



VAPOR-LOCK

HOT LIQUID APPLIED MEMBRANE SYSTEM

DESCRIPTION

Carlisle's Vapor-Lock System utilizes the CCW-711W sheet membrane as a preformed first course on difficult to waterproof substrates such as lightweight structural concrete and wood. The CCW-711W sheet membrane is a 90-mil thick composite consisting of a self-adhering rubberized asphalt membrane laminated to high-strength, heat-resistant woven polypropylene mesh. The woven mesh is designed to withstand high temperatures allowing the membrane to become an integral reinforcement part of the CCW-500R Hot Applied Membrane System.

The second course of the Carlisle Vapor-Lock System is the application of CCW-500. The CCW-500 is a single component rubberized asphalt compound that forms a tough, flexible, monolithic membrane over the CCW-711W sheet membrane. The fast set up time speeds the completion of the waterproofing system.

TYPICAL USES

Carlisle's Vapor-Lock System is used to waterproof lightweight structural decks, inverted roof systems with steel decks covered by gypsum, Dens-Deck® or plywood. The Vapor-Lock System is also ideal for conventional waterproofing of split slabs, tunnels and plaza decks.

LIMITATIONS

- Do not apply CCW-711W membrane if temperature is less than 25°F. Do not apply CCW-500 membrane if temperature is less than 0°F. Do not install waterproofing to a damp, frosty or contaminated surface.
- Alternate Substrates: Adequate structural support and the number, type and location of fasteners required to meet applicable codes should be determined and verified by the project engineer.
- Steel decking shall be 22 gauge minimum covered with 5/8" minimum fire rated Type X gypsum board or approved equal.
- Wood decking shall be 1/2" minimum exterior grade tongue-and-groove plywood installed with the long dimension perpendicular to joists. All butt joints shall be supported by framing.

PACKAGING

CCW-500 is packaged in 45 lb. blocks, one block per carton, 64 cartons per pallet. Each block is sealed in a polyethylene bag inside the carton. The block, including the bag, is placed in the kettle, leaving only disposal of the carton.

CCW-711W sheet membrane is packaged on rolls in the following sizes:

18" X 45' (67.5 sq. ft.) 36" X 45' (135 sq. ft.)

APPLICABLE STANDARDS

1. US Patent # 5,979,133
2. Canadian Specification CGSB-37.50-M89
3. UL 790 Class A
4. City of New York MEA#63-96-M

| PROPERTY | TEST METHOD | RESULTS |
|--|--|--|
| Solids content | ASTM D-1353 | 100% |
| Flow | ASTM D-1191 | @ 140°F, 0 mm |
| Penetration (1/10th mm) | ASTM D-1191 | @ 77°F = Avg. 76 @ 122°F = Avg. 159 |
| Flash Point | ASTM D-92 | 568°F |
| Water Vapor Permeance | ASTM E-96 (E) | 0.02 perms |
| Toughness | CGSB-37.50-M89 | 19J |
| Ratio of Toughness to peak load | CGSB-37.50-M89 | .09 |
| Adhesion | CGSN-37.50-M89 | Pass |
| Softening | ASTM D-36 | 202°F |
| Viscosity | CGSB-3750-M89 Brookfield | 8 seconds 1830 cps @ 400°F |
| Water Absorption | CGSB-37.50-M89 (max. 0.35 g (gain)) | 96 hrs. = 0.05 g |
| Pinholing | CGSB-37.50-M89 | No visible pinholes |
| Low Temperature flexibility | CGSB-37.50-M89 | No cracks or loss of adhesion |
| Low temperature crack bridging | CGSB-37.50-M89 | No cracks, splitting or loss of adhesion |
| Heat stability | CGSB-37.50-M89 | No change in viscosity, penetration, flow or low temp flexibility after aging |
| Resistance to mild acids | | No effect |
| Minimum ambient temperature for application | | 0°F |

COVERAGE

The following is a guide to estimate the amount of materials required for various membrane thicknesses.

215 mils applied = 1.30 lbs/ft² = 7 ft²/gal.

180 mils applied = 1.09 lbs/ft² = 9 ft²/gal.

in two coats at rates of:

125 mils applied = .76 lbs/ft² = 13 ft²/gal.

90 mils applied = .55 lbs/ft² = 18 ft²/gal.

WARNINGS AND HAZARDS

Use with adequate ventilation. Workers must use proper protection to prevent burns. Refer to the MSDS for important warnings and product information.

INSTALLATION

Surface Preparation: The substrate surface must be thoroughly clean, dry and free from any surface contaminants or cleaning residue that may harmfully affect the adhesion of the membrane.

Detail and Flashing: Detail expansion joints per manufacturer's recommendation. Preferred Curb and Parapet Flashing Method (VL-5004A): Apply CCW-702 primer at the juncture of all horizontal surfaces and vertical surfaces to the height indicated on the drawings (8" min. recommended), such as parapet walls, curbs, columns and all penetrations through the deck at a rate of 300-350 sq. ft. per gallon. Avoid puddles. Allow primer to dry for one hour minimum, eight hours maximum. **Membrane will not properly adhere to wet primer.** Apply 125-mil of CCW-500 membrane to cover primed areas. Install CCW-711W sheet membrane or uncured neoprene flashing into this first course of CCW-500 to cover the vertical section and extend 6" onto deck surface. Flashing installation may be done during crack and joint treatment or during installation of the first layer of CCW-500 membrane. Completely cover all flashing material during installation of the subsequent layers of CCW-500 membrane.

At the juncture of all horizontal surfaces to vertical surfaces, such as parapet walls, curbs, columns and all penetrations through the deck, apply CCW-702 Primer on the vertical sections to the height indicated on the drawings (8" min. recommended). Allow primer to dry. Apply the CCW-500 over the primed substrate. Install CCW-711-90 mil or CCW-Uncured Neoprene Flashing over the CCW-500 to cover the vertical section and extend 6" onto the deck surface. Install CCW-500 Membrane over horizontal portion of flashing and onto the vertical portion during the field membrane installation. Terminate flashing on wall per Carlisle 500-9 Details. Install CCW-500 Membrane over horizontal portion of flashing and onto the vertical portion during the field membrane installation.

Install Sure-Seal® EPDM flashings in exposed areas per Carlisle recommendations. Always clean and prime EPDM with EP-95 Splice Cement per Carlisle splice procedure prior to application of CCW-500 membrane. Apply a thin film of CCW-702 Primer in a 4' square area around drains. Allow primer to dry one hour minimum, eight hours maximum. Apply 90-mil of CCW-500 membrane to cover primed areas. Install a 3' square section of CCW-711W or uncured neoprene flashing over the drain and onto the deck. No splices or seams are allowed within 3" of the drain flange. Terminate the flashing under the clamping ring of the drain and cut away the inner portion of the flashing. Use firm pressure to press the flashing against the CCW-500 surface and ensure good adhesion. Do not interfere with weep holes.

APPLICATION

Apply CCW-702 primer to all surfaces to receive CCW-711W sheet membrane at a rate of 300-350 sq. ft. per gallon. Avoid puddles. Allow primer to dry for one hour minimum, eight hours maximum. **Membrane will not properly adhere to wet primer.**

Apply CCW-711W sheet membrane from low to high point, in a shingle fashion so that laps will shed water. Begin

installation at low edge of deck overlapping horizontal portion of previously installed flashings. Overlap all edges at least 2 1/2". End laps shall be staggered. Place sheet membrane carefully so as to avoid wrinkles and fishmouths. After installation, roll with a metal roller wrapped with a resilient material. Roller should be 18" - 24" wide and weigh at least 100 lbs.

Heat CCW-500 membrane blocks in a twin wall kettle with continuous agitation (**Caution: Do not exceed maximum safe operating temperatures of 400° F.**) Apply a coat of CCW-500 Hot Applied Membrane at a rate of 13 sq. ft. per gallon or as required to obtain an average thickness of 125 - mil. Total thickness of the CCW Vapor-Lock System shall be 215-mil.

Apply CCW-500 over the CCW-711W sheet membrane and CCW uncured neoprene flashing.

FLOOD TEST

Allow CCW-500 membrane to cool. Plug drains and provide barriers necessary to contain flood water.

Flood surface with 2" head of water for 24 hours. Inspect for leaks and repair membrane if leaks are found. Retest after making repairs.

PROTECTION COURSE

Install CCW MiraDRAIN® Drainage Composite or CCW Protection Board-H Protection Course or CCW 300HV immediately after flood testing on horizontal surfaces. If flood testing is delayed, install a temporary covering to protect the CCW-500 membrane from damage by other trades.

(Optional) Install 8-mil Elephant Skin prior to the protection course to provide easy future access to the membrane.

REPAIRS

In the event the CCW-500 Hot Applied Liquid Membrane is damaged, clean the area with a cloth wet with mineral spirits and apply CCW-500 Hot Applied Liquid Membrane to the damaged area.

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 effect 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.