



“WESTERN COOL ROOF SYSTEMS”

Sustainable - Energy Efficient

FLUID APPLIED ROOF COATING SYSTEM

SPECIFICATION NO. CTG-4.5xE

WHITE ELASTOMERIC REFLECTIVE COATING SYSTEM

CAP SHEET or SMOOTH SURFACE (New or Upgrade) – ACRYLIC SURFACE

PART 1 - GENERAL

1.1 APPLICABLE PUBLICATIONS: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. The latest publication of this specification shall be enforced. Refer to the latest publication of this specification via the manufacturer’s web site or by contacting the manufacturer.

- 1.1.1 American Society for Testing and Materials Publication (ASTM)
- 1.1.2 Underwriters Laboratories Inc. (U.L.)
- 1.1.3 Factory Mutual (FM Global)
- 1.1.4 Western Colloid Details, Drawings and Notes
- 1.1.5 ENERGY STAR® guidelines for energy efficiency (Roof Coatings)
- 1.1.6 CRRC – Cool Roof Rating Council
- 1.1.7 California Building Standards Code - Title 24
- 1.1.8 LEED (USGBC)

1.2 QUALITY CONTROL

1.2.1 Pre-Roofing Conference: Prior to starting the application of the roofing system, there will be a pre-roofing conference with the owner’s representative to assure a clear understanding of the specifications. The conference shall be attended by the Contractor(s) and the Membrane Manufacturer’s representative.

1.2.2 Warranty: The contractor shall warrant for 2 years, from the date of completion, that the roofing system is free of defective materials and workmanship. Repairs that become necessary because of defective materials and/or workmanship while this roofing is under warranty shall be performed by the contractor. The contractor is responsible for inspection of the installed system 1 to 6 months prior to 2 years from the date of completion. Contractor shall report any deficiencies to the manufacturer and make any repairs necessary. In addition the contractor shall provide the owner a 10 year Manufactures Warranty covering material and labor (NDL).

1.2.3 Manufacturer shall certify that materials submitted have been used in like application and that they have been actively engaged in the manufacture of these materials for a minimum period of 20 years prior to submittals, as required. The manufacturer shall certify that the contractor is authorized and approved for the application of their materials.

1.3 SUBMITTALS:

1.3.1 Descriptive literature: Submit manufacturer’s application instructions and technical data sheets or catalog cuts on materials.

1.4 DELIVERY, STORAGE AND HANDLING:

1.4.1 Storage: Prior to and during project, protect all materials from inclement weather conditions. Keep lids tightly closed on all containers when not in use. Locate materials temporarily stored on the roof in approved areas and distribute the load to stay within the live load limits of the roof construction.

1.4.2 Handling: Select and operate materials handling equipment so as not to damage existing construction and applied roofing. Handle roll materials in a manner to prevent damage to edges and ends.

1.5 ENVIRONMENTAL CONDITIONS: This Fluid Applied Reinforced Roof System is water based and should be applied when weather conditions permit proper application and drying. Application will not be permitted during inclement weather (wet, rain, snow, freeze). The temperature during application shall be a minimum of 55 degrees Fahrenheit (F) and rising. Do not attempt application when rain, inclement weather or temperatures below 40 degrees F are expected within 48 hours after application. The system should not be applied if there is ice or frost on the roof surface/deck. The preparation and repair portion of the system that does not include water based materials may be applied immediately prior to inclement weather if necessary.

1.6. PROTECTION OF PROPERTY:

1.6.1 Protective Coverings: Contractor shall take proper precautions to protect owners property against damage and overspray. The use of shield boards, maskings and protective coverings shall be used as necessary. Western Colloid Products is not responsible for damages caused by the overspray of any of its products.

SYSTEM COMPONENTS AND WEIGHTS

<u>No.</u>	<u>Component</u>	<u>Amount</u>	<u>Dry Weight Lb.**</u>
1	Reflective Surface Coating - ElastaHyde White Acrylic	4.5 Gallons	31.5
	Total System Dry Weight		31.5
	Total System Dry MILs (approximate)	38	

** weight approximate (per 100 sq. ft.)

PART 2 - PRODUCTS

2.1 DESCRIPTION OF ROOF SYSTEM:

2.1.1 Sustainable, Energy Efficient: This specified assembly is a cold process method to apply a reflective acrylic surface to existing or new smooth surface roofing. This system may also be used to re-coat existing SPF roofs. The system is water based and environmentally friendly. It has very low odor. It is intended to extend the life of applicable existing or new roof membranes. This system will prolong the serviceable life of existing roof membranes which reduces land fill usage. The system is surfaced with a highly reflective elastomeric coating. This type of reflective surface has proven to significantly reduce temperatures and save energy on many types of commercial structures. This coating system meets the requirements of **California Title 24** and will upgrade a new or existing BUR or Modified Bitumen system to **California Title 24** standards.

This specified assembly meets the following criteria:

- a. U.L. Class A
- b. Factory Mutual
- c. California Title 24
- d. LEED (USGBC)
- e. Energy Star

2.2 MATERIALS: Shall conform to the respective specifications and to the requirements herein.

2.2.1 Polyester Fabric: Shall be Western Colloid's 2.75 ounce firm or 3.0 ounce soft, stitchbonded polyester fabric. To be used as a reinforcing fabric in asphalt emulsion, acrylic coating and flashing materials. Available in various widths.

2.2.2 Seamless Walkway Coating #850 SWS: A unique, water based coating designed to protect walking areas and paths on smooth roofing systems. It is formulated with extremely tough acrylic resins and binders, to form a long lasting walking surface on smooth and coated roofs. 850 SWS contains an aggregate to form a textured non-slip surface with very high abrasion resistance.

2.2.3 All Weather Elastic Cement #8000 : A solvent-based, white sealant. #8000 is designed for use on various roof membranes and surfaces, including asphalt BUR, modified bitumen, metal and single ply roofs. (Including EPDM, PVC, TPO and Hypalon). Used where wet conditions are present during repair and also to set metal flanges and sheets where water based sealant is not practical. #8000 may be used in place of #800 Elastic Cement when a more immediate resistance to water is required.

2.2.4 Elastic Cement #800: Elastomeric Flashing & Sealing Compound: A water base, highly concentrated acrylic resinous plastic emulsion with inert mineral pigments and fillers as manufactured by Western Colloid. For application to all exposed terminations, metal joints, drain sumps and any areas needing a tough, highly flexible sealing compound. Available in white or black.

2.2.5 #970 A2A Bonding Primer : (Acrylic to Asphalt) is a water based, clear acrylic primer. It is formulated with premium acrylic resins that are designed to improve the adhesion of acrylic coatings to smooth asphalt products. May be required if surface of polyester fabric has been top coated with asphalt emulsion or on chopped glass & emulsion systems. Manufactured by Western Colloid.

2.2.6 ElastaHyde #720 ARC: Used as the base and finished coats of this all acrylic roof coating system. Meets and exceeds ASTM D6083//6083M-18 for 100% acrylic roof coating. A premium, elastomeric acrylic, white reflective coating. ElastaHyde is manufactured from premium resins, pigments and components producing an acrylic coating of the highest quality. ElastaHyde is a durable coating that will resist rigorous weather conditions while protecting roof surfaces and contributing to substantial energy savings. ElastaHyde #720 ARC meets the requirements of a "Cool Roof" and is listed by the "Cool Roof Rating Council" (CRRC). As an ENERGY STAR® Partner, Western Colloid has determined that ElastaHyde #720 ARC meets the ENERGY STAR® guidelines for energy efficiency (White, Platinum Gray, California Tan only). Manufactured by Western Colloid. (ElastaHyde can be produced in colors)

** Refer to current Technical bulletins for complete product data and proper application methods.

** Refer to SDS for proper handling procedures.

PART 3 - EXECUTION

3.1 PREPARATION:

3.1.1 Roof membrane shall be repaired and made sound and watertight prior to application of coating system. Be sure the existing membrane is properly fastened and or adhered per code requirements.

3.1.2 Remove all loose gravel, dirt, dust and foreign debris by vacuum, sweeping or power blower. The entire roof surface shall be washed to insure a positive attachment of the system paying special attention to valleys and ponding areas.

3.1.3 Repair and dress roof area as needed with special attention to penetrations, pipes, terminations and flashings.

Small splits and irregularities are to be repaired using a three course method with #800 Elastic Cement. To the area needing repair apply #800 at a rate of 5 gallons per 100 sq. ft.(aprox. 1/8 in. thick). Into the wet #800 embed 1 ply of polyester fabric. Brush the fabric into the #800 to insure full saturation having no wrinkles or voids. Over the fabric apply another coat of #800 at a rate of 4 gal. per 100 sq.ft.. Allow to dry.

3.2 APPLICATION

3.2.1 Pipe Flashings & Penetrations – Surface Treatment: After the preparation of the membrane and before the reflective coating, apply #800 Elastic Cement and Polyester Fabric in a three course method to all pipe flashings, cones, exposed metal joints and flanges. Also apply #800 Elastic Cement to all corners at curbs and skylight flashings or any area that has been previously repaired with roofing mastic.

3.2.2 Acrylic Bonding Primer Coating: Smooth surface asphalt or non-granulated modified bitumen require an application of 970 A2A primer prior to the application of the ElastaHyde coating. (Not required for granulated surfaces.) Wash roof surface to remove any asphaltic residue that may cause lack of adhesion or “tobacco staining”. Apply over the entire roof surface, #970 A2A Bonding Primer at a rate of ½ gallon per 100 sq. ft. to achieve a positive bonding of the acrylic reflective coatings. Before application, mix well and strain if spray applying. Do not thin or dilute.

3.2.3 Drains & Special Areas of Ponding: Areas around drains and scuppers shall receive a ply of polyester fabric set in the ElastaHyde acrylic coating. In addition, valleys, waterways and any locations where water ponds for more than 48 hours shall receive an extra ply of polyester fabric set in the ElastaHyde acrylic coating. The extra ply is to extend 12 inches beyond the ponding area or as needed to extend beyond the drain sump. To this area set 1 ply of polyester into a 3 gallon per 100 sq. ft. application of ElastaHyde and broom lightly to achieve full saturation having no wrinkles or voids. This application shall be applied prior to the final coatings of ElastaHyde.

3.2.4 Reflective Coating - ElastaHyde: After roof has been properly prepared apply reflective coating. To prevent damage to the membrane, the reflective coating should be applied early in the day prior to the heating and softening of the emulsion surface. If surface becomes soft and sticks to equipment or feet, discontinue application. Wash roof surface to remove any asphaltic residue that may cause lack of adhesion or “tobacco staining”. Apply over the entire roof surface, a first coat of **ElastaHyde** elastomeric roof coating at a rate of 1½ gallons per 100 sq. ft. and allow to dry for 24 hours. Over the first coat apply a second coat of **ElastaHyde 720 ARC** reflective surface coating at a rate of 1½ gallons per 100 sq. ft. and allow to dry for 24 hours. Over the second coat apply a third coat of **ElastaHyde 720 ARC** reflective surface coating at a rate of 1½ gallons per 100 sq. ft.. This shall be done in a "cross hatch" manner (each coat shall be at a right angle to the previous). Before application, mix well and strain if spray applying. Do not thin or dilute.

3.2.5 Seamless Walkway Coating: Where protection of surface coating and/or non slip surface is desired, apply #850 SWS Seamless Walkway Coating. Using short nap or smooth roller, apply to the properly prepared surface at the rate of 2 gallons per 100 sq. ft.. After first coat has dried (at least 24 hrs.) apply a second coat and the rate of 2 gallons per 100 sq. Ft.. It may be desirable to apply at a right angle to the first application to achieve a more desirable surface pattern. In all areas where increased resistance to puncture and membrane damage may be required such as roof doors and hatches and equipment service doors add an additional application of #850 SWS with a ply of polyester fabric. Apply the reinforcing layer of polyester fabric into a 2 gallon coat of #850 SWS and broom well to embed fabric. Allow to dry at least 24 hours. Apply the reinforced layer prior to the application of the 2 finished coats of #850 SWS described above.

3.2.6 Cleanup: Each day, remove from the job site, debris, scraps, containers and any rubbish resulting from the installation of the roofing system.