



WATERPROOFING

CCW-500 (Cdn)

Description

CCW-500 Hot-Applied Waterproofing Membrane is a single-component, rubberized asphalt compound that forms a tough, flexible, thick waterproofing membrane. CCW-500 adheres tenaciously to virtually any sound vertical or horizontal surface, to ensure water will not migrate beneath the membrane in the event of physical damage. The fast setup time speeds the completion of the waterproofing. CCW-500 Hot-Applied Liquid Membrane is applied in a thick, monolithic coating utilizing CCW Reinforcing Fabric, which allows for a wide variety of substrate conditions.

Typical Used

CCW-500 (Cdn) is used for waterproofing split-slab construction projects and is especially suited as the waterproofing membrane on roof decks using the inverted roof membrane assemblies and green roof systems.

Installation

Surface Preparation: New concrete shall be water cured, with a light, hair-broom finish, and in place for 14 days minimum, 21 days preferred. Surface shall be structurally sound, dry, and free of dust, dirt, frost, laitance, non-approved curing agent and other contamination that may affect adhesion of the membrane.

Remove splatters, fins, ridges or other projections to provide a level surface. Fill holes, honeycombs, rock pockets, spalls or other voids and indentations with approved concrete patching compound.

Grind or fill surface at cold joints where each pour is at a different plane to provide a smooth and level surface.

Detail Work: Detail expansion joints and drains per manufacturer's recommendation.

Apply a thin, even coat of any CCW recommended primer or contact adhesive, 150 mm (6") wide, centered over all non-moving cracks less than 0.8 mm ($1/16$ ") wide and cold joints. Apply primer at published coverage rate per gallon. Allow primer to dry. Apply a 3-mm-thick (125-mil) coat of CCW-500 Hot-Applied Liquid Membrane over the primed crack or cold joint.

Apply a thin, even coat of any CCW recommended primer or contact adhesive, 400 mm (16") wide, centered over all cracks greater than 0.8 mm ($1/16$ ") wide, all moving cracks and all previously sealed expansion joints. Allow primer to dry. Apply 2.25 mm (90 mils) of CCW-500 membrane to cover primed areas. Install a 300 mm (12") wide strip of CCW-711-90 Sheet Membrane Flashing, centered over the cracks and control joints.

Application: Blocks of CCW-500 shall be melted in a twin wall kettle with continuous agitation. Caution: Do not exceed maximum safe operating temperature of 205°C (400°F).

Apply a thin even coat of any CCW recommended primer or contact adhesive to the entire surface to receive waterproofing. At the juncture of all vertical sections with the deck surface, such as parapet walls, columns and all projections through the deck, apply a thin, even coat of CCW primer or contact adhesive to the vertical section to the height indicated on the drawings. Apply primer at published coverage rate per gallon. Allow the primer or contact adhesive to fully dry. Note: Membrane will not properly adhere to wet primer.

Penetrations and flashings shall be detailed per manufacturer's published drawings.

Apply CCW-500 Hot-Applied Membrane to the primed/prepared vertical and horizontal surfaces, including all previously detailed areas. For vertical wall applications of 4.5 mm (180 mils), install two coats of CCW-500 with each coat being applied to achieve 2.25 mm (90 mils) per coat. While the first coat is still warm and tacky, install CCW-500 Reinforcing Fabric and then apply second coat of CCW-500.

For horizontal applications of 5 mm (215 mils), install two coats of CCW-500 with the first coating being applied to achieve 2.25 mm (90 mils) and the second coat being applied to achieve 3 mm (125 mils). While the first coat is still warm and tacky, install CCW-500 Reinforcing Fabric and then apply second coat of CCW-500.

Protection Course: The membrane must be protected from damage. Install CCW Protection Board H or HS while CCW-500 is still warm and tacky. CCW Protection Board shall be spliced together using CCW-500 for expanded warranties. Integrity testing can be performed with the protection board installed. Install CCW MiraDRAIN and CCW Root Barrier relative to the requirements of the designed overburden.

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

Repairs: In the event the CCW-500 Hot-Applied Liquid Membrane is damaged apply heat to remove CCW Protection Board to expose CCW-500, clean the area with a cloth wet with mineral spirits and apply CCW-500 Hot-Applied Liquid Membrane to the damaged area to match existing system profile.

All fluid-applied product application rates are based on theoretical coverage relative to the percentage of solids in the material. These are minimum application rates to achieve the required dry film thickness for the system and do not account for substrate condition or porosity. A thicker application of the product may be necessary to achieve the required dry film thickness for system relative to the substrate.

Coverage Rate

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

CCW-500 (Cdn)

215 mils applied = 1.3 lbs/ft²
 125 mils applied = 0.75 lbs/ft²
 90 mils applied = 0.50 lbs/ft²

Limitations

- Do not use on exposed or wearing surfaces.
- Not recommended over lightweight insulated concrete.
- If metal pan is used for concrete form, the vented metal pan is preferred.
- Consult with Carlisle's representative before using CCW-500 on any type of lightweight concrete, concrete with curing compounds or additives or decks that have existing waterproofing materials.
- Do not apply below 0°F or to damp, frosty or contaminated surfaces.

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.

Packaging

CCW-500 is packaged in 50-lb. blocks, two block per carton, 40 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.

Product	Packaging
CCW-550 Primer	5-gallon pails (45 pails/pallet)
CCW-702LV VOC-Compliant Solvent-Base Contact Adhesive	5-gallon pails (45 pails/pallet)
CCW-AWP Water Base Contact Adhesive	1-gallon pails (100 pails/pallet) 5-gallon pails (45 pails/pallet)
CCW-702 Solvent Base Contact Adhesive	5-gallon pails (45 pails/pallet)
CCW-711-90 90-mil sheet membrane flashing	12" x 45' 2 rolls/carton 18" x 45' 1 roll/carton 24" x 45' 1 roll/carton 36" x 45' 1 roll/carton

The CCW Reinforcing Fabric is packaged in a rolls of:
 36" x 667' (2000 ft²) weight approx. 24 lb.

Standards

- OPSS 1213
- CGSB 37-GP-50-M89
- ASTM D1190
- Various Provincial and State D.O.T specifications

Typical Properties

Property	Method	Typical Value
Solids Content	ASTM D1353	100%
Flow	ASTM D5329	At 60 °C max 3 mm Result = 0 mm
Penetration (1/10 mm)	CGSB 37.50 M-89 ASTM D1191	At 25 °C Max 110 Result = 50 At 50 °C Max 160 Result = 110
Flash Point	CGSB 37.50 M-89 ASTM D1191	275°C
Water Vapor Permeability	CGSB 37.50M-89 ASTM E96 (E)	1.7 ng/Pa·s·m ² - 1.5
Elongation	ASTM D412	>1,000%
Toughness	CGSB-37.50-M89	Toughness Min. 5.5 Joules Result = 20 Joules
Ratio of toughness to peak load	CGSB-37.50-M89	0.065
Adhesion	CGSB-37.50-M89	Pass
Viscosity	CGSB-37.50-M89	2-15 Second Result= 8 Second
Water Absorption	CGSB-37.50-M89	96 Hrs. @ 50°C Result = 0.06%
Low temperature flexibility	CGSB-37.50-M89	Pass
Low temperature crack bridging	CGSB-37.50-M89	At -25°C No adhesion loss, cracking or splitting
Heat stability	CGSB 37.50 M-89	5 Hours = No change
Minimum ambient temperature for application		-18°C
Softening Point	ASTM D36	85 °C
Specific Gravity	ASTM D896	1.2

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.