



THERMOLASTIC® SOLAR SHIELD® MB/BUR 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 smooth or mineral surfaced built-up and modified bitumen roofing as outlined in this specification. Note: Not intended for use over gravel-surfaced 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. Flashing & Sheet Metal: Section 07 60 ___.
 6. Roof Accessories: Section 07 72 ___.
 7. Joint Sealants: Section 07 92 ___.

1.2 SYSTEM DESCRIPTION

- A. THERMOLASTIC® SOLAR SHIELD® MB/BUR ROOF RESTORATION SYSTEM shall be a complete system of compatible materials to create a seamless waterproof roof membrane.
- B. THERMOLASTIC® SOLAR SHIELD® MB/BUR 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 THERMO MATERIALS® product literature and installation instructions.
- B. Samples: Submit cured samples of specified 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 specified system.
- E. Warranty: Submit a copy of the THERMO MATERIALS® warranty to meet project specifications.

1.4 QUALITY ASSURANCE

- A. Supplier Qualifications: THERMOLASTIC® SOLAR SHIELD® MB/BUR ROOF RESTORATION SYSTEM, as supplied by THERMO MATERIALS® is approved for use on this project.
- B. Applicator Qualifications: The Applicator shall be approved by THERMO MATERIALS® to install the THERMOLASTIC® SOLAR SHIELD® MB/BUR ROOF RESTORATION SYSTEM fluid-applied roofing system. Manufacturer's written verification of applicator approval is required.

- 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® MB/BUR 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 membrane is clean and dry.
 3. Take all measures necessary to protect unrelated surfaces from membrane overspray or spillage.

1.7 WARRANTY

- A. A warranty is available for institutional, commercial, industrial, and high-rise/multi-family residential projects only. Applicator must be eligible for, and make application to THERMO MATERIALS® upon completion of fluid-applied roofing system.
- B. As a condition of the project's completion and acceptance, deliver to the Owner, a copy of the fully executed specified warranty from THERMO MATERIALS® following individual warranty guidelines.

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. Elastomeric Base Membrane: Thermolastic® Solar Shield®. Standard colors are gray or white.
 3. Elastomeric Intermediate/Top Membrane: Thermolastic® Solar Shield®. Standard colors are gray or white.
 4. Flashing/Reinforcement Fabric: Thermopolyester SB-075 or Self-adhering Thermotape.
 5. Sealant: Thermolastic® acrylic sealant by THERMO MATERIALS®.
 6. Flashing Mastic: Thermolastic® Fibrated Acrylic Mastic (Drains, Penetrations, Curbs, Parapet Walls, Scuppers).
 7. Pitch Pan Sealant: Thermolene® SEBS Pitch Pan Sealant (Restoring Old Pitch Pans).
 8. 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	INTERMEDIATE/ TOPCOAT
Tensile Strength	ASTM D412	330 psi	330 psi
Elongation	ASTM D412	330%	330%
Permanent Set	ASTM D412	<8%	<8%
Tear Resistance	ASTM D1004	51 lb/in	100 lb/in
Water Resistance	ASTM D471	<3% @ 7 days	<3% @ 7 days
MVT @ 30 mils	ASTM E96	N/A	N/A
Taber Abrasion	ASTM D4060	N/A	N/A
Shore A	ASTM D2240	65-75	65-75
Adhesion	ASTM D903	5pli+	5pli+
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. Miscellaneous materials such as adhesives, expansion joints and drains shall be compatible with the fluid-applied roofing system and approved by THERMO MATERIALS®. All materials shall be applied and/or installed in accordance with its manufacturer's recommendations.
- B. 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.
- 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 all roof drains are clean and in working order.
- E. Verify that all air conditioning and air intake vents are suitably protected or closed.
- 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. Mask off or cover all air intakes near the work area to prevent odors from entering occupied areas of the building or structure.

- c. Set up wind breaks when needed.
 - d. Minimize or exclude all personnel not directly involved with the fluid-applied roofing 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 roofing installation. Use drop cloths or masking as required.

B. Surface Preparation:

1. All MB surfaces, whether old or new, shall be cleaned using plenty of Thermoclean[®] surface cleaner, and fresh water. Thoroughly rinse with fresh water under high pressure (minimum 3,000 psi) to remove the contaminants/pollutants from the roof surface. The use of stiff-bristle brooms or mechanical scrubbers may be required to remove heavy deposits of dirt, algae, mold, animal fats, and other contaminants from surface. Note: If algae is present on the surface, the cleaning must include bleach in the washing of the substrate. Allow roof surface to thoroughly dry.
2. Remove all existing abandoned mechanical equipment, deteriorated roofing materials, adhesives and foreign materials down to sound substrate. Replace these areas with similar materials to match existing roof level. The width, adhesion and/or fastening requirements of the new material must be compatible with the existing roof and meet local codes. Seal all edges as described in Section 3.2 B5 of this guide specification.
3. **Wet/Saturated areas shall be removed.** Replace with similar roofing materials to match existing roof level. The width, adhesion and/or fastening requirements of the new material must be compatible with the existing roof and meet local codes. Seal all edges as described in Section 3.2 B5 of this guide specification.
4. Flashings can be repaired using *Thermo SB-075 Polyester or Self-adhering Therмотape, and Thermolastic[®] Fibrated Acrylic Mastic* (*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*. If flashings are damaged beyond repair, flashing must be replaced with similar type roofing materials and must be compatible with existing roofing system. The membrane should be installed per the manufacturer's written specification, to bring the flashings back to a water tight condition.
5. 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.
6. Repair all blisters, splits, fishmouths, seams, holes, and other surface imperfections of the roof and flashing areas with similar roofing materials. The width, adhesion and/or fastening requirements of the new material must be compatible with the existing roof and meet local codes. Over the repair, use*Thermopolyester SB-075 or Self-adhering Therмотape, and Thermolastic[®] Fibrated Acrylic Mastic* (*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*.
7. Thoroughly clean all exposed metal surfaces such as pipe sleeves, drains, boxes, ducts, etc. remove all loose paint, rust and asphalt or loose roofing materials of any kind.
8. Seal watertight gutters, parapet walls and caps. Repair any damaged metal. Seal watertight all screws, seams, skylights, joints, pipes, voids, protrusions and any areas where water could enter through the roof with Thermolastic[®] acrylic sealant, or Thermolastic[®] Fibrated Acrylic Mastic.
9. Clean and seal all drains watertight.
10. Allow roof and other prepared surfaces to dry completely before proceeding with fluid-applied membrane application.

3.3 APPLICATION

A. Fluid-Applied Roofing:

10 Year Warranty Requirements

1. Cleaner: Thermoclean[®] surface cleaner, and plenty of clean water.
2. Base Membrane: Apply Thermolastic[®] Solar Shield[®] @ a rate of 1.5 Gallons per 100 square feet.
3. Top Membrane: Apply Thermolastic[®] Solar Shield[®] @ a rate of 1.5 gallons per 100 square feet in strict accordance with procedures outlined by THERMO MATERIALS[®], and allow to cure. Application of top membrane shall be in a perpendicular direction to the previous pass.

Total system of fluid-applied membrane to average 48 wet mils or 36 DFT.

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

15 Year Warranty Requirements

Requires Pre-Approval. Please contact Thermo for details.

3.4 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Inspection by the fluid-applied membrane manufacturer's representative may be required to verify the proper installation of the system. Any areas that do not meet the minimum standards for application as specified herein shall be corrected at the contractor's expense. Manufacturer's inspection or verification shall not constitute acceptance of responsibility for any improper application of material.

3.5 CLEANING

- A. Surfaces not intended to receive the THERMOLASTIC® SOLAR SHIELD® MB/BUR ROOF RESTORATION system shall be protected during the application of the system. 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. All debris from completion of work shall be completely removed 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

The information, data and suggestions contained herein are believed to be reliable, based upon our knowledge and experience; however, it is expressly declared that Seller does not guarantee the result to be obtained in Buyer's process. **SELLER HEREBY EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY FOR FITNESS FOR A PARTICULAR PURPOSE AND/OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED** as to any and all products and/or suggestions described herein, whether such products are used alone or in combination with other materials. Buyer must make its own determination of the suitability of any product for its use, and the completeness of any information contained herein. Nothing contained herein shall be construed to constitute inducement or recommendation to practice any invention covered by any patent without authority from the owner of the patent. Applicator is an independent contractor of, and should under no circumstances be viewed as an employee or agent of, THERMO MATERIALS®.
Solar Shield®MB/BURRoof09102012.

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