MATERIALS® or its designated third party inspection company may be required. Consult THERMO MATERIALS® for details.

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 (23.8°C). Handle products to avoid damage to containers. Do not store for long periods in direct sunlight.

1.6 JOB CONDITIONS

- A. Environmental Conditions:
1. Do not proceed with application of fluid-applied materials when surface temperature is less than 40°F (4.4°C) or if precipitation is imminent.
 2. Do not apply material unless surface to receive fluid-applied membrane is clean and dry.

1.7 WARRANTY

- A. Upon request, THERMO MATERIALS® shall offer the manufacturer's standard warranty upon receipt of a properly executed application for warranty request form.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. THERMO MATERIALS®, 301 Walnut Springs Rd., Lindale, TX 75771, Toll Free (800) 882.7007, Fax (903) 881-8787, www.thermomaterials.com.

2.2 MATERIALS

- A. Fluid-Applied Roofing Materials:
1. Cleaner: Thermoclean® surface cleaner, and plenty of clean water.
 2. Primer: Thermo SEBS Acrylic Primer.
 3. Elastomeric Base/Intermediate Membrane: Thermolastic® Solar Shield®. Standard colors are gray or white.
 4. Elastomeric Top Membrane: Thermolastic® Solar Shield®. Standard colors are gray or white.
 5. Flashing/Reinforcement Fabric: Thermopolyester SB-075 or Self-adhering Thermotape.
 6. Sealant: Thermolastic® Acrylic Caulk.
 7. Flashing Mastic: Thermolastic® Fibrated Acrylic Mastic. (Drains, Penetrations, Curbs, Parapet Walls, Scuppers).
 8. Pitch Pan Sealant: Thermolene® SEBS Pitch Pan Sealant (Restoring Old Pitch Pans).
 9. Gas Line Product: Thermolene® SEBS Safety Yellow Membrane (Restore Old Exterior Gas Lines).
- B. Typical physical properties of cured fluid-applied roofing materials used on this project are:

PERFORMANCE REQUIREMENTS OF CURED FILM			
PHYSICAL PROPERTIES	TEST METHOD	BASE COAT	TOPCOAT
Tensile Strength	ASTM D412	330 psi	330 psi
Elongation	ASTM D412	330%	330%

Permanent Set	ASTM D412	<10%	<10%
Tear Resistance	ASTM D1004	100 lb/in	100 lb/in
Water Resistance	ASTM D471	<3% @ 7 days	<3% @ 7 days
Taber Abrasion (cs17), max	ASTM D4060	N/A	45 mg/1,000 rev
Shore A	ASTM D2240	65-75	65-75
Adhesion	ASTM D903	5 pli+	5 pli+
Weathering Resistance	ASTM D822	N/A	N/A
Thermal Shock	Alternate Heat/Cold	No Loss of Adhesion	No Loss of Adhesion

2.3 ACCESSORIES

- A. Fabric reinforcement and waterproofing coverings for expansion joints shall be compatible with specified fluid-applied roofing system.
- B. Miscellaneous materials such as adhesives, metal primers, metal vents and drains shall be a composite part of the roof system and shall be compatible with the fluid-applied roofing system.
- C. Granules (Optional): Consult THERMO MATERIALS® for recommendations.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Inspect roof surfaces to insure they are clean, smooth, sound, properly prepared and free of moisture, dirt and debris or other contamination.
- B. Verify structural decking is securely supported and attached.
- C. Verify all roof penetrations, mechanical equipment, cants, gravel stops and all other on-roof items are in place and secure.
- D. Verify the membrane is either fully adhered or the mechanical fasteners are in-place and functional.
- E. Verify the membrane is essentially intact and has not failed to the point necessitating a complete tear-off.
- F. Verify all critical areas in the vicinity of the application area are suitably protected.
- G. Verify that there are no areas of ponding water concerns on any part of the roof that will not dry up within 48 hours.

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 and until vapors are gone. Post "No Smoking" signs.
 - 2. The overspray and/or solvents from spraying fluid-applied roofing materials can carry considerable distances and care should be taken to do the following:
 - a. Post warning signs a minimum of 100 feet from the work area.
 - b. Close air intakes into building and/or air conditioner intakes.
 - c. Set up windbreaks when needed.
 - d. Minimize or exclude all personnel not directly involved with the fluid-applied application.
 - e. Have CO₂ or other dry chemical fire extinguishers available at the jobsite.
 - f. Provide adequate ventilation.
 - 3. Protect plants, vegetation and animals which might be affected by the fluid-applied membrane. Use drop cloths or masking as required.
- B. Surface Preparation:
 - 1. Remove all unnecessary and non-functional equipment and debris from the roof.

2. Remove dirt, and foreign material detrimental to adhesion or application of fluid-applied roofing by thoroughly cleaning all roof surfaces with a high-pressure (3,000 psi) wash Power-washer, and Thermoclean® surface cleaner. Surfaces contaminated with oil, grease, animal fats, etc. must be removed using Minimum 3,000 P.S.I. Power-washer, and Thermoclean® surface cleaner.as required by job conditions. Remove all cleaning solutions with plenty of fresh water. Note: If algae is present on the surface, the cleaning must include bleach in the washing of the substrate.
3. Membranes with seam and flashing failure shall be 3-course detailed with *Thermopolyester SB-075 Polyester or Self-adhering Therмотape, and Thermolastic® Fibrated Acrylic Mastic* (*20 linear foot average per gallon of completed 3-course detail @ 6" wide*). *Fluid-applied repair shall extend a minimum of 3 inches beyond the edges of the repair*.
4. Round projections, machine legs, sign posts, guide wire straps, inside and outside corners, etc. can be treated using Thermolastic® acrylic sealant, or Thermolastic® Fibrated Acrylic Mastic.
5. Seal watertight gutters, parapet walls and caps. Repair any damaged metal. Seal watertight all screws, seams, skylights, joints, pipes, voids, protrusions, and areas where water could enter through the roof with Thermolastic® acrylic sealant, or Thermolastic® Fibrated Acrylic Mastic.
6. Clean and seal all drains watertight.
7. Allow roof and other prepared surfaces to dry completely before proceeding with priming and/or fluid-applied membrane application.

3.3 APPLICATION

A. Fluid-Applied Roofing:

10 Year Warranty Requirements

Surface Preparation/System Application:

1. Cleaner: Thermoclean® surface cleaner, and plenty of clean water.
2. Base Membrane: Apply Thermolastic® Solar Shield® fluid-applied base membrane at a rate of 1.5 gallons per 100 square feet to all surfaces that will receive the fluid-applied roofing system to yield an average of 24 wet mils in strict accordance with procedures outlined by THERMO MATERIALS®.
3. Top Membrane: When dry, apply Thermolastic® Solar Shield® fluid-applied top membrane at a rate of 1.5 gallons per 100 square feet to yield an average of 24 wet mils. Application of this pass shall be in a perpendicular direction to the previous fluid-applied membrane. *Total system of fluid-applied membrane thickness to average 48 wet mils or 36 DFT*.

***Note: Thickness values of cured film are averages and can vary due to finish of surface. High sloped roofs may require additional fluid-applied membrane to achieve specified dry film thickness.**

15 Year Warranty Requirements

Requires Pre-Approval. Please contact Thermo for details.

3.4 CLEANING

- A. Remove debris, resulting from completion of fluid-applied roofing operation, from the project site.

3.5 PROTECTION

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

END OF SECTION

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THERMO MATERIALS®

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