
MANUFACTURER'S GUIDE SPECIFICATIONS

SECTION 07 14 16 CCW MIRASEAL™ COLD FLUID-APPLIED WATERPROOFING



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CCW MIRASEAL™ 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 MiraSEAL Fluid-Applied Waterproofing Membrane.

[NOTE TO SPECIFIER:

- **MiraSEAL may be applied at 60-mils, 90-mils, 120-mils and 120-mils reinforced**
- **Specifier shall match minimum thickness requirements to match design criteria]**

1.2 RELATED SECTIONS

- A. Section 03150 - Expansion Joints.
- B. Section 03300 - Cast-In-Place Concrete.
- C. Section 07900 - Caulking and Sealants.
- D. Division 15 - Floor Drains and Standpipes.
- E. Division 16 - Conduit and other Electrical.

1.3 REFERENCES

ASTM C 836 100% 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 and solvent-free, single component, elastomeric liquid designed to create a seamless waterproofing membrane at 60-mil thickness.

1.5 SUBMITTALS

- A. General: Submit in accordance with Section 01300.
- 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. Pre-Application Conference: Prior to beginning work, convene a conference to review conditions, installation procedures, schedules and coordination with other work.

1.7 WARRANTY

Upon completion and acceptance of the work required by this section, the manufacturer will issue a warranty agreeing to promptly replace defective materials.

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 75°F. Store materials in protected and well ventilated area.

1.9 PROJECT CONDITIONS

- A. Do not apply membrane if temperature is less than 40°F. If precipitation is imminent or the surface is wet or has frost, substrate may be surface dry.
- 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. 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

Provide CCW MiraSEAL Fluid Applied Waterproofing Membrane at 60-mil thickness as supplied by Carlisle Coatings and Waterproofing Incorporated, 900 Hensley Lane, Wylie, Texas 78098, Phone: (800) 527-7092 Fax: (972) 442-0076.

2.2 PRODUCTS

- A. Waterproofing membrane shall be CCW MiraSEAL for horizontal and vertical cast-in-place structural weight concrete substrates applied at 60-mils and shall meet or exceed the requirements of ASTM C 836.

2.3 ACCESSORY PRODUCTS

- A. Surface Primer: is not required for concrete.
- B. Sealants: Shall be CCW-201 two-component Polyurethane Sealant.
- C. Backing Rod: Shall be closed-cell polyethylene foam rod.
- D. Flexible Flashing: Shall be as recommended and supplied by coating manufacturer.
- E. Protection Course: Shall be CCW Protection Board-H/HS for horizontal surfaces or CCW Protection Board-V for vertical surfaces.
- F. Drainage Composite: Shall be CCW MiraDRAIN® as recommended by the manufacturer for each condition.
- G. Perimeter Drainage System: Where required shall be CCW MiraDRAIN HC.
- H. Reinforcing: Shall be CCW Reinforcing Fabric or CCW Liquifiber™.
- I. Swellable Sealant: Shall be MiraSTOP SS for use in non-moving joints to create watertight concrete joints and as an adhesive for CCW MiraSTOP waterstop strips
- J. Pre-formed Bentonite hydrophilic waterstop strip: Shall be CCW MiraSTOP BW for use in non-moving joints to create watertight concrete joints
- K. Pre-formed non-Bentonite hydrophilic waterstop strip: Shall be CCW MiraSTOP NBW for use in non-moving joints to create watertight concrete joints
- L. Injectable waterstop (grout tube): Shall be MiraSTOP IW for use as an injectable waterstop for use in non-moving joints to create watertight concrete joints
- M. Chemical grout: Shall be MiraSTOP CG-F and for use with the MiraSTOP IW
- N. Miscellaneous products: accessory products approved by Carlisle Coatings & Waterproofing Inc.

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 type and be approved by the Carlisle representative.
 - 3. Concrete shall be cured at least three (3) days 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 3" 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 contaminants or cleaning residue that may harmfully affect the adhesion of the membrane.
- B. Install a 1" face, 45 degree 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-mils thick stripe-coat of CCW MiraSEAL centered over all sealed cracks, hairline cracks, joints, and outside corners.
- G. Apply a 45-mil thick stripe-coat of CCW MiraSEAL over sealant cants and extending 4" onto the horizontal deck and up the vertical wall to the height called out on the drawings (minimum 8" recommended).
- H. Allow all detail work to cure overnight.
- I. All required metal shall be installed at this time. Apply a stripe coat of CCW MiraSEAL, 45-mils thick, 6" wide, centered over all transitions from concrete to metal flashings and reinforce with CCW Liquifiber reinforcing fabric. Allow the stripe coat to cure a minimum of three (3) hours to a firm consistency.

3.3 APPLICATION

- A. Priming: Primer is not required.
- B. To mitigate the effects of pinhole and blister problems as a result of air and/or moisture vapor being trapped or emitted from the concrete and/or environmental conditions, it is recommended that a thin-mil coat application (i.e. scratch-coat) of MiraSEAL be applied to remove trapped air/vapor.
- C. Apply the CCW MiraSEAL in one uniform coat at the rate of one gallon minimum per 26 square feet or as needed in order to obtain a minimum thickness of 60-mils wet, including coverage of detail work. Use a ¼-inch notch squeegee to achieve a uniform thickness, then back roll to smooth coating.
- D. When using Carlisle's CCW Liquifiber reinforcing fabric for surface prep, work the fabric into the wet CCW MiraSEAL until fabric is saturated, avoiding trapped air, wrinkles and fishmouths. Cut and lay flat wrinkles and fishmouths.
- E. In the event the entire surface is not completed in one day and becomes contaminated, prior to beginning application clean an area 6" wide along the edge of the previously applied membrane with a cloth wet with xylene solvent and allow to dry. New work shall overlap the existing work by 6".

3.4 FLOOD TEST

- A. Allow CCW MiraSEAL Membrane to cure for at least 24 hours. Plug drains and provide barriers necessary to contain flood water.
- B. Flood surface with 1" head of water for 24 hours. Inspect for leaks and repair membrane if leaks are found. Retest after making repairs.

3.5 PROTECTION COURSE

- A. Install MiraDRAIN Drainage Composite and CCW Protection Board-H/HS Protection Course immediately after flood testing on horizontal surfaces. If flood testing is delayed, install a temporary covering to protect the CCW MiraSEAL membrane from damage by other trades.
- B. Install MiraDRAIN Drainage Composite and CCW Protection Board-H/HS Protection Course on vertical surfaces immediately after membrane has cured (24 hrs. at 75°F).

END OF SECTION

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