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# WATERPROOFING

**CCW MiraDRI® 860/861**

**Self-Adhering Sheet-Applied Waterproofing Membrane**



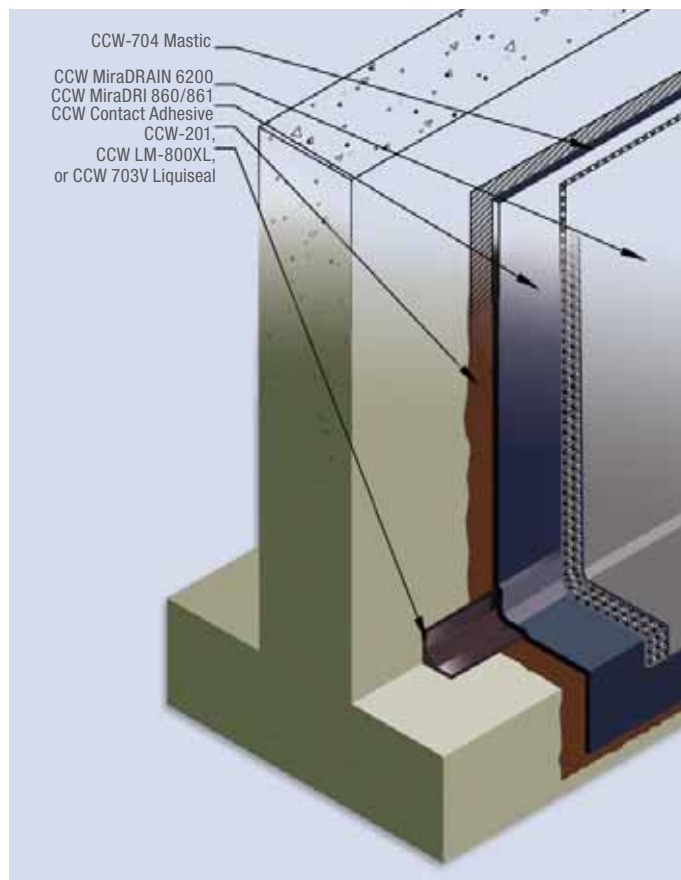
# WATERPROOFING

## CCW MiraDRI 860/861

### Self-Adhering Sheet-Applied Waterproofing Membrane

Carlisle Coatings & Waterproofing, Inc. (CCW) provides a broad range of solutions to meet specific waterproofing needs. CCW offers technical services, research & development and manufacturing capabilities from its headquarters in Wylie, Texas and two additional manufacturing facilities in Terrell, TX and Carlisle, PA. The CCW network is further supported by over 50 manufacturer's sales representatives directed by regional sales offices throughout the country. CCW offers a complete line of waterproofing and moisture protection products for the architectural, general construction, industrial and maintenance industries. Carlisle Coatings & Waterproofing, Inc., is part of the Carlisle Construction Materials Division of Carlisle Companies, Inc., which is a publicly traded company on the NYSE.

Protection from the damaging effects of water can be achieved quickly and easily with CCW MiraDRI 860/861. Focusing on below-grade foundation walls, this peel-and-stick waterproofing membrane is easy to handle, simple to apply and provides long-lasting protection. CCW MiraDRI 860/861 works best when suited with the appropriate CCW MiraDRAIN® Drainage System, which protects the membrane, provides a channel for water migration and eliminates hydrostatic pressure. With all the benefits of factory-controlled properties and the waterproofing characteristics of asphalt, CCW MiraDRI 860/861 is the easy choice for contractors and applicators alike.



#### CCW MiraDRI: A Foolproof Waterproofing System

CCW MiraDRI self-adhering membranes are composite materials consisting of a specially formulated rubberized asphalt laminated to a high-impact-resistant HDPE film. The CCW MiraDRI waterproofing system is designed to provide waterproofing protection for below-grade foundation walls, slabs, parking decks, plaza decks, tunnels and many applications. The CCW MiraDRI waterproofing system consists of the self-adhering membrane, an environmentally friendly water-based primer for surface preparation, a liquid membrane for detailing and mastic to seal termination points.

The installed CCW MiraDRI waterproofing membrane is protected by CCW MiraDRAIN drainage composites or a CCW Protection Course. CCW MiraDRAIN drainage composites protect waterproofing systems and keep the water away from the building structure. CCW MiraDRAIN provides a cost-effective solution as compared to traditional protection boards and aggregate drainage systems.

## Installation

CCW MiraDRI 860 Membrane is used for applications where surface temperatures are 40°F (4.4°C) and above. CCW MiraDRI 861 is specially formulated for applications with cooler surface temperatures down to 25°F – 65°F (-3.9°C – 18°C). CCW MiraDRI 860/861 membranes should not be applied in temperatures below 25°F (-3.9°C).

**Substrate Preparation:** CCW MiraDRI 860/861 can be applied to concrete, metal, wood, insulated wall systems or masonry surfaces. All substrates must be clean, dry and free of surface irregularities.

**Concrete Substrates:** Structural concrete must be cured a minimum of seven days and lightweight structural concrete must cure a minimum of 14 days before the application of CCW MiraDRI 860/861. Repair surfaces that are not structurally sound, have voids, protrusions, rough spalled areas, loose aggregate or exposed coarse aggregate. Void areas should be filled with latex Portland cement, concrete or epoxy concrete and troweled smooth to match the existing surface. Protrusions and other rough areas should be ground down and patched as above. CCW LM-800XL, CCW-201, or CCW 703V Liqueiseal may be used to fill small voids, honeycombs or bug holes.

**Masonry Substrate:** Rough masonry may require the surface to be parged with a plaster coat of cementitious material to form a well-adhered, smooth and uniform finish. Allow the parge coat to dry before priming and installing the CCW MiraDRI 860/861 waterproofing membrane.

**Priming:** Apply the appropriate CCW Contact Adhesive at the specified coverage rate. Apply CCW Contact Adhesive with a lambswool roller, brush or spray apparatus. Allow Contact Adhesive to dry for a minimum of 30 minutes. The CCW Contact Adhesive will dry to a tacky finish. Areas applied but not covered with CCW MiraDRI 860/861 within 24 hours should be re-applied.

### Surface Preparation for Gypsum-Sheathing with Glass-Mat Facers:

When installing CCW sheet membranes and sheet flashings over gypsum-sheathing with glass-mat facers, coverage rates for contact adhesives and primers will depend on the porosity and texture of the sheathing and will vary substantially by gypsum-sheathing brand and manufacturer. To achieve consistent contact adhesive and/or primer coverage with adequate tack, it may be necessary to decrease the coverage rate (i.e. increase the amount applied) of the contact adhesive and/or primer and/or the application of multiple coats. CCW Contact adhesives and primers shall be allowed to dry completely (lower temperatures will extend drying time) before additional coats are applied or membranes installed. Caution should be taken as contact adhesives and/or primers applied to gypsum-sheathings with glass-mat facers will take longer to dry than other substrates. Multiple adhesion tests should be performed randomly to verify proper application of primer and ensure a successful application.

**Membrane Application:** Start membrane application by removing the release paper. Begin applying the membrane, beginning at the low point and working toward the high point. Side laps should be 2½" (6.3 cm) minimum and end laps should be 5" (12.7 cm) minimum. CCW recommends that the membrane be rolled in place immediately after

## Features & Benefits

- Fully Adhered Membrane: Eliminates water migration which can otherwise cause leakage through cracks
- Factory-controlled thickness: eliminates thin spots which could be easily penetrated, allowing leakage
- Preformed sheet: eliminates pinholing
- Flexibility over cracks: elastomeric properties accommodate normal expansion and contraction of the substrate
- Resists hydrostatic pressure
- Mechanically strong
- Easy to apply
- Cost-competitive: the highest performance system with the best lifecycle cost

its placement to ensure full adhesion to the primed substrate. A minimum 1" fillet should be applied at juncture of footing and foundation wall. Double coverage should be used on all inside and outside corners using a 9" (22.9 cm) strip of CCW MiraDRI 860/861. All joints, drains, penetrations and protrusions should also receive double coverage. All terminations of the membrane should receive a troweled bead of CCW-704 Mastic, CCW LM-800XL, CCW-201 or CCW 703V Liqueiseal.

**Membrane Protection:** CCW MiraDRAIN Drainage Composites, CCW Protection Boards or CCW Protection Fabric should be applied at the end of each day's work to avoid damage caused by other trades, construction materials or backfill. For more information on installation guidelines, refer to the Manufacturer's Guide Specification or contact your local CCW representative.



## Technical Data

Property	Test Method	Typical Value
Color	—	Dark Gray
Tensile (Membrane)	ASTM D412	325 psi
Tensile (Film)	ASTM D882	5,000 psi
Elongation	ASTM D412	350%
Permeance	ASTM E96	0.05 perms
Low Temp. Flexibility	ASTM D1970	Unaffected, @ -45°F Cracking Cycle*
(100 Cycles)	ASTM C836	Unaffected, @ -25°F
Peel Strength	ASTM D903	10 lb/in
Lap Adhesion	ASTM D1876	19.0 lb/in
Puncture Resistance	ASTM E154	60 lb min
Soil Burial	GSA-PBS 07121	16 wks, no effect
Water Absorption	ASTM D570	0.1% by wt
Hydrostatic Head	ASTM D5385	230 ft

\*180° bend over a 1" (25 mm) mandrel at -45°F (-43°C)

## Applicable Standards

- GSA; PBS PCD 07121
- USN; NAVFAC TS-07111
- VA; H-08-1
- Federal Construction Guide Specs; FCGS-07111
- Corps of Engineers; CEGS-07111-3-82
- UL 790, Class A
- LA Research Report Number 25094L

## Limited Warranty

Carlisle Coatings & Waterproofing, Incorporated (Carlisle) warrants this product to be free of defects in workmanship and materials only at the time of shipment from our factory. If any Carlisle materials prove to contain manufacturing defects that substantially affect their performance, Carlisle will, at its option, replace the materials or refund its purchase price.

This limited warranty is the only warranty extended by Carlisle with respect to its materials. There are no other warranties including the implied warranties of merchantability and fitness for a particular purpose.

Carlisle specifically disclaims liability for any incidental, consequential or other damages including, but not limited to, loss of profits or damages to a structure or its contents arising under any theory of law whatsoever.

The dollar value of Carlisle's liability and buyer's remedy under this limited warranty shall not exceed the purchase price of the Carlisle material in question.

### Carlisle Coatings & Waterproofing

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