



“WESTERN COOL ROOF SYSTEMS”

Sustainable - Energy Efficient

FLUID APPLIED ROOF COATING SYSTEM

SPECIFICATION NO. CTG-3x-E

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.

- 1.1.1 American Society for Testing and Materials Publication (ASTM)
- 1.1.2 Underwriters Laboratories Inc. (U.L.)
- 1.1.3 Western Colloid Details, Drawings and Notes
- 1.1.4 ENERGY STAR® guidelines for energy efficiency (Roof Coatings)
- 1.1.5 CRRC – Cool Roof Rating Council
- 1.1.6 California Building Standards Code - Title 24
- 1.1.7 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 coating system is free of defective materials and workmanship. Repairs that become necessity because of defective materials and/or workmanship while this roofing is under warranty shall be performed by the contractor. Any additional warrantees shall be provided by the contractor to the owner.

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 15 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	3.0 Gallons	21.0
	Total System Dry Weight		21.0
	Total System Dry MILS (approximate)	25	

** 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. 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. California Title 24
- c. LEED (USGBC)
- d. 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 used as a reinforcing fabric in asphalt emulsion.

2.2.2 SBS Fiber Glass Base Sheet: (For repairs) Shall be minimum 25 lb., SBS asphalt coated, G-2 type base sheet conforming to ASTM D 4601-95.

2.2.3 SBS Modified Bitumen Cap Sheet: (For repairs) Shall be minimum 4mm., granule surfaced, SBS modified with fiberglass and or polyester reinforcement(s).

2.2.4 Asphalt Flashing Compound: (For repairs) Asbestos free, cut back roof mastic reinforced with non asbestos fibers. ASTM D 4586-86 Type 1.

2.2.5 Modified Asphalt Flashing Compound: (For repairs) Asbestos free, cut back roof mastic reinforced with non asbestos fibers. Modified to form a permanently rubberized compound.

2.2.6 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 and any areas needing a tough, highly flexible sealing compound. Available in white or black.

2.2.7 #298 Asphalt Emulsion: A premium clay stabilized asphalt emulsion ASTM D 1227 Type III as manufactured by Western Colloid. Produced in a continuous colloid mill process without any added surfactants or additives. Also known as Glas-Shield Waterproofing Compound for cold process roofing.

2.2.8 ElastaHyde #720 ARC: Meets and exceeds ASTM D6083-97a 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 only). Manufactured by Western Colloid. (ElastaHyde can be produced in colors) (For application to smooth or non-granulated, asphalt, emulsion or modified bitumen surfaces, use ElastaHyde #770 AXP for base or both coats.)

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

** Refer to MSDS for proper handling procedures.

PART 3 - EXECUTION

3.1 PREPARATION:

3.1.1 New BUR roofing membrane shall be installed per the manufacturers specifications and recommendations. All flashings and details shall be completed prior to the application of the coating system.

or (for upgrade follow 3.1.1 through 3.1.5):

3.1.1 Roof membrane shall be repaired and made sound and watertight prior to application of coating system.

3.1.2 Remove all loose gravel, dirt, dust and foreign debris by vacuum, washing, sweeping or power blower. The entire surface shall be properly cleaned so as to receive proper attachment of the new fluid applied membrane. Areas of light dirt and dust may require only sweeping or power blowing. Areas of heavier dirt, dried mud or contamination may require washing. Use strongest cleaning method necessary to achieve best results.

3.1.3 Valleys and ponding areas shall be washed so as to receive a positive attachment of the system. Valleys, ponding areas and areas around drains shall receive a ply of polyester fabric set in ElastaHyde applied at a rate of 3 – 4 gallons per 100 square feet prior to the application of the coating system. Extend the polyester fabric at least 12 inches beyond the perimeter of the area that holds water.

3.1.4 All blisters and splits are to be repaired using the “floating patch” (or other approved) method with asphalt flashing compound and modified base or cap sheet. Remove blisters with flat shovel, scraper or knife. Embed modified base or cap sheet in application of asphalt flashing compound. Apply pressure to smooth and achieve complete contact of sheet and flashing compound. Edges of sheet shall extend at least 6 inches beyond widest point of blister or split being repaired. Apply asphalt flashing compound to seal edge of sheet.

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

Apply #800 Elastic Cement to all pipe flashings, cones, exposed metal joints and flanges using brush or trowel. Also apply #800 Elastic Cement to all corners at curbs and skylight flashings or any area that has been previously repaired with roofing mastic.

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 Special Areas of Ponding: Areas around drains, scuppers and any locations where water ponds for more than 48 hours shall receive an extra ply of polyester fabric set in the ElastaHyde #720 ARC acrylic coating (as described in section 3.1.3). The extra ply is to extend 12 inches beyond the ponding area. To this area set 1 ply of polyester into a 3 gallon per 100 sq. ft. application of #720 ARC and broom lightly to achieve full saturation having no wrinkles or voids. This application shall be applied after the roof membrane and prior to the final coating of ElastaHyde #720 ARC.

3.2.2 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 asphalt 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, apply ElastaHyde elastomeric reflective roof coating at a rate of 3 gallons per 100 sq. ft. to achieve a dry thickness of 25 mils (average) after cure. The reflective coating shall be applied in a two coat application. This shall be done in a "cross hatch" manner (the second coat shall be at a right angle to the first). Each coat shall be ½ of the total application rate. Before application, mix well and strain if spray applying. Do not thin or dilute.

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