



Endurance Building Systems Ceramaflex (Roof) 10 Year Acrylic Installation Guide Specifications

Part 1 GENERAL

1.0.1 SUMMARY

- A. Provide labor, materials, equipment and supervision necessary to apply 100% acrylic coating system as outlined in this specification to create a seamless, waterproof roofing system.
- B. The manufacturer's application instructions for each product utilized is to be considered part of these specifications and should be followed at all times.
- C. Ceramaflex shall be designated for application on the specific deck type indicated in the contract documents.

1.0.2 QUALITY ASSURANCE

- A. **Supplier Qualifications:** Ceramaflex, as supplied by Endurance Building Systems (EBS) is approved for use on the project.
- B. **Applicator Qualifications:** The applicator must be approved of in writing by EBS to apply the coating system. Manufacturer's written verification of applicator approval is also required.
- C. **Requirements of Regulatory Agencies:** Ceramaflex shall be compliant with appropriate UL, FM, and specific regional agencies, which have jurisdiction approvals.
- D. **Field Quality Control:** Upon completion of the Ceramaflex, installation, an inspection by EBS or EBS's designated third party inspection firm may be required. Consult with EBS for details and warranty requirements

1.0.3 SUBMITTALS

- A. **Product Data:** Submit EBS product data sheets and installation instructions including approved products.
- B. Submit material safety data sheets.

1.0.4 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Containers and Packaging: Deliver materials in original sealed containers, clearly marked with manufacturer's logo, full product name, and lot number(s).
- B. Storage and Handling: Store materials between 40°F and 100°F with careful handling to prevent damage to products. If conditions exceed these ranges, specific considerations must be taken. Do not store at high temperatures or in direct sunlight.
- C. Protection: Protect all materials from freezing and other damage during transit, handling, storage, and installation.
- D. Physical Properties of Cured Coating System:

PROPERTY	ASTM METHOD	RESULTS	EBS 510/500
Tensile Strength, psi (Max @ 73°F)	D6083/D-412	Minimum 200	216
%Elongation @ Break (73°F)	D6083/D-412	Minimum 100	243
Wet Adhesion to Specific Substrate	D6083	Minimum 2.0 pli	2.3
Permeance, perms	D6083	Maximum 60	44
Volume Solids %	D6083	>50	58
Weight Solids %	D6083	>65	69

1.0.5 ACCESSORIES AND MISCELLANEOUS MATERIALS

- A. Flashing and waterproof coverings for expansion joints shall be compatible with the PSI spray polyurethane foam and EBS coating.
- B. Miscellaneous materials such as adhesives, elastomeric caulking compounds, metal, vents and drains shall be a composite part of the roof system and shall be compatible with the coating.
- C. Board stock: If required over metal decks, follow instructions for fastening according to Factory Mutual in order to achieve necessary wind uplift requirements. Contact EBS technical representative for appropriate primer.

PART 2 EXECUTION

2.0.1 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins and product guide specification instructions.

2.0.2 EXAMINATION

- A. Inspect surfaces, which will receive urethane and spay polyurethane foam insulation 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 that all roof drains are clean and in working order.
- E. Verify that all air conditioning and air intake vents are suitably protected or closed.

2.0.3 SURFACE PREPARATION

A. GENERAL

- a. Existing roofing materials shall be securely fastened to meet wind uplift requirements.
- b. All roofing surfaces shall be free of loose material, grease, soft asphalt, and other materials that could interfere with form adhesion.

B. BUILT UP ROOF

- a. All loose gravel, dust and residue shall be removed using power vacuum equipment, power sweeper, air blowing, or other suitable means.
- b. The roof shall be inspected or tested to determine if moisture is present within the roof assembly. If damp insulation is found, the insulation might be able to be vented through the spray polyurethane foam or with insulation relief vents. Saturated insulation must be removed and replaced with compatible materials.

- c. The existing roof shall be inspected for adhesion between felts, insulation, and deck. Areas of poor adhesion should be fastened. Blisters, buckles, wrinkles, and fishmouths shall be cut out and/or fastened.
- d. All soft mastic or asphaltic materials that could impede spray polyurethane foam adhesion must be removed.
- e. Remove or refasten all loose base flashing, counter-flashing, and gravel stops as required.
- f. Lightning rods shall be masked prior to foaming. Lightning rod cables shall not be embedded in the spray polyurethane foam and should be removed prior to foaming. Electrical and mechanical conduits should be relocated or raised above the finished roof surface.
- g. Exterior grade metal or concrete should replace all wood and or cellulose materials such as curbs, curbing or blocks.

C. METAL DECK

- a. Metal surfaces shall be primed with an acrylic, rust inhibitive primer or, a corrosion resistant epoxy primer and thoroughly cured prior to foaming.
- b. Ferrous Metal: Remove loose rust and unsound primer from shop primed iron and steel surfaces by scraping, wire brushing, or sandblasting. Prime according to PSI recommendations.
- c. Non-Ferrous Metal: Clean and prime galvanized metal, aluminum, copper, and stainless steel surfaces and prime as recommended by PSI.
- d. If the metal surface is free of loose scale, rust, weathered or chalking paint, it can be cleaned using compressed air jet, vacuum equipment, or broom to remove loose dirt. Grease, oil or other contaminants shall be removed with proper cleaning solutions.

D. CONCRETE

- a. Remove loose dirt, dust and debris by using compressed air, vacuum equipment, or brooming. Oil, grease, release agents, or other contaminants shall be removed with proper cleaning solutions.
- b. All joint openings in concrete decks that exceed one inch shall be grouted or caulked.

- c. If priming is required, the primer utilized shall be as recommended by PSI.

E. WOOD

- a. Plywood shall be exterior grade, nailed firmly in place. Attachment must meet building code requirements for resistance to wind uplift.
- b. Plywood shall contain no more than 18% water, as measured in accordance with ASTM D-2016.
- c. All unpainted surfaces shall be primed at 1 gallon per 200 square feet. Priming is required to minimize moisture absorption and eliminate potential problems with adhesion.
- d. Plywood joints in excess of one inch shall be taped or filled with a suitable sealant material.
- e. Deck shall be free of loose dirt, grease, oil or other contaminants prior to priming or spray polyurethane foam application. Remove loose dirt or debris by use of compressed air vacuum, or brooming. No washing shall be permitted.
- f. Tongue & Groove, Sheathing, Planking: Due to the frequency of joints, possibility of variable openings and effects of aging and shrinking, these surfaces must be overlaid with a minimum one inch thick exterior grade plywood or suitable covering.

F. OTHER SURFACES (i.e. TEXTUM, GYPSUM BOARD, ISOCYANURATE BOARD)

- a. These materials are generally utilized over fluted metal decks and must be installed with mechanical fasteners approved by Factory Mutual.
- b. Boards shall be firmly butted together along all edges without gaps or openings. Joints exceeding one inch shall be taped or caulked with a suitable sealant material.
- c. Fasteners shall be installed to meet Factory Mutual wind uplift criteria or the appropriate local building code criteria.
- d. Special care must be taken to prevent these materials from getting wet in storage on the job site, and after installation prior to being protected by spray polyurethane foam. Moisture exposure will damage these materials and may be cause for replacement.

- e. Remove loose dirt and debris by using compressed air, vacuum, or light brooming. No power brooming is permitted due to possibility of damage.
- f. The installed materials shall be protected from spills of contaminants such as oil, grease, solvents, etc. as these materials cause soiling that cannot be readily removed from the board surfaces.

3.0.1 APPLICATION

- A. Elastomeric Acrylic Coating System:
 - a. The first coat shall be applied the same day as the surface is cleaned.
 - b. The coating system shall be sprayed or roller applied in a crosshatch technique without causing runs or puddles.
 - c. The coating system shall be evenly applied in at least 3 separate coats to achieve a minimum of 28 mils dry film thickness.
 - d. 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, or other variables.
 - e. No coating shall be applied if weather will not allow it to dry prior to exposure to precipitation or freezing temperatures.

3.0.2 CLEANING

- A. Surfaces not intended to receive spray polyurethane foam insulation and/or elastomeric coating materials shall be protected during the application of the system. Should this protection not be effective, or not be provided, the respective surfaces shall be restored to their proper conditions by
- B. Cleaning, repairing or replacing. All debris from completion of work shall be completely removed from the project site. The site shall be left in a broom-clean condition.

3.0.3 MATERIAL

- A. The following materials are available from EBS:

- a. Ceramaflex, 100 – 100% acrylic, high performance elastomeric roof coating.
- b. Ceramaflex general primer – A rapid drying primer designed for most substrates except metal.
- c. Ceramaflex METAL PRIMER – A rust inhibitive primer for most metal substrates.