

THERMOTEK™ TORCH SYSTEM MODIFIED BITUMEN MEMBRANE OVER POLYISOCYANURATE

TORCH MODIFIED BITUMEN MEMBRANE OVER POLYISOCYANURATE BS-TH/CS



1. THERMOTEK™ USA PRO POLYESTER 2.0 BASE SHEET
2. THERMOTEK™ USA PRO POLYESTER GRANULATED

COMPONENTS AND WEIGHTS

	Coat	Product	Coverage (100 sq. ft.)	Dry Weight Lb			Dry Mils		
				4.0 mm	4.5 mm	5.0 mm	4.0 mm	4.5 mm	5.0 mm
SYSTEM	1	THERMOTEK™ USA PRO POL.2.0 BS	150 sq ft	46.9 LBS/SQ			78.74 Mils		
	2	THERMOTEK™ USA PRO POL. GRAN.	89 sq ft	97.93 LBS/SQ	108.78 LBS/SQ	120.15 LBS/SQ	157.48 Mils	177.17 Mils	196.85 Mils
	SYSTEM			144.83 LBS/SQ	155.68 LBS/SQ	167.05 LBS/SQ	236.22 Mils	255.91 Mils	275.59 Mils
CRITICAL POINTS	THERMOTEK™ DURA MASTIC		Variable	Variable			Variable		
	THERMOTEK™ USA PRO POL 2.0 BS		Variable	Variable			Variable		
OPTIONAL TITLE 24	1	THERMOTEK™ COATING	1 gallon	SILVER + 6.24 LBS/SQ	GOLD + 7.25 LBS/SQ	PLATINUM + 7.67 LBS/SQ	SILVER + 6.86 Mils	GOLD + 8.06 Mils	PLATINUM + 8.2 Mils
	2	THERMOTEK™ COATING	1 gallon	6.24 LBS/SQ	7.25 LBS/SQ	7.67 LBS/SQ	6.86 Mils	8.06 Mils	8.2 Mils
	ADD TO SYSTEM			+ 12.48 LB/SQ	+ 14.5 LB/SQ	+ 15.34 LB/SQ	+13.72 Mils	+16.12 Mils	+16.4 Mils

*Approximate measures

PART 1 – GENERAL

1.1 SUMMARY

This document provides the specifications for the application of our product to roofing surface. These specifications should be used only as a general guide, with the addition of specific details as different job conditions.

These tools include roofing products, coverage rate, installation procedures with THERMOTЕК™ Roofing Products and complementary products. Final determination of the fitness of the application of any THERMOTЕК™ Roofing products shall not be made by anyone other than an authorized representative of THERMOTЕК™ Roofing Products.

1.2 APPLICABLE PUBLICATIONS

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only:

- A. American Society for Testing and Materials Publication (ASTM).
- B. Underwriters Laboratories Inc. (UL).
- C. CRRC – Cool Roof Rating Council.
- D. California Building Standards Code - Title 24.
- E. THERMOTЕК™ Details, Drawings and Notes

1.3 QUALITY CONTROL

- A. Warranty: THERMOTЕК™ GROUP guarantees that since our products are shipped from the production plant they will be free of manufacturing defects and defective materials. Liability, if any, is limited to product replacement from the completion date of the work.
- B. The manufacturer: shall certify that submitted materials have been actively engaged in the manufacture industry for a minimum period of 10 years prior to submittals.
- C. Applicator Qualifications:
 - 1) Applicators shall have a minimum of 5 years experience in the application of roofing materials.
 - 2) The manufacturer shall certify that the contractor possesses a current “Qualified Applicator” Certificate and that is authorized for the application of their materials.
 - 3) The applicator shall have general knowledge and understanding of roofing, as well for all THERMOTЕК™ Roofing Products for any given specified project.
 - 4) For all warranties, a firm which has complete business stability shall perform the work in this section: present a copy of certification upon request by the Architect or the owner.
 - 5) The installer, owner or Architect must review all the documents related to all critical points and check list.
 - 6) For different roofing details and/or terms and conditions for warranty, the installer, owner or architect must contact a THERMOTЕК™ Technical Representative. All issues concerning the roof must be resolved in writing.

1.4 SUBMITTALS

In the normal course of bidding, descriptive literature, technical data, and wet or dry samples of all proposed materials for their use under these specifications, shall be submitted upon request.

1.5 JOB CONDITIONS

To proceed with proper conditions, the applicator must be aware of the following:

- A. UV curing time for all products is critical. The applicator must allow sufficient cure time for each product. Please be aware that outside temperatures will be a factor.
- B. Do not begin work if rain or heavy dew is expected within twenty-four to forty-eight (24-48) hours after application.
- C. Do not begin work if temperatures are expected to fall below 50 °F and increase over 104 °F during the installation.
- D. Consider that other environmental conditions such as humidity, mist, dew, extreme temperatures and condensation, can affect products in an inconsistent way.
- E. This product has better drying with high humidity.

1.6 PRODUCT STORAGE AND HANDLING

All the time, the THERMOTЕК™ products should be stored at a temperature above 40 °F, in a warm, dry, clean and well-ventilated area.

1.7. PROTECTION OF PROPERTY

The contractor shall take proper precautions to protect owner’s property against damage and overspray. The use of shield boards, maskings and protective coverings shall be necessary. THERMOTЕК™ is not responsible for damages caused by the overspray of any of its products.

PART 2 – PRODUCTS

COMPONENTS AND WEIGHTS

	Coat	Product	Coverage (100 sq. ft.)	Dry Weight Lb			Dry Mils		
				4.0 mm	4.5 mm	5.0 mm	4.0 mm	4.5 mm	5.0 mm
SYSTEM	1	THERMOTЕК™ USA PRO POL.2.0 BS	150 sq ft	46.9 LBS/SQ			78.74 Mils		
	2	THERMOTЕК™ USA PRO POL. GRAN.	89 sq ft	97.93 LBS/SQ	108.78 LBS/SQ	120.15 LBS/SQ	157.48 Mils	177.17 Mils	196.85 Mils
	SYSTEM			144.83 LBS/SQ	155.68 LBS/SQ	167.05 LBS/SQ	236.22 Mils	255.91 Mils	275.59 Mils
CRITICAL POINTS	THERMOTЕК™ DURA MASTIC		Variable	Variable			Variable		
	THERMOTЕК™ USA PRO POL 2.0 BS		Variable	Variable			Variable		
OPTIONAL TITLE 24	1	THERMOTЕК™ COATING	1 gallon	SILVER +	GOLD +	PLATINUM +	SILVER +	GOLD +	PLATINUM +
				6.24 LBS/SQ	7.25 LBS/SQ	7.67 LBS/SQ	6.86 Mils	8.06 Mils	8.2 Mils
	2	THERMOTЕК™ COATING	1 gallon	6.24 LBS/SQ	7.25 LBS/SQ	7.67 LBS/SQ	6.86 Mils	8.06 Mils	8.2 Mils
ADD TO SYSTEM			+ 12.48 LB/SQ	+ 14.5 LB/SQ	+ 15.34 LB/SQ	+13.72 Mils	+16.12 Mils	+16.4 Mils	

*Approximate measures.

OPTIONAL - for a REFLECTIVE FINISH the applicator should add THERMOTЕК COATING to the THERMOTЕК™ TORCH SYSTEM - MODIFIED BITUMEN MEMBRANE OVER POLYISOCYANURATE (TITLE 24 COMPLIANCE).

2.1 MATERIALS

A. SYSTEM

- THERMOTЕК™ USA PRO POLYESTER 2.0 BASE SHEET
- THERMOTЕК™ USA PRO POLYESTER GRANULATED

B. CRITICAL POINTS

- THERMOTЕК™ DURA MASTIC
- THERMOTЕК™ USA PRO POLYESTER 2.0 BASE SHEET

C. OPTIONAL

- THERMOTЕК™ ACRYLIC ELASTOMERIC COATING

2.2 PRELIMINARY DETAILED INSPECTION

Inspect the preliminary work area and flashing details for problem areas (e.g. gaps, cracks, fishmouths, air pockets, etc.) to ensure the work be satisfactorily completed. Inform project Architect and THERMOTЕК™ Technical representative when all preliminary work and flashing details are completed, in order the installer gets ready to proceed with application of THERMOTЕК™ TORCH SYSTEM - MODIFIED BITUMEN MEMBRANE OVER POLYISOCYANURATE. Allow a minimum of two weeks for the interim inspection. Any final roofing installation prior to this interim inspection is subject to rejection by the project Architect and/or the THERMOTЕК™ Technical representative. Please be aware that technical on-site support for instructing certified contractors in the proper application of the THERMOTЕК™ TORCH SYSTEM - MODIFIED BITUMEN MEMBRANE OVER POLYISOCYANURATE is available.

2.3 PROCEDURE, COVERAGE RATE & APPLICATION INSTRUCTIONS

THERMOTЕК™ TORCH SYSTEM - MODIFIED BITUMEN MEMBRANE OVER POLYISOCYANURATE is approved for application over ply-wood roofing which have a good drainage.

- A. SURFACE PREPARATION: the surface must be clean, dry and free of dust, dirt, grease, wax, or other incompatible substances that may interrupt the proper adherence of the new fluid applied:

- 1) Remove all loose particles on the roof by sweeping or vacuum.

- 2) For coating or repairing, the surface must be clean, dry and free of dust, dirt, grease, wax, or other incompatible substances.
- 3) When multiple layers of insulation are installed, all the joints between them should be staggered. Insulation greater than 2.5 inches shall be installed in multiple layers.
- 4) The insulation must be kept dry and roofed promptly after installation. Install only as much insulation as can be completely covered with the roofing membrane before the end of the day's work.
- 5) The edges must fit neatly against adjoining surfaces to provide a smooth overall surface. Gaps greater than 1/4 inch width shall be filled with insulation.
- 6) Install tapered insulation around roof drains and penetrations to provide adequate slope for proper drainage.
- 7) Mechanically attached insulation shall be fastened in accordance with FM Approvals requirements for the applicable geographic zone with the required number and type of fasteners and plates. Exception: where Polyglass requirements are severe compared to FM Approvals or third party manufacturers, Polyglass requirements shall be followed unless otherwise required by the applicable Code or Approval agency.
- 8) All necessary repairs to the existing roof shall be made according to NRCA (National Roofing Contractors Association) guidelines.
- 9) The substrate to which the THERMOTЕК™ roof system will be installed must:
 - Be smooth, flat and clean.
 - Be free of foreign materials that could damage the system.

B. SUBSTRATE CONDITIONS: the roofing contractor is responsible to ensure that the substrate is acceptable or the THERMOTЕК™ roof system.

- 1) THERMOTЕК™ Technical representative must present to the owner a completed inspection form verifying the substrate condition and any noted defects not specifically addressed in regard to this installation.
- 2) The surface shall be free from dirt, loose adhered granules, oil, debris and moisture, it shall be in stable condition. Any work on the area to receive this application shall be completed prior to installation.
- 3) Prior starting coating or restoring the roof, the applicator shall complete the substrate inspection. The architect, owner and applicator must agree that the surface is in acceptable condition. After this, the THERMOTЕК™ Technical Representative will begin the work.

C. APPLICATION INSTRUCTIONS:

- 1) THERMOTЕК™ USA PRO POLYESTER 2.0 BASE SHEET application: apply THERMOTЕК™ USA PRO POLYESTER 2.0 BASE SHEET, the fasteners to attach must be 1 inch (25mm) plus the thickness of the Polyisocyanurate, the number of Fasteners varies from state to state, please refer the proper building code. The coverage rate¹ for THERMOTЕК™ USA PRO POLYESTER 2.0 BASE SHEET will be a 2.70 SQ (theoretical coverage)
- 2) CRITICAL POINTS: review all critical points over the surface and repair them with THERMOTЕК™ DURA MASTIC and THERMOTЕК™ USA PRO POLYESTER 2.0 BASE SHEET.
- 3) THERMOTЕК™ USA PRO POLYESTER GRANULATED application. Apply THERMOTЕК™ USA PRO POLYESTER GRANULATED. The coverage rate for THERMOTЕК™ USA PRO POLYESTER GRANULATED is a 0.89 SQ (theoretical coverage).
- 4) THERMOTЕК™ ACRYLIC ELASTOMERIC COATING APPLICATION (OPTIONAL): for a REFLECTIVE FINISH (according TITLE 24 COMPLIANCE) apply THERMOTЕК™ ACRYLIC ELASTOMERIC COATING over the entire surface. The coverage rate for THERMOTЕК™ ACRYLIC ELASTOMERIC COATING will be 2.0 gallons per 100 square feet, two coats of 1.00 gallon per 100 square feet.
- 5) Finally, the applicator shall repair and/or replace any defective work found at the end of the job, before any warranties will be issued..

Note: Drying time depends on weather conditions such as temperature, humidity and air movements. The above drying times assume good weather (70 ° F daytime temperature) and NO RAIN. Conditions of lower temperature and rain will require a longer period for drying. The coverages contained herein are theoretical and these may vary depending on the surface roughness and the weather at the time of application. Existing foam and/or insulation roofs with extensive delamination or blistering of the foam, APP and/or the coating system, major wet areas, saturated foam, etc., will require total removal and possible replacement as per local building codes. When situations are questionable, Thermotek™ Technical Representative shall be contacted for recommendations. In all cases of prospective re-coats or initial 1st coat applications should be verified as to moisture content by survey, i.e. infra-red, in conjunction with core cuts and moisture readings. If moisture is present, the roof must be allowed to dry completely before proceeding the coating application.

¹COVERAGE RATE: the texture and porosity of the existing roof may affect the coverage rate.

PART 3 – WARRANTY

3.1 CARE AND MAINTENANCE PROGRAM

Please read our THERMOTЕК™ PRODUCT LIMITED WARRANTY¹ to verify our available warranty periods.

NOTE: To maintain an optimal performance of the roof system, the owner must recoat the surface with the THERMOTЕК™ ACRYLIC ELASTOMERIC COATING used in the system at a rate of 1.5 gal/SQ, after the first 10 years, and then, every 5. For additional warranty questions please contact THERMOTЕК™ Technical and Warranty Services department.

PART 4 – CARE AND MAINTENANCE

4.1 CARE AND MAINTENANCE PROGRAM

In order to ensure that your THERMOTЕК™ Roofing Products will continue performing to its fullest, you should follow, implement and satisfy this THERMOTЕК™ Care and Maintenance Program².

- A. Maintain a file for all records relating to your roof, including the THERMOTЕК™ Roofing Products agreements, reports, invoices, repair and maintenance bills, original drawings and specifications, etc.
- B. Inspect the roof and coating at least twice each year, preferably in spring and fall. The most common areas of damage or distress are drainage points, penetrations, perimeter flashings and traffic areas.
- C. The surface should always be clean and white. Pressure wash the coating as needed (at least once every 12 months) in order to remove all dirt and debris off the surface. Use THERMOTЕК™ WASH and clean water with an appropriate pressure washing equipment (1500 psi – 1 ft away), *do not use anything but clean water* unless THERMOTЕК™ Roofing Products (in such case, use only approved wash products).
- D. Inspect for damage after severe weather conditions, such as hailstorms, heavy rains, high winds, acts of God, etc.
- E. Arrange the prompt and necessary repairs to correct non-guaranteed conditions affecting the roof surface. Repairs to the surface must be promptly performed with THERMOTЕК™ Roofing Products, approved contractors with approved products, and repair methods that are consistent with the type and quality of the warranted coating, in order that such repairs will last as long as the THERMOTЕК™ Roofing Products.
- F. Regularly remove any debris, such as leaves, branches, dirt, rocks, bottles, rubbish... that may accumulate on the roof surface. Clean rain gutters, downspouts, scuppers, and surrounding roof areas ensure proper drainage.
- G. Examine all metal flashings, counter flashings, expansion joints and pitch pockets for repairing: rust, detachment, deteriorated sealant, and any damage. If it is necessary, reattach loose metalwork, replace sealant and paint rusted areas.
- H. Examine masonry walls and copings for cracks, bad mortar joints, deteriorated sealant, loose masonry/coping stones, and indications of bad water absorption. Repair all such conditions to prevent water filtration.
- I. Examine rooftop equipment such as air conditioners, ductwork, gooseneck vents, powered ventilators, evaporative coolers, antennas, equipment screens, skylights, satellite dishes, etc. For the excessive movement, spillage of coolant, condensation, oil, grease, water/liquid release, etc. Damage to sheet metal cabinets and rubber or fabric gaskets may allow water filtration. Employ, keep and maintain drainage systems for release of water from rooftop equipment to avoid surface water buildup. Keep all roof top equipment in good conditions.
- J. Inspect with frequency for any cracks, blistering, or flaking. Contact a THERMOTЕК™ Roofing Products representative for repairing. Any such cracks, blistering or flaking must be recoat/patch with approved THERMOTЕК™ products.
- K. Minimize rooftop traffic. Establish paths which confine roof traffic to designated areas only. Service personnel should take care to avoid dropping tools, equipment, parts, etc. on the roof surface; also they should not make any penetrations or repairs to the coating. All the work affecting the coating must be performed by an approved THERMOTЕК™ Roofing Products contractor.

END OF SECTION

¹LIMITED WARRANTY - We as THERMOTЕК GROUP guarantee that since our products are shipped from the production plant they will be free of manufacturing defects; all the recommendations contained herein follow tests we consider as reliable and are subject to change without prior notice. THERMOTЕК GROUP does not assume any responsibility for coverage, performance on injuries resulting from storage, handling or use of our products. Liability, if any, is limited to product replacement, to the terms stated within the executed warranty.

²THERMOTЕК™ CARE AND MAINTENANCE PROGRAM - is intended to address conditions commonly found on buildings (other conditions that require special maintenance considerations may exist). It is the responsibility of the building owner ensuring that the care and maintenance program used for his particular building is adequate, given that building's specific condition.