

Roof-Paint System 1201

A Single Step, Self-Priming DTM Two Component Acrylic Polyurethane System

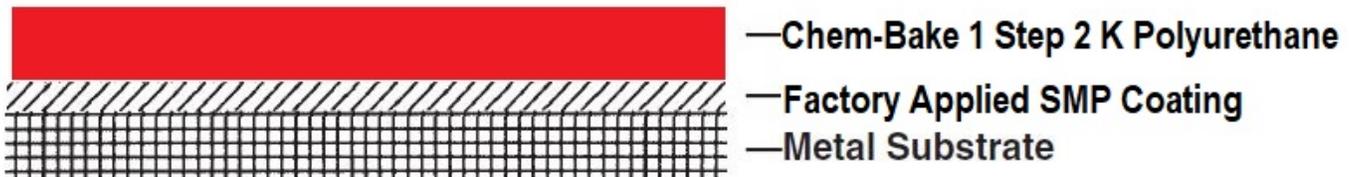
Using *Chem-Bake® 1 Step Polyurethane*

For refinishing metal roof systems

Roof System 1201 was developed specifically for the re-painting of SMP (silicone modified polyester) coil coated steel that has been roll formed into sheet metal panels used on roofs.

A hi-solids, hi-build system for applying directly overtop SMP coated steel; steel previously coated with a 2k polyurethane; or directly to bare steel without the need for additional priming. The most solvent, chemical and moisture resistant Chem-Bake system. It should not be used on flat roofs or roofs that are subject to ponding water.

This system involves the proper cleaning and preparation of the roof including the creation of a surface profile on glossy or smooth and slick substrates, and then the application of *Chem-Bake® 1 Step Polyurethane*



This provides a very hard, super durable, chemical and solvent resistant surface that is easily cleaned and resists chalking and fading. This system comes with a 10-year warranty that can be extended to 18 years with application of a clear coat before the end of the 8th year.

Roof-Paint System 1201 Specifications overview

Average Service Life -----	10-14 year	Color retention -----	5
Composition -----	2k DTM acrylic polyurethane	Gloss retention -----	5
Reduction -----	Reducer or acetone	Clean-ability -----	6
VOC Level -----	Available as low as 250 gpl / 2.10 lb	Scratch resistance -----	6
Sheen level -----	Gloss	Hardness -----	6
Application Temp Range -----	35°F to 110°F	Chemical resistance -----	6
Dry to handle -----	Up to 4 hours	Corrosion resistance -----	6
Application process duration -	Single day	Ease of application -----	4
Self-Priming -----	Yes, on properly prepared surfaces	Ease of touch-up -----	3
Versatility over substrates ---	Self-priming on abraded SMP, test unknown substrates for lifting		
Minimum dry mil thickness ---	3 mil dry		
Cost, material per 100 sq ft --	As low as \$45.00	6= Superior, 5= Excellent, 4= Good, 3= Fair, 2= Marginal, 1= Poor	

Evaluating roof to determine if it is a candidate for refinishing with the *Chem-Bake*® 1 Step

Chem-Bake® 1 Step should only be applied to substrates that are sound and show no signs of peeling or adhesion failure. If applied to a surface that has inter-coat adhesion issues in some cases it may accelerate the peeling failure process. If there are any concerns or questions about the surface integrity then an adhesion test should be performed. This can help determine if the substrate adhesion is adequate for using *Chem-Bake*® 1 Step especially if questionable coats of another product are on the roof.

Chem-Bake® 1 Step is designed to be applied over bare ferrous steel or existing hi-performance coatings such as 2k polyurethanes or silicone modified polyester (SMP). *Chem-Bake*® 1 Step Polyurethane contains strong solvents that may attack and lift other types of coatings. If you are unsure of the suitability of an existing substrate is for recoating with *Chem-Bake*® 1 Step then a test patch should be performed or 1 coat of *Chem-Bake*® bonding primer, with a minimum 12-hour dry cycle, should be applied as a barrier coat.

Surface Preparation. Surfaces to be painted should be clean, dry and free from wax, grease, dust, silicone, scaling paint, oil and excessive chalk. Remove rust, loose or peeling paint and all foreign matter.

Clean all surfaces using Sand & Scrub cleaning mixture per label instructions or clean all surfaces with a degreasing agent such as TSP diluted at 8 oz per gallon.

Glossy or smooth hard surfaces must be dulled and/or abraded using Sand & Scrub cleaning mixture, silicon carbide sandpaper, Scotch-Brite® or other abrading medium to de-gloss and create a surface profile. If a complete abrading and de-glossing of the surface is not achieved then *Chem-Bake*® bonding primer should be used.

A completely clean and sound substrate with no dust, chalk, rust, or other surface contaminants must be obtained prior to applying any coating or primer. If dust, chalk, or dirt remains, repeat the cleaning process

Any coating failure resulting from inadequate surface preparation or failure to follow manufacturer's recommendations and specifications are the sole responsibility of the Contractor to remedy.

Masking and Protection: Protect all areas not being painted. Check for nearby cars and trucks that might be at risk for overspray. *Chem-Bake* products have high adhesion properties. If items are over-sprayed, it is very difficult to remove!

Environmental Conditions: Don't apply if the air, surface, or material temperature is above 110 degrees. Avoid painting in direct sunlight. Apply in the shade during warmer temperatures. Don't apply when there is a risk of rain or freezing temperatures within 12 hours after the application of *Chem-Bake*® 1 Step. Don't apply when relative humidity is above 90% or will become so within 2 hours after application. Don't apply when the ambient or surface temperature is within 5 degrees of the dew point. Don't apply if the air, surface, or material temperature is below 35 degrees or if it will become so within 4 hours after application. Don't apply within 2 hours of sunset if the temperature is below 60 degrees.

Chem-Bake® 1 Step will remain tacky for 2 – 4 hours after application depending on temperature and humidity. Avoid spraying in windy conditions to reduce the risk of contaminants adhering to the surface.

Handling: Read all label warnings and data sheets prior to handling any paint or coating! Although the *Chem-Bake*® system is considered environmentally friendly when used properly, as with any industrial coating it does contain certain chemicals that can irritate the skin and lungs. Always wear chemical resistant gloves when handling and avoid contact with the skin. Always use a properly fitted respirator that employs chemical cartridges while handling, mixing, or spraying any *Chem-Bake*® product. Consult MSDS sheets for further warnings and information on the chemical composition.

Sprayer and Spray Equipment. Use only airless spray equipment that has low pressure capability, either hydraulic or have electronic pressure controls. The sprayer, hoses and gun must be thoroughly clean and flushed with acetone or equivalent solvent. Always use a hose and gun that is dedicated for spraying solvent-based products, separate from spraying water based coatings. Never use a hose that has been used for water-based coating or has paint build-up in it. The strong solvents in *Chem-Bake*® 1 Step may dissolve the build-up contaminating the finish.



Adjusting for Correct Spraying Pressure:

- Chem-Bake® 1 Step should be sprayed at the least amount of pressure required to obtain a uniform spray pattern.
- To adjust to the proper pressure, using a NEW tip, back-off the pressure knob all the way and then screw it in about 1/3rd of the way. (Screwing in increases pressure on most sprayers). Point the gun at a piece of cardboard for testing and with your hand in motion, pull the trigger and spray a sample area.
- If you have thick lines at the edge of the spray pattern, sometimes referred to as “tails” or “fingers”, turn pressure knob 1/8 and spray again. Repeat until they are gone. Now you have the proper amount of pressure for the material you are spraying. (If no amount of pressure eliminates the tails, then the tip is worn or damaged).
- If you need more paint flow, increase the size of the tip, not the pressure. There should never be a cloud of spray-mist surrounding the person spraying, a sign of too much pressure!



Application of Chem-Bake® 1 Step:

Mixing: Chem-Bake® Clear “Baking* Finish” is mixed at a 6:1 ratio, 6 parts “Part A” resin to one part “Part B” activator. Pot life depends upon weather and temperature. Read all product labels to determine exact pot life. Mix up no more than what can be comfortably used in that time, and no more than what can be used in 2 hours.

1. Agitate “Part A” and “Part B” separately prior to mixing together.
2. Pour contents of Part A resin into clean chemical resistant 5 gallon bucket.
3. Slowly add “Part B” activator into “Part A” while mixing and continue to mix a minimum 1 minute.

NEVER mix un-catalyzed “Part A” or “Part B” with an existing catalyzed batch! Always combine “Part A” and “Part B” following the above directions in a separate container before mixing with an existing batch

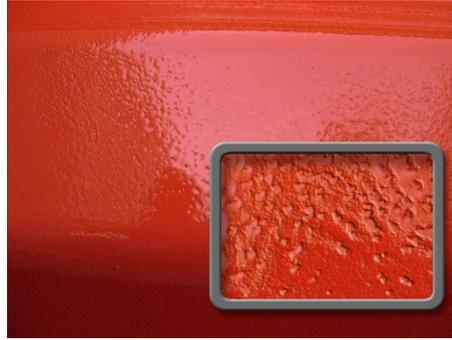
Chem-Bake® 1 Step Spray Application Method: Confirm the substrate is clean, free of chalk, and de-glossed per above specifications. If spraying overtop a glossy or hard slick surface, 1st apply a coat of Chem-Bake® bonding primer and allow to dry for a minimum 12 hours.

- Chem-Bake® 1 Step should be applied at a minimum 5 mil wet film thickness (315 sq ft per gallon no reduction) to achieve a minimum 3 mil dry film thickness.
- Use a new 4-12 or 5-14 double orifice fine finish spray tip. Holding the spray gun approx. 6”, and no more than 10” from the surface.
- Start your hand in motion first and then pull the trigger, release the trigger just before you reach the stopping point of your swing. Each pass should overlap the prior pass by 50% to obtain full coverage.
- Improper technique can lead to “dry-spray” resulting in areas that have a rough texture, and a blotchy and inconsistent look. Always maintain a wet edge and overlap passes by 50%. If “dry spray” does occur, apply a 2nd coat.
- HELPFUL HINT: Keep all fluid lines, spray pump, and material out of the sun. Cooler material flows (smooth’s) out on the surface better.
- The final finish should be smooth and have no pinholes or stippling in the finish which may void the warranty.
- Make a thorough inspection of all painted surfaces. On standing seam roofs closely examine the sides of all ribs as these are the area’s most commonly prone to holidays. Minor imperfections can be touched up with a high-quality brush. Larger areas will need to be re-sprayed.





Incorrect: stipple / orange peel



Incorrect: Pinholes



Correct: smooth finish no stipple

Appendix A

A correctly completed roof should be smooth with uniform color and gloss on all sides of each rib. There should be no mottling in the finish, and free of dirt, grit and debris. It should have a high-gloss luster with no orange peel, holidays, or “dry-spray” and be free of runs and sags.

Common Workmanship Mistakes that can Void a Warranty

Painting in the Rain, Snow, Fog, etc. (note rain drops in finish)

Painting Over Grit and Dirt

Severe Orange Peel

Runs and Sags

“Dry Spray” (applied too thin or when too hot)

