APPLICATION GUIDE FOR THERMO-SEAL 1500M High-Performance IR solar heat-reflective paint ON METAL ROOFS* (Application process is always to be determined based on condition of existing coatings, substrate and repaired areas. If in doubt, contact The Ultimate Coatings Company or its representative. Warranty application only by Approved Applicators.)
***For roofs coated with existing adhering coating, factory finish or bare metal.**

PREPARATION OF ROOF SURFACES:
Power-wash and de-mildew existing elastomeric or other factory painted surfaces fully with minimum pressure of 3000 psi, and scrubbing with stiff brush to ensure surface dirt and mildew are removed. Use sodium hypochlorite (beach), detergents mixture, Concrobium or equivalent environmentally friendly mildewcide cleaner as necessary on all roofs except those with no mildew (dark spots, colored algae, etc.) whatsoever. Roofs must be fully rinsed down with water to remove any residues. In instances of dusty or salt fog conditions, rinsing between coats is required. Rinsing before coating or priming or between coats is absolutely required if after 72 hours no primer or coating has been applied - due to dust or pollen accumulation that will interrupt proper paint adhesion and durability. Washed surfaces must be allowed to dry at least overnight at 65 degrees or above before primer or **THERMO-SEAL 1500M** is applied.

PRIMING:
Cleaned metal surfaces (unpainted or painted, except Kynar) are to be primed with **METAL PRIMER 490** in one fully sprayed coat at the rate of ½ gallon per 100 sq ft before applying **THERMO-SEAL 1500M**. Other repairs, where required, including caulking, sealing, taping, spot priming must also be allowed to set overnight, or according to manufacturer specifications, before spot priming. Deep fills of seam sealant (ECO-SEAL, etc.) will generally require a full 2 days to sufficiently cure before priming.

TEST PRIOR COATING TYPE:
Prior coated metal roofs must be tested to confirm type of existing roof coating is not Kynar, or similar fluoropolymer type product, which will require coating with **KYN-PRIME 90** primer because acrylic primers will not bond to it. To test, apply an elastomeric onto a well-cleaned test area not larger than 12” x 12”. This should have reinforcing fabric applied into a wet swatch of

the elastomeric coating and then recoated with the same to sandwich it in allowing a few inches to hang loose and not be adhered. Allow 2 full days drying time (more in colder weather) and then perform a pull test by tugging on the loose end of the fabric attempting to pull it off.
If it strips off easily, with little or no residue left on the roof, (bottom side is shiny) then roof is Kynar coated and requires **KYN-PRIME 90 Primer**, **not METAL PRIMER 490**.

All bare metal is to be primed with **METAL PRIMER 490** in one fully sprayed coat prior to any **THERMO-SEAL 1500M** coating application. Other repairs, where required, including caulking, sealing, taping, priming must also be allowed to set overnight, or according to manufacturer specifications, before top-coating with **ULTIMATE COATINGS** products.

Prior coated metal roofs must be tested to ensure type of existing roof coating to determine suitability for coating before confirming any specification or warranty/guarantee. All roofs to be coated must have positive drainage with no ponding of water more than ¼" past 48 hrs duration.

If weather is over 80 degrees Fahrenheit and there is direct sun that causes power-washing water to visibly evaporate, same day application of **THERMO-SEAL 1500M** may be done after 3hrs drying time of the washed surfaces. This may only be done when surfaces have cooled sufficiently. ALSO SEE below section titled "**WEATHER**".

APPLICATION:
Primer coat: METAL PRIMER 490 (red, white, or grey as necessary)
Initial coat: THERMO-SEAL 1500M (Full IR color)
Second or Third coats: THERMO-SEAL 1500M (Full IR color)

COATING PROCEDURE:
Apply by sprayer at a steady moderate pace from 12-18" above the roof surface. Rib risers or standing seams to be sprayed separately from flat sections for uniform coating thickness on all contours to ensure even coverage throughout, unless utilizing calibrated dual-tip spray sled or other dual-tip spray system.

RATE OF APPLICATION/COVERAGE:
Cool Roof Specification only (no waterproofing): Apply 1.0 gallons upon each 10' x 10' square per coat at 55-80 degrees Fahrenheit (ideal). Minimum, apply 2 full coats**. Caution:** If applied thickness exceeds 1.0 gals per coat, mud-cracking can occur and topcoat may fail prematurely. Longer Warranty with increased gallons/millage application is required. Inquire with Manufacturer. See below for "**MILLAGE**" requirements.

Do not apply THERMO-SEAL 1500M on surfaces with a single coat.
The coating will not perform correctly and will not last for the full warranty or guarantee.

NOTE: If needing ROOF WATERPROOFING, use ECO-THERM 2500 ELASTOMERIC.

EQUIPMENT:
Commercial Airless sprayer: Capable of min. 2500 psi @ minimum 2.0 gallons per minute.
Tip Orifice: .0019" to .0023" = Best tips 519 to 523 or 619 to 623 - okay).
Millage Gauge: Acquire one from a paint store and use to check first wet coat applied and confirm mil thickness. See spec below under "MILLAGE."
Spot Indirect Thermometer: For handheld reading of spot temperatures of roof surfaces.

MILLAGE:
Wet Film Thickness (WFT) must be NOT LESS than 9 mils applied @ 1.0 gallon rate per coat in 2 finish coats total. If done so, **Finished Dry Film Thickness (DFT) = 5-6 mils minimum.**

PLEASE NOTE:
Provided applicator follows these guidelines under warm weather, non-moist conditions, these values must comply in order to receive any warranty or guarantee from the Manufacturer. Photos of each stage of prep and product application must be make and work must be checked to assure millage. Suggested: Have your applicator/foreman check this work as work progresses.

Unless full use of all specified product is confirmed, stage photos and millage checks info submitted to Manufacturer before final signoff, Warranty or Guarantee cannot be issued.

WEATHER
Weather conditions that are cold or hotter will effect the coating build thickness and cure times. Colder weather will cause a greater quantity of product to be used because material is thicker. Hotter weather can cause more product to be used because material can dry overly fast.

Steady weather conditions at temperature of 60 to 85 F. is ideal. No rain or moisture expected within 24 hrs. Overnight and surface temperatures above 50 degrees. Fog, high humidity, lower temperatures will slow drying. Sticky surfaces after overnight dry means that **THERMO-SEAL** must be allowed to dry more fully before recoating.

DO NOT APPLY when exterior air temperature is 90 degrees Fahrenheit or above.
DO NOT APPLY when surface temperature exceeds 90 degrees Fahrenheit.
DO NOT APPLY when nighttime temps will below 50 degrees.

APPLICATOR RESPONSIBILITY:
You must use good professional judgment and follow these guidelines or THERMO-SEAL will not bond properly and will blister and fail prematurely. In the case of Applicator failure to apply coating according to these product application guideline procedures, Applicator will be at fault when problems are determined to be due to application error and will not be able to be covered by product guarantee or any warrantee.

Photos must be taken before first application and at each application stage, as well as of the finished job per roof and supplied to **THE ULTIMATE COATINGS COMPANY for ANY confirmation of No-Peel Guarantee or Warrantee issuance.**

ADDITIONAL CAUTIONS FOR APPLICATORS:
You must be an Approved Applicator with pre-approved specifications confirmed in advance of job with the manufacturer in order to offer any Guarantee or Warrantee work.

NEVER SINGLE COAT. Completed coating systems must have at least 2 completed coats at specified millage.

DO NOT APPLY ONTO ANY ROOFS NOT REWASHED AFTER 72 hrs time since power-washing due to surface dirt and pollen accumulation.

DO NOT WALK ON COATED METAL SURFACES FOR MINIMUM 3 hrs after primer or paint application.

JUST BECAUSE SUN IS NO LONGER OVERHEAD DOES NOT MEAN THAT SURFACES ARE NOT TOO HOT TO TOPCOAT.

Best application times are early morning and later afternoons in warm weather.

You must recheck surface temperatures in hot weather. If in doubt, use spot indirect thermometer to check surface temperatures. you must be aware of sun overhead causing overly hot surface temperatures that will require you to delay. Applying paint that later bubbles or fails will be applicator's full responsibility to fix.

Colder weather <u>will retard drying times</u> for recoat. On early and later season days with temperatures below 60 degrees and nights in the 40's to 50's, these require caution and shortened work days, typically 10:00 or 11:00 am to not later than 2:00 pm to allow the paint sufficient drying time before cold night temperatures and moisture condensation occurs on roofs.

If coating is tacky to the touch after overnight drying, it cannot be recoated until dry.

It is acceptable to tarp surfaces to keep cool prior to coating when necessary so long as surfaces are not overheated by time of coating.

QUESTIONS? Contact: The Ultimate Coatings Company 1-800-226-9180

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