

SECTION 07560

FLUID APPLIED WATERPROOFING (OVER METAL ROOFING)

PART 1 GENERAL

1.1 DESCRIPTION

1. Fluid applied flexible acrylic waterproofing system over metal roofing. This work shall include the preparation of the roof deck, application of the roof system, flashing system, and clean up.

1.2 RELATED WORK

1. The contractor shall review all sections of these specifications to determine items of work that will interface with the application of this roofing system. Coordination and execution of related sections shall be the responsibility of the contractor.

1.3 REFERENCES

1. ASTM B117 - Test Method of Salt Spray (Fog) Testing.
2. ASTM D412 - Standard Test Method for Rubber Properties in Tension
3. ASTM D638 - Standard Test Method for Elongation
4. ASTM D1653 - Water Vapor Transmission of Materials.
5. ASTM D6083 - Standard Specification for Liquid Applied Acrylic Coatings Used in Roofing.
6. ASTM E108 - Test Method for Fire Test of Roof Coverings.
7. ASTM E903 - Test Method for Hemispherical Spectral Reflectance
8. ASTM E406 - Test Method for Total Emittance
9. ASTM G26 - Practice for Operating Light- and Water-Exposure Apparatus (Xenon Arc Type) for Exposure of Non-metallic Materials.
10. ASTM G29 - Test Methods for Algae Resistance.

1.4 SUBMITTALS

1. Shop Drawings: Submit a scaled drawing showing the layout of joint reinforcing and all flashing details.
2. Product Data: Provide manufacturer's technical literature on products that make up the roofing system. This shall include, but is not limited to, coatings, reinforcing fabrics, flashing materials, roof drains, fasteners, etc..
3. Manufacturer's Installation Instructions: Submit all data sheets available from the manufacturer on the installation of the roofing system applicable to the work.
4. Manufacturer's Certificate: Certify that Products meet or exceed specified requirements.

1.5 QUALIFICATIONS

1. Applicator Qualifications: The applicator of the roofing material specified herein shall be an approved applicator. Proof of this qualification shall be provided in written form from the manufacturer of the roofing system.

1.6 QUALITY CONTROL

1. Codes and Standards: The contractor shall make him/herself thoroughly familiar with all codes, regulations, and standards governing the specified work. Any contradiction between the manufacturer's requirements and these specifications shall be brought to the attention of the manufacturer and the specifier.
2. Deviations: There shall not be any deviations from these specifications unless the deviation is submitted in writing to the specifier. The request for deviation must have a letter from the roofing manufacturer's technical department approving the details of the deviation.
3. Manufacturer's Technical Representative: An employee of the roofing material manufacturer shall be on site at least once every 7-calendar days during the work specified herein. The technical representative shall provide a written inspection report, during each site visit and submit the reports to the owner/owner's representative. The manufacturer's representative must approve the application process at specific stages before the contractor may continue including: Prior to the application of the FoundationCoat and fabric, at the completion of the FoundationCoat and fabric, and after the FinishCoat is applied.

1.7 DELIVERY, STORAGE, AND HANDLING

1. Deliver materials to site in manufacturer's unopened and undamaged containers bearing the following information:
 1. Name of manufacturer.
 2. Name of contents and products code.
 3. Net volume of contents.

4. Lot or batch number.
 5. Storage temperature limits.
 6. Shelf life expiration date.
 7. Mixing instructions and proportions of contents.
 8. Safety information and instructions.
2. Store and protect materials from damage and weather in accordance with manufacturer's instructions.
 3. Store materials at temperatures between 50 and 90 degrees F. Keep out of direct sunlight.

1.8 ENVIRONMENTAL REQUIREMENTS

1. Do not apply if ambient temperatures are expected to fall below 40 degrees F or if rain is expected before the application has time to dry.

1.9 WARRANTY

1. Provide ten-year manufacturer's warranty.

PART 2 PRODUCTS

2.1 MANUFACTURER

- | | | |
|----------------------------|------------|--------------------|
| 1. Hydro-Stop, Inc. | Toll Free: | (800) 739-5566 |
| 1465 Pipefitter Street | Phone: | (843) 745-9600 |
| North Charleston, SC 29405 | Fax: | (843) 745-9602 |
| | Web: | www.hydro-stop.com |

2.2 MEMBRANE COMPOUND MATERIAL

1. Waterproofing Material: PremiumCoat three-stage, fabric reinforced, flexible acrylic coating, fluid applied in successive stages to form one continuous, seamless, watertight membrane; 40 mil minimum cured total system thickness; comprised of the following:
 1. Foundation and Saturation Coats: PremiumCoat FoundationCoat (highly flexible water based 100% pure acrylic polymer resin coatings).
 2. Fabric: Hydro-Stop polyester, non-woven, stitch-bonded, and heat-set fabric.
 3. Finish Coat: PremiumCoat FinishCoat (ultraviolet light resistant, blend of highly flexible water based 100% pure acrylic polymer resin coating); color as selected from manufacturer's standard colors.
2. Reinforcing Fabric: This material shall be non-woven, stitch bonded, heat set fabric with the following characteristics:

| | |
|------------------|-----------------------------|
| Weight: | 3 oz per square yard. |
| Tensile Strength | 57.1 lbs. PSI per ASTM 1682 |
| Elongation | 61.65% per ASTM D1682 |
| Mullein Burst | 176.8 lbs. Per ASTM 3786 |
| Trapezoid | 16.1 lbs. Per ASTM D117 |

3. Cured Membrane Characteristics:

| <u>PROPERTY</u> | <u>TEST</u> | <u>RESULT</u> |
|------------------|-------------|---|
| Elongation | ASTM D638 | >300% elastomeric, 50% reinforcing fabric |
| Cured System | ASTM D412 | >2000 PSI |
| Tensile Strength | | |
| Algae Resistance | ASTM G29 | No Growth Supported |
| Weathering | ASTM G26 | No effect after 3,000 hours. |
| Salt Spray Test | ASTM B117 | No effect. |
| Fire Rating | ASTM E108 | Class A |
| Moisture Vapor | ASTM D1653 | 3 perms |
| Wind Uplift | FM 4470 | Meets Class 1- 90 |
| Severe Hail Test | FM 4470 | No separation or rupture |

2.3 ACCESSORIES

1. Surface Primer for Unprotected or Rusted Steel: Hydro-Stop StableRust Primer, compatible with membrane compound.
2. Surface Primer for Chalky Surfaces: Hydro-Stop SureBond Primer for old chalky Surfaces.
3. Fasteners: Hardened penetrating fasteners or screws approved by roofing system manufacturer shall be used to reattach loose metal panels.

PART 3 EXECUTION

3.1 EXAMINATION

1. Verify substrate surfaces are smooth, durable; free of frozen matter, dampness, loose particles, cracks, pits, projections, or foreign matter detrimental to adhesion or application of waterproofing system.
2. Verify that substrate surfaces are smooth and not detrimental to full contact bond of waterproofing materials.
3. Verify items that penetrate surfaces to receive waterproofing are securely installed.
4. Verify that substrate areas are adequately supported and firmly fastened in place.

3.2 PREPARATION

1. Protect adjacent surfaces not designated to receive waterproofing.
2. As a minimum, clean and prepare surfaces to receive waterproofing by removing all loose and flaking particles, grease and laitence with the use of a stiff bristle push broom and a minimum of 3000 psi powerwash
3. Do not apply waterproofing to surfaces unacceptable to manufacturer.

3.3 APPLICATION

1. Bare Metal or Clean Rusted Metal: Remove all scale and apply StableRust Primer at a rate of 200-sq. ft/gal to all rusted areas. Allow to dry. Protect from weather until dry.
2. Chalky Surfaces: Apply SureBond primer to chalky areas at a rate of 400 sf/gal. Allow to dry before application of waterproofing system.
3. Apply Foundation and saturation coats at a total rate of 40-sq. ft/gal. mininum.
4. At all horizontal Seams apply FoundationCoat and 12 inch fabric to the prepared area. Embed Hydro-Stop polyester fabric directly into the foundation coat and fully saturate from above. Protect from weather until dry.
5. At all Verticalseams apply FoundationCoat and 6 inch fabric to the prepared area. Embed Hydro-Stop polyester fabric directly into the foundation coat and fully saturate from above. Protect from weather until dry.
6. Seal watertight, items projecting through waterproofing material with appropriate fabric and Foundation and saturation coats. Protect from weather until dry.
7. On all exposed fasteners apply foundation coat to the prepared area. Embed a 6 inch X 6 inch piece of Hydro-Stop polyester fabric directly into the foundation coat and fully saturate from above. Protect from weather until dry.
8. Using 12 inch flashing fabric, continue waterproofing material up vertical surfaces minimum 6 inches.
9. Apply extra thickness of waterproofing material at corners, intersections, angles, and over lap joints.
10. Apply two coats of FinishCoat at a combined total rate of 70-sq. ft/gal to entire roof area including flashings and repairs.
11. Apply FinishCoat finish coat after foundation and saturation coats have dried.

12. Seal watertight, items projecting through waterproofing material.

3.4 PROTECTION OF FINISHED WORK

1. Monitor finished system for 7 day, sweeping off birdbaths to allow for full cure.

3.5 CLEANING

Immediately clean unscheduled surfaces receiving waterproofing in accordance with manufacturer's instructions.

END OF SECTION