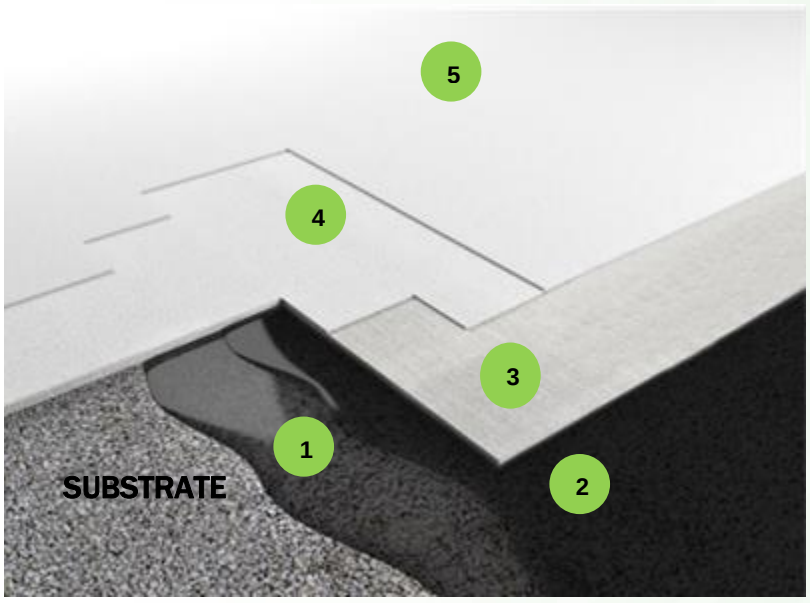
THERMOTEK™ ACRYLIC ELASTOMERIC SYSTEM
EMULSION OVER MODIFIED BITUMEN AND/OR BUR MEMBRANE

ACRYLIC ELASTOMERIC COATING OVER MODIFIED BITUMEN AND/OR SMOOTH BUILT-UP ROOFING MEMBRANE
8E-PM-3C



1. NON-FIBERED ASPHALT EMULSION WATER-BASED
2. NON-FIBERED ASPHALT EMULSION WATER-BASED
3. POLYESTER MESH
4. THERMOTEK™ ACRYLIC ELASTOMERIC COATING
5. THERMOTEK™ ACRYLIC ELASTOMERIC COATING

COMPONENTS AND WEIGHTS

	Coat	Product	Coverage (100 sq. ft.)	Dry Weight Lb			Dry Mils		
				SILVER +	GOLD +	PLATINUM +	SILVER +	GOLD +	PLATINUM +
SYSTEM	1	NON-FIBERED ASPH-EMULSION	4 gal	16.8 LBS/SQ			31.5 Mils		
	2	NON-FIBERED ASPH-EMULSION	4 gal	16.8 LBS/SQ			31.5 Mils		
	3	POLYESTER MESH	110 SQ FT	2.0 LBS/SQ			NEGLIGIBLE		
	4	THERMOTEK™ COATING	1.5 gal	9.35 LBS/SQ	10.87 LBS/SQ	11.51 LBS/SQ	10.35 Mils	12.07 Mils	12.3 Mils
	5	THERMOTEK™ COATING	1.5 gal	9.35 LBS/SQ	10.87 LBS/SQ	11.51 LBS/SQ	10.35 Mils	12.07 Mils	12.3 Mils
	SYSTEM			**54.30 LBS/SQ**	**57.34 LBS/SQ**	**58.62 LBS/SQ**	**83.70 Mils**	**87.14 Mils**	**87.6 Mils**
CRITICAL POINTS	THERMOTEK™ DURA MASTIC		Variable	Variable			Variable		
	POLYESTER MESH		Variable	Variable			Variable		
COMPLEMENTS	THERMOTEK™ WASH		0.2 gal	Variable			Variable		

*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 THERMOTEK™ Roofing Products and complementary products. Final determination of the fitness of the application of any THERMOTEK™ Roofing Products shall not be made by anyone other than an authorized Technical Representative of THERMOTEK™ 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. THERMOTEK™ Details, Drawings and Notes

1.3 QUALITY CONTROL

A. Warranty: THERMOTEK™ 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 posses 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 THERMOTEK™ 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 THERMOTEK™ 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 THERMOTEK™ Roofing 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 THERMOTEK™ Roofing Products in an inconsistent way.
E. This product has better drying with high humidity.

1.6 PRODUCT STORAGE AND HANDLING

All the time, the THERMOTEK™ Roofing 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. THERMOTEK™ 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		
				SILVER +	GOLD +	PLATINUM +	SILVER +	GOLD +	PLATINUM +
SYSTEM	1	NON-FIBERED ASPH-EMULSION	4 gal	16.8 LBS/SQ			31.5 Mils		
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CRITICAL POINTS	THERMOTEK™ DURA MASTIC		Variable	Variable			Variable		
	POLYESTER MESH		Variable	Variable			Variable		
COMPLEMENTS	THERMOTEK™ WASH		0.2 gal	Variable			Variable		

*Approximate measures.

2.1 MATERIALS

A. SYSTEM

- NON-FIBERED ASPHALT EMULSION WATER-BASED (ASTM D 1227,TYPE LLL)
- POLYESTER MESH
- THERMOTEK™ ACRYLIC ELASTOMERIC COATING

B. CRITICAL POINTS

- THERMOTEK™ DURA MASTIC
- POLYESTER MESH

C. COMPLEMENTS

- THERMOTEK™ WASH

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 THERMOTEK™ Technical Representative when all preliminary work and flashing details are completed, before the installer gets ready to proceed with application of THERMOTEK™ ACRYLIC ELASTOMERIC SYSTEM - EMULSION OVER MODIFIED BITUMEN AND/OR BUR MEMBRANE. 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 THERMOTEK™ Technical Representative. Please be aware that technical on-site support for instructing certified contractors in the proper application of the THERMOTEK™ ACRYLIC ELASTOMERIC SYSTEM - EMULSION OVER MODIFIED BITUMEN AND/OR BUR MEMBRANE is available.

2.3 PROCEDURE, COVERAGE RATE & APPLICATION INSTRUCTIONS

THERMOTEK™ ACRYLIC ELASTOMERIC SYSTEM - EMULSION OVER MODIFIED BITUMEN AND/OR BUR MEMBRANE is approved for application over BUR and Modified Bitumen Membranes 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 interumpt the proper adherence of the new fluid applied:
   1) Remove all loose granules 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; wash with THERMOTEK™ WASH and clean water using a power wash machine (1500 psi- 1 ft away).
   3) All the existing substrate must be securely adhered.
   4) All necessary repairs to the existing roof shall be made according to NRCA (National Roofing Contractors Association) guidelines.
   5) Areas of algae, mildew or fungus on the roof membrane or on the existing coating should be treated with a solution of 1 part household bleach and 3 parts water, followed with power washer rinse using clear water.

B. SUBSTRATE CONDITIONS: the roofing contractor is responsible to ensure that the substrate is acceptable for the THERMOTEK™ roof system.
   1) THERMOTEK™ 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 THERMOTEK™ Technical Representative will begin the work.

C. NON-FIBERED ASPHALT EMULSION WATER-BASED APPLICATION: cover all the surface with NON-FIBERED ASPHALT EMULSION WATER-BASED, after this coat gets dry, apply uniformly a second coat.
   1) The coverage rate[1] of NON-FIBERED ASPHALT EMULSION WATER-BASED is 4 gallons per 100 square feet.

D. POLYESTER MESH APPLICATION: over the entire surface apply a coat of POLYESTER MESH. Embed the mesh in the wet emulsion. Allow to cure completely before proceeding with any further product applications

E. POST SURFACE PREPARATION: After the application of the NON-FIBERED ASPHALT EMULSION WATER-BASED, surfactants[2] are drawn by moisture to the surface, leaving a soapy residue. After drying out, this slick residue will appear on your fingers when rewetted. Surfactants may be drawn out of the applied coating by heavy fog, dew or light rain. Then they are often carried by moisture to low areas on the roof. After drying on the surface, surfactant residues are easily removed by heavy rain or by washing the roof off with water. Prior to applying THERMOTEK™ Coatings over the emulsion, care must be taken, this due to its inherent characteristic of asphalt emulsions. Surfactants left on the surface will inhibit proper adhesion of THERMOTEK™ Coatings over asphalt emulsions.

NOTE: The application of THERMOTEK™ Roofing Products over Standard Clay type Asphalt Emulsions (including those modified with various resins), typically contain surfactants. If you apply a THERMOTEK™ ACRYLIC ELASTOMERIC COATING over an Asphalt Emulsion, you should wait 7 to 14 days for it to be cured and dried perfectly; consider that the drying time may vary depending upon the weather conditions.

F. AVOIDING ADHESION PROBLEMS: there are various options to avoid adhesion problems, they include:
   1) Apply THERMOTEK™ ACRYLIC ELASTOMERIC COATING before moisture has chance to draw out the surfactants
   2) Apply THERMOTEK™ ACRYLIC ELASTOMERIC COATING after heavy rains have washed the surfactants off the surface. In this case, moisten the low areas of the roof to check for any remaining soapy film.
   3) If surfactant problems are suspected, wash off the roof with water, rinsing especially the low areas, prior to coating with THERMOTEK™ ACRYLIC ELASTOMERIC COATING

NOTE: During summer, In hot and dry climates (such as in desert areas) there is less chance for these types of surfactant problems to exist (even if the emulsion is left uncoated for many days). Use an appropriate judgment in all cases to ensure a good system application with adhesion integrity.

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

[2] SURFACTANTS: are surface active agents that tend to reduce the surface tension of a liquid in which it is dissolved.

G. CRITICAL POINTS: review all the critical points over the surface and repair them with THERMOTEK™ DURA MASTIC, on details like cracks, put two coats of THERMOTEK™ DURA MASTIC and between them a layer of POLYESTER MESH.

H. APPLICATION INSTRUCTIONS:
   1) Apply THERMOTEK™ ACRYLIC ELASTOMERIC COATING base coat over the entire surface. The coverage rate[1] for THERMOTEK™ ACRYLIC ELASTOMERIC COATING base coat will be 1.5 gallons per 100 square feet.
   2) Apply THERMOTEK™ ACRYLIC ELASTOMERIC COATING top coat all over the roof in perpendicular way from the first – in the 'cross hatch' manner. The coverage rate for THERMOTEK™ ACRYLIC ELASTOMERIC ROOF COATING top coat will be 1.5 gallons per 100 square feet.
   3) 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 allowed to dry completely before proceeding the coating application.

PART 3 – WARRANTY

3.1 WARRANTY

Please read our THERMOTEK™ PRODUCT LIMITED WARRANTY[1], to verify our available warranty periods.

NOTE: For additional warranty questions please contact THERMOTEK™ Technical and Warranty Services department.

PART 4 – CARE AND MAINTENANCE

4.1 CARE AND MAINTENANCE PROGRAM

In order to ensure that your THERMOTEK™ Roofing Products will continue performing to its fullest, you should follow, implement and satisfy this THERMOTEK™ Care and Maintenance Program[2].

A. Maintain a file for all records relating to your roof, including the THERMOTEK™ 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.
A. Maintain a file for all records relating to your roof, including the THERMOTEK™ 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 THERMOTEK™ WASH and clean water with an appropriate pressure washing equipment (1500 psi – 1 ft away), *do not use anything but clean water* unless THERMOTEK™ 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.

[1] LIMITED WARRANTY - We as THERMOTEK 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. THERMOTEK 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. THERMOTEK GROUP will not be assume liability, and any warranty will be invalid, if the used asphalt Emulsion stains or generates detachment of the ACRYLIC ELASTOMERIC coating.

[2] THERMOTEK™ 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.

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 THERMOTEK™ 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 THERMOTEK™ Roofing Products.

F. Remove regularly 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 as soon as possible a THERMOTEK™ Technical Representative for repairing. Any such cracks, blistering or flaking must be recoat/patch with approved THERMOTEK™ 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 which affects the coating must be performed by an approved THERMOTEK™ Roofing Products contractor.

END OF SECTION