

application instructions

THERMCOTE/A-10™ & THERMCOTE/A-PW5™

TAR & GRAVEL SLURRY APPLICATION

MATERIAL ESTIMATION

CHLORINE BLEACH	1 QT per 100 S.F	(1 QT per 5 Gal/Water)
SLURRY MIX	Approx. 10 Gal. per 100 S.F.	See Formula in Step #4
THERMAPATCH™	1 Gal. Fills 175 cu. inches	Caulk and Seal all cracks 1/8" or greater
POLYMESH™	Rolls available in 4" & 12" W x 300' 40"W x 324" L Use quantity as needed.	Tape any seams necessary. Lay POLYMESH into ELASTOPRIME within 15 minutes of applying the primer at the rate of 1 1/4 to 3 Gal. per 100 sq.ft.
ELASTOPRIME™*	100 – 150 sq.ft./gal	1 coat required *
THERMCOTE/A-10™ * (for sloped roofs) (Two coats REQUIRED) OR THERMCOTE/A-PW5™ * (required for FLAT roofs) (Two coats REQUIRED)	Approximate Coverage: For CA – Title 24 requirements: 2 coats, each at 80 sq.ft./gal. per coat <i>(Film Thickness at 80 sq.ft./gal/coat: 18-19 wet mils = 11-12 dry mils) **</i> All other Applications : 2 coats, each at 100 – 150 sq.ft./gal, per coat <i>(Film Thickness at 100 sq.ft./gal/coat: 15-16 wet mils = 9-10 dry mils)*</i>	
NOTE: THE MORE POROUS, ROUGH OR UNEVEN THE SURFACE, THE MORE PRODUCT NEEDED PER SQUARE FOOT		
* for 12 and 6 Year Renewable Warranties, respectively		
** when applied at a minimum of 20 dry mil film thickness, product meets or exceeds the standards specified in Title 24, California Code of Regulations, Part 6, Section 118 (f), Mandatory Requirements for Cool Roofs, Sub-Section 2.		

GETTING STARTED

Estimates of Material needed for turning Gravel Roofs into COOL Roofs can vary substantially depending on the porosity of the surface, thickness of the gravel, how much slurry is applied, etc. For that reason it is advisable that material needs be overestimated to avoid cost overruns.

All coatings must be stirred manually or mechanically before being used (except for THERMAPATCH™). Do not let products freeze. Do not use any of these products at temperatures below 45 degrees Fahrenheit. Apply all products to dry surfaces only and do not apply products when they will be subjected to rain or heavy dew before they have had enough time to dry (Check Product Data Sheets). **Do not thin any products unless specifically mentioned within this application specification manual.**

STEP 1:

VISUAL INSPECTION and REPLACEMENT of DAMAGED BUILDING MATERIALS

The substrate to be coated must be in SOUND condition. Physically inspect the surface area for missing or damaged building materials. Replace and/or repair all damaged areas back to sound and solid condition. Inspect for any existing leaks and be sure to repair leaks prior to the application of coating. Make sure roof is adequately vented. Check with a roofing contractor, if necessary.

STEP 2:

REMOVING GRAVEL & CLEANING THE ROOF SURFACE

If possible & desirable remove as much loose gravel from the roof as possible without damaging roofing substrate. Now clean the entire roof surface as best you can, using a water and chlorine solution (approximately 1-quart chlorine to 5 gallons of water). Thoroughly remove all dirt, oil, grease, residues, mold, mildew, algae and any other surface contaminants. Severe mildew requires a stronger concentration of chlorine. When roof is completely cleaned, rinse and flood the roof with water to

remove all chlorine and contaminants. Let the roof surface dry at least 24 hours before continuing.

STEP 3:

PREPARING ROOF SURFACE FOR SLURRY MIX

Use a push broom to level off the remaining gravel to achieve a roof surface even with the slope of the roof.

Do not leave any piles of gravel or low spots. Remove all extraneous debris off roof surface.

STEP 4:

SLURRY MIX FORMULA & APPLICATION

Prepare the cementitious slurry mix on the job site using the following formula:

FORMULA for Approx. 50 Gallons of Slurry Mix:

- 2 - 50 pound bags of Calcium Carbonate or Marble Dust
- 1 - 100 pound bag of White Portland Cement
- 5 Gallons of ProTek-SEAL LINK™, Vinyl Acrylic Resin
- Approximately 25 to 30 Gallons of Water (depending on desired consistency)

Mix ingredients using an industrial grade drill motor or a mechanical mixer. Start with 20 gallons of water, then add the powders and the ProTek-SEAL LINK™. Gradually add the remaining water to achieve a consistency so that a paint stick can stand straight up in the batch. Pump or pour the Slurry Mix on the roof. Use a broom or rake to move the mix around and at the same time leveling off the gravel. Spread rate of the slurry mix will vary depending on the surface and the desired outcome. You should have enough Slurry Mix on the roof so that it is almost covering all the gravel. The Slurry Mix is used to lock down all the gravel so that coating can be applied to a solid surface, and to level the roof sufficiently to minimize the ponding of water, resulting in quick evaporation of water. Let the Slurry Mix dry for at least 5 days to insure the release of alkalines, which are inherent in cement. If you do not wait at least 5 days the alkalines could adversely react with the acrylics.

STEP 5:

CAULKING & PATCHING IMPERFECTIONS

After surface has thoroughly dried, Patch and Caulk all cracks, crevices, fractures, holes, valleys, vents, voids, etc., with **THERMAPATCH™**. Use a trowel or stiff brush to apply. Multiple coats are better than one thick coat. Thinner multiple coats will dry faster than one heavy coat. Wait at least 4 hours before applying a second coat of **THERMAPATCH™** and let final application dry at least 24 hours before continuing to next step. **THERMAPATCH™** dries from top to bottom, so be careful when working around a caulked area since it will be skin dry only. There is no problem coating over **THERMAPATCH™** even if it is not completely dry, since it is a high solids material.

STEP 6:

TAPING SEAMS (If applicable)
(otherwise proceed to STEP 7)

Tape all visible seams, large cracks & fractures prone to water intrusion on roof surface. Apply a liberal coat of **ELASTOPRIME™** at 10-12 mils wet film thickness, directly to the affected area using brush, roller or airless spray and lay the **POLYMESH™** directly onto the WET PRIMER. Tape must be put down before **ELASTOPRIME™** has had a chance to start drying (approximately 15 minutes). Lightly roll over embedded tape using a roller WET with **ELASTOPRIME™**. After all areas are taped let dry for 1 to 2 hours and apply a second light coat of PRIMER at 5-8 mils wet over the top of the tape. Let the taping procedure dry for at least 2 hours before continuing.

STEP 7:
PRIME COAT

Apply **ELASTOPRIME™** using 1) large roller with at least a one inch nap, or 2) a 3,000 P.S.I. or bigger airless sprayer with at least a .027 tip. When spraying or Rolling **ELASTOPRIME™**, it must be applied perpendicular to the slope of the roof. Example: If the slope of the roof runs from North to South then the coating must be applied spraying from East to West. This will be the start of a checkerboard application pattern. Refer to diagram below. Apply the **ELASTOPRIME™** at a rate of 50 -150 square feet per gallon covering the entire roof surface. Wet film thickness of 10-12 mils wet resulting in dry film thickness of 45 mils. Let PRIMER dry at least 12 hours before continuing.

STEP 8:

FIRST COAT of FINISH TOPCOAT

Be sure entire surface is clean and free of all moisture. Be sure the entire area to be coated is primed, if not, then spot prime before application.

specific areas. Apply **THERMCOTE/A-10™** using 1) brush, 2) one inch or higher nap roller, or 3) a 3,000 P.S.I. or bigger airless sprayer with at least a .027 tip. **Remember to use THERMACOTE/A-PW5™ on flat roofs.**

When spraying or rolling **THERMCOTE/A-10™**, the first coat of **THERMCOTE/A-10™** must be applied perpendicular to the coat of PRIMER to achieve a checkerboard pattern. See diagram below. Apply the first coat of **THERMCOTE/A-10™** at a rate of 80-150 square feet per gallon per coat (refer to Film Thickness chart for information regarding the correct coverage rate for your substrate) over the entire roof surface. Let dry at least 12 hours before continuing.

STEP 9:

SECOND COAT of FINISH TOPCOAT

Be sure entire surface is clean and free of all moisture. Be sure the entire roof area is completely coated, if not then spot coat. Apply **THERMCOTE/A-10™** using a) brush, b) one inch or higher nap roller, or c) a 3,000 P.S.I. or bigger airless sprayer with at least a .027 tip. **Remember to use only THERMACOTE/A-PW5™ on flat roofs.** When spraying or rolling **THERMCOTE/A-10™**, the second coat of **THERMCOTE/A-10™** must be applied perpendicular to the first coat of **THERMCOTE/A-10™**, completing the checkerboard pattern. See diagram below. Apply the second coat of **THERMCOTE/A-10™** at a rate of 80-150 square feet per gallon per coat (refer to Film Thickness chart on Page 1 for information regarding the correct coverage rate for your substrate) over the entire roof surface. Let dry at least 24hours before your Final Evaluation.

STEP 10:

FINAL EVALUATION

At this time a detailed evaluation of the completed job will determine the quality of the workmanship and whether strict application specifications have been met. The entire roofing surface must be completely coated & sealed. Be sure to check that all roof areas are completely coated & sealed including under permanently placed roof items such as roof top air conditioning units. Divide roof into 1,000 square feet sections and randomly check one spot in each section for a dry film thickness of at least 20 mils (includes **ELASTOPRIME™** primer coat). Remember to touch up the penetration made by the dry film thickness gauge. If specifications have not been met, determine how much material will be required to meet specifications and recoat. Check dry film thickness again until specifications has been met.

NOTE: Because of the various peculiarities associated with a Tar & Gravel Slurry Application, it is strongly recommended that all details be discussed with a ProTek-USA Technical Advisor

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How to achieve the checkerboard spray or roller pattern

