



GLOBAL Encasement, Inc.

Installation Guide Specification For Preserving Metal Roofs 07560 GEI – Metal Roofs

1. GENERAL

1.01 SUMMARY

- A. Provide labor, materials, equipment and supervision necessary to install (spray-apply, brush or roller) GLOBAL Encasement, Inc. coating systems as outlined in this specification to preserve and extend the service life of metal roofing and provide energy saving and life-cycle cost benefits.
- B. GLOBAL Encasement, Inc.'s application instructions for each product used are considered part of these specifications and should be followed at all times.

1.02 SUBMITTALS

- A. Submit product data sheet and literature verifying physical properties of materials.
- B. Submit material safety data sheets.

1.03 QUALITY ASSURANCE

- A. Supplier Qualifications: GLOBAL Encasement, Inc.'s fluid applied restoration system for metal roofs, as supplied by GLOBAL Encasement, Inc., is approved for use on the project.
- B. The product manufacturer shall have been in business for a minimum of twenty one (21) years.
- C. Applicator Qualifications: The applicator can be approved by GLOBAL Encasement, Inc. to apply the system. GLOBAL Encasement, Inc.'s written verification of applicator approval is required.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Containers and Packaging: Deliver materials in origin sealed containers, clearly marked with: GLOBAL Encasement, Inc.'s logo; full product name; and lot number(s).
- B. Storage: Store materials between 40°F and 100°F with careful handling to prevent damage to products. If conditions exceed these ranges, special consideration in storage must be taken. Do not store at high temperatures in direct sunlight.
- C. Protection: Protect all materials from freezing and other damage during transit, handling, storage, and installation.
- D. Verify dates of manufacture and confirm that material is within one year shelf life.

1.05 PROJECT CONDITIONS

- A. These minimum recommendations for material usage are for ideal conditions. The number of gallons per 100 square feet may need to increase due to uneven application, rough surface texture, wind conditions while spraying and/or other variables.
- B. Wet insulation must be thoroughly evaluated and then addressed with removal or other measures. Consult a GLOBAL Encasement, Inc. technical consultant regarding the need for moisture surveys and other assessments.
- C. Structural cracks should be referred to the appropriate GLOBAL Encasement, Inc. technical consultant.

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- D. This Installation guide specification assumes that the deck, if plywood, has no dry rot, and is in sound condition, or has been repaired.
- E. Do not apply materials unless surface to receive acrylic roofing system is clean, dry and prepared as specified.
- F. Install all material in strict accordance with all published safety or applicable regulations of the manufacturer and/or local, state, and/or federal agencies that have jurisdiction.
- G. The entire system shall be fully adhered to the surface on which it is applied. Voids left under the system by creating bridges are not acceptable.
- H. Do not proceed with application of coating or sealing materials when temperature is less than 50°F. No coating system shall be applied if weather will not permit it to dry prior to exposure to precipitation or freezing or freezing temperatures are expected within 72 hours.
- I. Heavy puddles of coating on the roof are not acceptable.
- J. Instructions for use of all roofing materials and application equipment should be read and followed at all times.
- K. As a general principle, to prevent the ponding of water, install additional drains as necessary or install drainage systems with sprayed polyurethane foam (SPF).

1.06 DETAIL WORK

This specification does not extensively outline procedures for preparation and finishing of drains, vents, ducts, flashing, parapet walls, sheet metal work, etc. The contractor should outline this work before work commences, and shall be performed observing good trade practices.

II. PRODUCTS

2.01 GLOBAL ENCASEMENT, INC. RESTORATION SYSTEM

- A. The roofing system is a 100% acrylic, elastomeric, spray, brush or roller applied GLOBAL Encasement, Inc. restoration system manufactured by GLOBAL Encasement, Inc.
- B. Underwriters Laboratories® 790 Class "A" Ratings TGFU #R15397
- C. Physical properties of cured roofing system: The testing of the coating shall be done under ASTM-D6083, "Standard Specification for Liquid Applied Acrylic Coating Used in roofing", unless otherwise specified.
 1. The roofing system shall have good resistance to ponding water.
 2. The roofing system shall contain no plasticizers.
 3. The roofing system shall contain no migrating fire retardants.
 4. The roofing system shall have a Class A fire rating on a noncombustible deck when tested according to the procedures outlined in ASTM-E-108.
 5. The roofing system shall also meet the following physical property requirements:

PROPERTY	ASTM Method	RESULTS
Tensile strength, psi (Max @ 73° F)	D6083	Minimum 200
% Elongation @ Break (73° F)	D6083	Minimum 100
Wet Adhesion to Specified Substrate	D6083	Minimum 2.0 pli

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Permeance, perms	D6083	Maximum 15
Volume Solids %	D6083	>50
Weight Solids %		>60

2.02 RELATED MATERIALS

Flashing, adhesives, thinners, elastomeric caulking compounds, primers, and similar materials shall be approved by GLOBAL Encasement, Inc. All materials used shall be applied in accordance with GLOBAL Encasement, Inc.'s recommendations.

2.03 EQUIPMENT

GLOBAL Encasement, Inc. materials are prescreened at the factory and can be applied with nylon bristle brushes, roller, or airless equipment. Roller nap size will depend on the substrate being encased; ½ inch nap to 1¼ inch is recommended. Airless piston-type spray equipment may also be used for application. Equipment selection will depend on the size and nature of the encasement project.

Recommended airless piston-type spray equipment should have at a minimum 3000-psi, 3:1 ratio and a ¾-gallon capacity.

- A. **Graco** - information line is (800) 328-0211.
- B. **Titan Tool Inc.** information line is (800) 526-5362.
- C. **Equipment Accessories:** Hose: 3/8 inch (9.53 mm) inside diameter (minimum), 1/2 inch (minimum) on long runs.
Guns: Graco Silver or Golden Hydra-mastic guns.
Spray Tips: **RoofCoat™**, **AsbestoSafe®** or **Your Last Coat™**
Use self cleaning reversible spray tip size 0.019 to 0.035 (.032 is most often used.)

Note: For alternative equipment recommendations consult the spray equipment manufacturer directly.

III. EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

Compliance: Comply with GLOBAL Encasement, Inc.'s product data, including product technical bulletins and product guide specification instructions.

3.02 EXAMINATION

- A. Inspect surfaces that will receive the GLOBAL Encasement, Inc. restoration system to make sure they are clean, smooth, sound, properly prepared, and free of moisture, dirt, debris, or other contamination.
- B. Verify that all roof penetrations, mechanical equipment, cants, edge metal, and other on-roof items are in place and secure.
- C. Verify that all critical areas around the immediate vicinity of the spray area are suitably protected.
- D. Verify all roof drains are clean and in working order.
- E. Verify that all air conditioning and air intake vents are suitably protected or closed.

3.03 PREPARATION

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- A. The entire surface must be clean, sound, dry and free of any materials that would interfere with proper adhesion of the coating or sealant. All loose paint and loose rust must be removed prior to the application of coating or sealant. Achievement of this condition may require the use of industrial cleaner, scraping, wire brushing, power brooming, vacuuming, sweepblasting, sandblasting or other means, and shall always be performed observing responsible trade practices.
- B. Spot prime rusty areas with **R.I.P.™ Rust-Inhibiting Primer**.
- C. Metal that has corroded to the point of being weak or broken must be replaced.
- D. Any new metal must be clean and oil-free. Prime ferrous metal with **R.I.P.™ Rust-Inhibiting Primer** at the rate of 1 gallon per 200 square feet (7.5 wet mils = 3 dry mils).
- E. Tighten or replace all fasteners where necessary. In no case shall joints or seams be allowed to separate greater than 1/16 inch.
- F. Seal all joints and seams with **GEI Seam Tape**. Seal nails and fasteners with caps.
- G. All detail areas unable to be sealed with **GEI Seam Tape** and caps must be sealed with **Globe Caulk™**.
- H. After allowing sealant to dry, (normally at least 24 hours), apply TopCoat (either **RoofCoat™**, **AsbestoSafe®** or **Your Last Coat™**) to those areas at the rate of at least 2 gallons per 100 square feet (32 wet mils = 18 to 20 dry mils). Immediately embed 4 inch, 6 inch or 10 inch polyester reinforcing fabric into the wet coating. Work the fabric into the coating to cause good saturation of the fabric. Immediately apply a second coat of TopCoat to the fabric at the rate of at least 1 gallon per 100 square feet (16 wet mils = 9 to 10 dry mils thickness). The edges of the reinforcing fabric shall be well sealed. Overlap the edges by at least 2 inches with the TopCoat.
- I. Allow all coating to dry thoroughly, (normally 6 to 24 hours), before further application of the system.

3.04 APPLICATION

- A. After thorough preparation as necessary, the entire roof shall receive the GLOBAL Encasement, Inc. restoration system consisting of 3 gallons per 100 square feet of TopCoat (48 to 53 wet mils = 30 to 32 dry mils), applied evenly in two separate coats.
- B. The first coat shall be sprayed or roller applied at the rate of 1½ gallons per 100 square feet (24 to 26 wet mils = 14 to 16 dry mils). Back roll initial coat.
- C. After thorough drying of the first coat (normally 4 to 12 hours), the second coat shall be applied using a crosshatch technique, at the rate of 1½ gallons per 100 square feet (24 to 26 wet mils = 14 to 16 dry mils).
- D. All coating edges shall be cut in evenly in a uniform manner so as to provide an aesthetically pleasing appearance.

3.05 FIELD QUALITY REQUIREMENTS

- A. Manufacturer's Field Services: Inspection by a GLOBAL Encasement, Inc. Authorized Sales Representative can be made to verify the proper installation of the system. Any areas that do not meet the minimum standards for application as specified herein shall be corrected at the contractor's expense. On a case-by-case basis, payment of expenses incurred by the GLOBAL Encasement, Inc. Representative may be the responsibility of the building owner and/or contractor.
- B. Manufacturer's inspection or verification shall not constitute acceptance of responsibility for any improper application of material.
- C. **Disclaimer:** GLOBAL Encasement, Inc.'s employees and/or Authorized Sales Representatives are not responsible for any liabilities resulting from the application or use of these materials.

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3.06 CLEANING

Use soapy water while coatings are still wet and wipe clean. Surfaces not intended to receive GLOBAL Encasement, Inc. system shall be protected during the application process. Should this protection not be effective, or not be provided, the respective surfaces shall be restored to their proper conditions by cleaning, repairing or replacing. All debris from completion of work shall be completely removed from the project site.

IV. MATERIALS

The following materials listed in these recommendations are available from

GLOBAL Encasement, Inc.
701 E. Santa Clara St.
Ventura, CA 93001-5972 USA
(800) 266-3982 / Fax (800) 520-3291
Website: www.encasement.com

1. **RoofCoat™, AsbestoSafe® or Your Last Coat™ TopCoat**
2. **R.I.P.™ Rust-Inhibiting Primer**
3. **PremeClean™ Industrial Cleaner**
4. **GEI Seam Tape**
5. **Globe Caulk™**
6. **GEI Fabric**

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. The prospective user should determine the suitability of our materials and installation recommendations before adopting them for commercial use.

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