MANUFACTURER'S GUIDE SPECIFICATIONS

SECTION 071416
COLD FLUID-APPLIED MEMBRANE

CARLISLE®
COATINGS & WATERPROOFING

900 Hensley Lane • Wylie TX 75098 • 800-527-7092 • www.carlisleccw.com

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SECTION 07 14 16

COLD, FLUID-APPLIED WATERPROOFING

PART 1 - GENERAL

1.1 SECTION INCLUDES:

Installation of waterproofing membrane on surfaces indicated on drawings, consisting of preparation of existing and repaired concrete surfaces, sealing of cracks and joints, and application of CCW-525 or CCW-703 Liquid-Applied Waterproofing Membrane.

1.2 RELATED SECTIONS

A. Section 03 15 00 – Concrete Accessories/Expansion Joints
B. Section 03 30 00 - Cast-In-Place Concrete
C. Section 07 90 00 - Caulking and Sealants
D. Division 04 - Masonry
E. Division 20 – Mechanical/Floor Drains and Standpipes
F. Division 25 – Electrical/Conduit and other Electrical

1.3 REFERENCES

ASTM C 836 High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for use with Separate Wearing Course.

1.4 SYSTEM DESCRIPTION

Product provided by this Section is a coal-tar free polyurethane liquid designed to create a seamless waterproofing membrane.

1.5 SUBMITTALS

A. General: Submit in accordance with Section 01 30 00.
B. Product Data: Submit manufacturer's product literature and installation instructions.
C. Subcontractor’s approval by Manufacturer: Submit document stating manufacturer's acceptance of subcontractor as an Approved Applicator for the specified materials.
D. Warranty: Submit a sample warranty identifying the terms and conditions stated in Section 1.7.

1.6 QUALITY ASSURANCE

A. Applicator Qualifications - Applicator shall be experienced in applying the same or similar materials and shall be specifically approved in writing by the membrane system manufacturer.
B. Regulatory Requirements - Comply with applicable codes, regulations, ordinances, and laws regarding use and application of products that contain volatile organic compounds (VOC).
C. Pre-Application Conference - Prior to beginning work, convene a conference to review conditions, installation procedures, schedules and coordination with other work.

1.7 WARRANTY

A. Upon completion and acceptance of the work required by this section, the manufacturer will issue a warranty agreeing to promptly replace defective materials.
B. The formation or presence of mold or fungi in a building is dependent upon a broad range of factors including, but not limited to, the presence of spores and nutrient sources, moisture,

temperatures, climatic conditions, relative humidity, and heating/ventilating systems and their maintenance and operating capabilities. These factors are beyond the control of Carlisle and Carlisle shall not be responsible for any claims, repairs, restoration, or damages relating to the presence of any irritants, contaminants, vapors, fumes, molds, fungi, bacteria, spores, mycotoxins, or the like in any building or in the air, land, or water serving the building.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to project site in original, factory-sealed, unopened containers bearing manufacturer's name and label intact and legible with following information.
   1. Name of material.
   2. Manufacturer's stock number and date of manufacture.
   3. Material safety data sheet.

B. Recommended storage and application temperature is 75º F. Store materials in protected and well ventilated area.

1.9 PROJECT CONDITIONS

A. Do not apply membrane if temperature is less than 40ºF., if precipitation is imminent or to a damp or frosty surface.
B. Coordinate waterproofing work with other trades to ensure adequate illumination, ventilation, and dust-free environment during application and curing of membrane. The applicator shall have sole right of access to the specified areas for the time needed to complete the application and allow the membrane to cure adequately.
C. Protect adjoining surfaces not to be coated against damage or soiling. Protect plants, vegetation and animals, which might be affected by waterproofing operations.
D. Warn personnel against breathing of vapors and contact of material with skin or eyes. Wear applicable protective clothing and respiratory protection gear.
E. Keep products away from spark or flame. Do not allow the use of spark-producing equipment during application and until all vapors have dissipated. Post “NO SMOKING” signs.
F. Maintain work area in a neat and orderly condition, removing empty containers, rags, and rubbish daily from the site.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND DISTRIBUTORS

Provide CCW-525 or CCW-703 Liquid-Applied Waterproofing Membrane as manufactured by Carlisle Coatings & Waterproofing Incorporated, 900 Hensley Lane, Wylie, Texas 75098, Phone: (800) 527-7092 Fax: (972) 442-0076.
Distributed by: Bowman Construction Supply, 10801 E. 54th Avenue, Denver, CO 80239;Phone: (303) 696-8960

2.2 PRODUCTS

Waterproofing membrane shall be CCW-525-H or CCW-703-H for horizontal surfaces and CCW-525-V or CCW-703-V for vertical surfaces and shall meet or exceed the requirements of ASTM C 836.

2.3 ACCESSORY PRODUCTS

F. Surface Primer: As recommended by manufacturer for each surface encountered.
G. Sealants: Shall be CCW-201 two-component Polyurethane Sealant.
H. Backing Rod: Shall be closed-cell polyethylene foam rod.
I. Flexible Flashing: Shall be as recommended and supplied by coating manufacturer.

J. Protection Course: Shall be CCW Protection Board-H for horizontal surfaces or CCW Protection Board-V for vertical surfaces.
K. Drainage Composite: Shall be CCW MiraDRAIN® as recommended by the manufacturer for each condition.
L. Perimeter Drainage System: Where required shall be CCW QuickDRAIN™.
M. Reinforcing: Shall be CCW Reinforcing Fabric.

PART 3 - EXECUTION

3.1 INSPECTION

A. Before any waterproofing work is started the waterproofing applicator shall thoroughly examine all surfaces for any deficiencies. Should any deficiencies exist, the architect, owner, or general contractor shall be notified in writing and corrections made.
B. Condition of Concrete Surfaces:
   1. The concrete surfaces shall be of sound structural grade, minimum of 2500 PSI compressive strength, and shall have a wood float or fine broom finish, free of fins, ridges, voids or entrained air holes.
   2. Concrete shall be cured by water curing method. Curing compounds must be of the pure sodium silicate or removed. Refer to “Technical Bulletins” section at www.carlisle-ccw.com for more information.
   3. Concrete shall be cured a minimum of 14 days, 28 days preferred, and shall be sloped for proper drainage.
   4. Control joints and/or expansion joints shall have been properly installed at strategic points throughout the field of the deck to control cracking caused by deflection and shrinkage.
   5. Any required crickets or drains should be installed at the time the main deck is poured. Deck should be monolithic.
   6. Voids, rock pockets and excessively rough surfaces shall be repaired with approved non-shrink grout or ground to match the unrepaired areas.
   7. Two-stage drains shall have a minimum three inch flange and be installed with the flange flush and level with the concrete surface.
   8. Surfaces at cold joints shall be on the same plane.

3.2 SURFACE PREPARATION

A. The concrete surface must be thoroughly clean, dry and free from any surface contaminates or cleaning residue that may harmfully affect the adhesion of the membrane.
B. Install a one inch face, 45º cant of CCW-201 polyurethane sealant at all angle changes and inside corners including projections through the deck, walls, curbs, bumpers, etc.
C. All cracks over 1/16" in width and all moving cracks under 1/16" in width shall be saw cut to 1/4" minimum in width and depth. Saw-cut a 1/4" by 1/4" kerf around drain flanges. Clean, prime and fill saw cuts flush with CCW-201 polyurethane sealant.
D. All moving cracks over 1/16" wide and all expansion joints less than 1" wide shall be cleaned, primed, fitted with a backing rod and caulked with CCW-201 polyurethane sealant. For larger joints, contact Carlisle representative.
E. Allow all sealant to cure thoroughly.
F. Apply a 6” wide, 45-mil thick stripe-coat of CCW-525-V or CCW-703-V centered over all sealed cracks, hairline cracks, joints and outside corners.
G. Apply a 45 mil thick stripe-coat of CCW-525-V or CCW-703-V over sealant cants and extending four inches onto the horizontal deck and up the vertical wall to the height called out on the drawings (minimum eight inches recommended).
H. Allow all detail work to cure overnight.
I. All required metal and neoprene flashings shall be installed at this time. Apply a stripe coat of CCW-525-V or CCW-703-V, 45 mils thick, six inches wide, centered over all transitions from

concrete to metal flashings and reinforce with CCW Reinforcing Fabric. Allow the stripe coat to cure over night (16 hours minimum).

3.3 APPLICATION

A. Priming: Shall be per membrane manufacturer=s instructions. Primer is not required for adhesion to dry, non-porous concrete. However, if pinhole and blistering problems occur as a result of air and/or moisture vapors emitted from the concrete and environmental conditions, it is recommended that the surface be primed with epoxy Primer. Refer to manufacturer's data sheet for full information regarding the use of this product.
B. Wipe all detail work with a cloth wet with xylene solvent.
C. CCW-525 or CCW-703 Membrane: Apply in one uniform coat at the rate of one gallon minimum per 22 square feet for CCW-525 and 25 square feet per gallon for CCW-703 or as needed in order to obtain a minimum thickness of 60 wet mils.
D. In the event the entire surface is not completed in one day, prior to beginning application the next working day clean an area 6" wide along the edge of the previously applied membrane with a cloth wet with xylene solvent. New work shall overlap the existing work by six inches.

3.4 INTEGRITY TESTING

A. Test is required for all expanded warranties beyond the standard material warranty of horizontal applications.
B. The test can be done with Electronic Vector Mapping or flood testing. Flood testing requires 2” minimum head of water for a period of 24 hours.

3.5 PROTECTION COURSE

A. Install CCW QuickDRAIN Perimeter Drainage System as the first course of drainage composite immediately after membrane has cured on vertical surfaces. Install CCW MiraDRAIN Drainage Composite or CCW Protection Board-V Protection Course on remainder. Stop drainage composite six inches below final grade level.
B. Install CCW MiraDRAIN Drainage Composite or CCW Protection Board-H Protection Course immediately after flood testing on horizontal surfaces. If flood testing is delayed, install a temporary covering to protect the CCW-525 or CCW-703 membrane from damage by other trades.

End of Section