SCIENCE. SERVICE. SOLUTIONS.

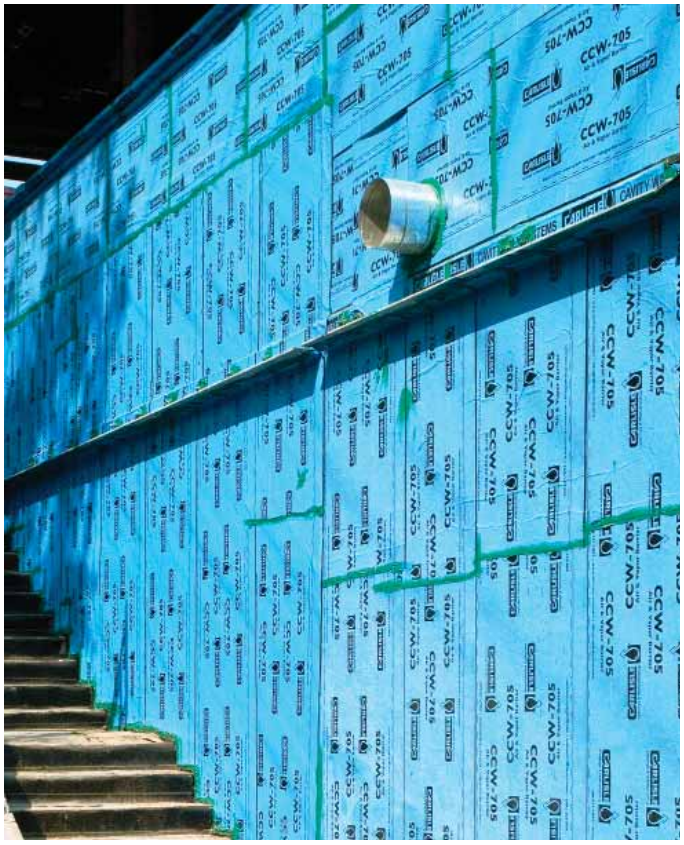
CARLISLE COATINGS & WATERPROOFING

AIR & VAPOR BARRIER

CCW-705

Description

CCW-705 Air & Vapor Barrier is a 40-mil-thick (0.040" inch) composite membrane consisting of a rubberized-asphalt adhesive laminated to a tough, dimensionally stable, smooth-surfaced poly film. CCW-705 is provided in rolls of various widths lined with disposable silicone-coated plastic release film. The release film is removed to expose the adhesive as the membrane is pressed in place. CCW-705 provides a complete barrier to moisture and air when adhered to an above-grade substrate. Cut sizes are also useful for other above-grade wall flashing applications. CCW-705 is cold applied and will adhere firmly when pressed against the substrate.



Typical Use

CCW-705 is designed for use in above-grade wall assemblies to function as an air, vapor and water barrier. CCW-705 can be applied over many common building materials including gypsum sheathing, concrete masonry unit (CMU), concrete, wood, structural steel, metal flashings, aluminum extrusions and rigid PVC (i.e. pipe/conduit, window frames). All substrates shall be prepared with a CCW contact adhesive to provide consistent adhesion of CCW-705 in jobsite conditions.

Features/Benefits

- Printed facer provides easy product identification
- Factory-controlled composition provides uniform coverage and instant rain resistance after installation
- Self-adhering membrane provides easy, reliable installation; spray equipment or mil-thickness measurements are not required
- Membrane seals around fasteners and bridges cracks, providing an air- and water-tight assembly
- CCW-705 is a warranted air & vapor barrier system from Carlisle Coatings & Waterproofing

Project Conditions

Building codes and project specifications require continuity of the air barrier installation. It is the installer's responsibility to understand the extent and sequencing of air barrier installation on the project. Do not proceed with installation until substrate and project conditions conform to requirements specified in this document. All surfaces accepting CCW-705 shall be clean, dry, frost free and of sound condition. Verify that wall assemblies are dried in so that water intrusion will not occur from above, behind or around the membrane installation. Gaps and cracks exceeding ¼" across shall be filled with materials and technique approved by CCW. As CCW-705 cannot span any gap in excess of ¼" , electrical/mechanical penetrations, structural steel penetrations, columns/beams, expansion/seismic joints, shelf angles, tie-ins to fenestration and transitions to other building assemblies, these may require extra work and materials to provide suitable surfaces for continuous installation of CCW-705. Please consult the CCW-705 details for guidance.

Carlisle Coatings & Waterproofing
900 Hensley Lane | Wylie, TX 75098 | 800.527.7092 | **www.carlisleccw.com**

FIRE RESIST

AIR & VAPOR BARRIER
CCW-705

Substrate Inspection

Concrete

Concrete shall be cured in place 7 days minimum. It shall be smooth, with sharp protrusions such as cold joints ground flush. Honeycomb and holes/cracks exceeding ¼" across shall be filled with grout or mortar.

Concrete Masonry Unit (CMU)

Mortar joints shall be struck flush and shall be free of voids exceeding ¼ inch across. Mortar droppings shall be removed from brick ties and all other surfaces accepting CCW-705 and CCW accessories. Allow mortar joints to dry a minimum of 3 days prior to installation of CCW-705 and CCW accessories.

Gypsum Sheathing

Sheathing boards shall be flush at joints, with gap between boards according to building code and sheathing manufacturer's requirements. Sheathing boards shall also be securely fastened to the structure with proper fastener type, technique and spacing according to building code and sheathing manufacturer's requirements. Sheathing boards shall be repaired or replaced if inspection reveals moisture damage, mechanical damage or if sheathing boards have exceeded the exposure duration or exposure conditions as required by the sheathing manufacturer.

When installing CCW sheet membranes and sheet flashings over gyp-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 gyp-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.

OSB, Plywood, Lumber & Pressure-Treated Wood

Wood sheathing inspection carries the same protocol given for gypsum sheathing. Also, moisture content, measured with a wood moisture meter in the core of the substrate, shall be below 20%. Do not cover any wooden materials with CCW-705 or CCW accessories if moisture content is 20% or above. Do not encapsulate wood (such as nailers) with membrane, as this will cause premature rot. In most cases fire- and pressure-treated wood must be kiln dried to accommodate the less than 20% moisture content requirement.

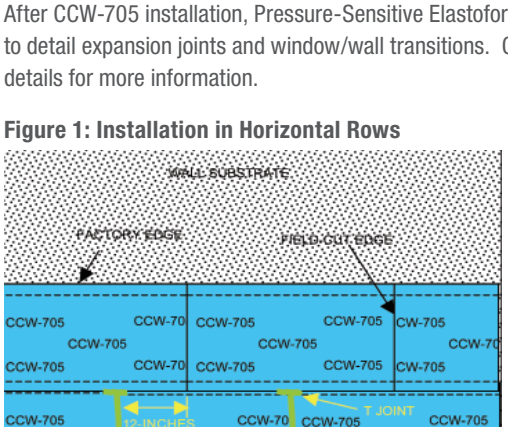
Surface Preparation

Apply CCW contact adhesive to ALL surfaces accepting CCW-705. CCW-702, CCW-702 LV, CCW-702 WB, CCW- 715, CAV-GRIP™ and TRAVEL-TACK™ are all acceptable for this application. Follow the application instructions on the respective contact adhesive technical data sheet.

Installation

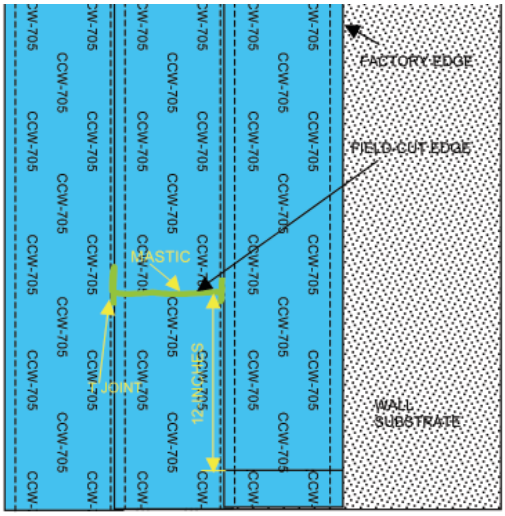
Install CCW-705 in horizontal rows or in vertical runs. Wipe dust or debris from film side of product with a clean, dry rag to assist in forming tight laps. Avoid forming wrinkles and air pockets. Press membrane firmly to substrate with a hand roller, especially at laps, corners and terminations. Overlap adjoining pieces of CCW-705 a minimum of 2 inches. Use narrower cut sizes for detailing. Sequence the installation to provide shingled laps. Membrane shall bear minimum 3 inches onto each side of transitions such as joints, angle changes and substrate changes. Membrane shall bear 6 inches minimum onto adjacent membrane systems such as foundation waterproofing or roofing. Apply LM-800XL Mastic or CCW-201 or other approved sealant to field-cut edges, T-joints, reverse laps and terminations. After CCW-705 installation, Pressure-Sensitive Elastoform may be used to detail expansion joints and window/wall transitions. Consult CCW-705 details for more information.

Figure 1: Installation in Horizontal Rows



- Start at bottom, work up
- Cut sheets to manageable size
- Offset vertical seams 12 inches minimum
- Lap neighboring pieces at least 2 inches
- Install LM 800 XL Mastic or CCW-201 OVER CCW-705
- Do not install CCW-705 over LM 800 XL Mastic unless mastic has been allowed to cure

Figure 2: Installation in Vertical Runs



- Start at top, adhere top of sheet and unroll down wall
- Offset horizontal seams 12 inches minimum
- Lap neighboring pieces at least 2 inches
- Install LM 800 XL Mastic or CCW-201 OVER CCW-705
- Do not install CCW-705 over LM 800 XL Mastic unless mastic has been allowed to cure

Inspection, Repair & Schedule

Protect membrane from damage by other trades. Do not cover work until it has been inspected according to project requirements. Cover CCW-705 with cladding system as soon as schedule permits. In cold climates, once CCW-705 is installed, avoid heating the building until the exterior insulation is installed. CCW-705 can be left exposed to UV for a maximum of 60 days. Repair damage to membrane by removing loosely adhered material and re-covering with CCW-705 patch, extending beyond the damage by at least 3 inches. Where CCW-705 patch or re-cover is installed, clean debris from surfaces of the old CCW-705 and prepare with CCW contact adhesive. TRAVEL-TACK, a CCW contact adhesive provided in convenient aerosol cans, can be used for this and similar touch-up applications. Seal terminations of repair patch with LM-800XL or other approved sealant. If multiple sheets are used in CCW-705 repair/re-cover, offset seams of new installation 12 inches minimum versus underlying CCW-705.

Limitations

- If NFPA is required, consult CCW's NFPA 285 extension report. CCW-705 passes NFPA 285 in some wall assembles.
- Do not proceed with installation unless ambient and substrate temperature are 40ºF or above.
- Do not install in areas expected to reach 151°F or higher.
- CCW-705 is a vapor barrier. The design professional shall determine appropriate use in project wall assemblies.
- Due to surface heat gain, do not install over foam insulation.
- Maximum permitted exposure time of CCW-705 on an un-insulated, vertical wall is 60 days.
- Exposure to high heat greatly reduces permitted exposure time. If wall stud cavity insulation is in place, or the membrane is in proximity to highly reflective roof/window surfaces, cover CCW-705 as soon as possible.
- Not intended for traffic resistance or as a wearing surface.
- Do not install on roofs.
- Do not install over PVC membrane, silicone, un-cured sealants or other incompatible materials. Consult CCW-705 details for more information.
- Keep edge of membrane ½" minimum back from finished exterior.

Packaging

CCW-705
36" x 75' roll: (225 ft²/roll) 1 roll/box
24" X 100' roll: (200 ft²/ roll) 1 roll/box
18" X 100' roll: (150 ft²/ roll) 1 roll/box
12" X 100' roll: (100 ft²/ roll) 2 rolwwl/box
9" X 100' roll: (75 ft²/ roll), 2 roll/box
6" X 100' roll: (50 ft²/ roll) 4 roll/box
4" X 100' roll: (33.3 ft²/ roll) 6 roll/box

CCW Contact Adhesives
CCW-702 (solvent based, 5-gal pail)
CCW-702LV (solvent based, VOC compliant, 5-gal pail)
CCW-702WB (water-based, 5-gal pail)
CCW-715 (solvent based for green concrete, 5-gal pail)
CAV-GRIP #40 Aerosol Cylinder
CAV-GRIP gun
CAV-GRIP 18' hose
CAV-GRIP 12' hose
CAV-GRIP 6' hose
TRAVEL-TACK (12-oz aerosol cans, 12/carton)

CCW Sealants
CCW-201 (2-part Polyurethane, 1.5-gal kit)
LM-800 XL Mastic (29-oz tubes, 12/carton, 5-gal pail)
SURE-SEAL Lap Sealant (10.3-fl-oz tubes, 25/carton)

SCIENCE. SERVICE. SOLUTIONS.

CARLISLE COATINGS & WATERPROOFING

AIR & VAPOR BARRIER
CCW-705

Other Approved Sealants
Certain silicone and polyurethane sealants have adequate adhesion to the CCW-705 and are suitable for use over the membrane. A few polyurethane sealants are also chemically compatible with the rubberized-asphalt adhesive. Consult the CCW-705 details for the most current list of approved sealants provided by others.

Warnings and Hazards

CCW-702, CCW-702 LV and LM 800 XL contain flammable and combustible solvents. Avoid exposure to open flame. Avoid breathing vapors. Use only in areas with adequate ventilation. Refer to MSDS for important warnings and product information.

CAV-GRIP, Travel-Tack: USE IN WELL-VENTILATED AREA. Do not puncture or incinerate container. Do not expose to heat or store at temperatures over 120°F. In case of eye contact, flush thoroughly with running water for at least 15 minutes and get medical attention. REFER TO PRODUCT DATA SHEET FOR PERFORMANCE CAPABILITIES.

Storage

CCW-705 rolls should be stored on-end, under cover, and in areas where the temperature is between 40° and 100°F (4.4° and 38°C). Do not double-stack pallets. Shelf life in original, un-opened packaging is 1 year.

Typical Properties

Property	Method	Results
Thickness	—	40 mils
Elongation*	ASTM D412	300%
Water Vapor Permeance	ASTM E96 A (desiccant method) ASTM E96 B (water method)	0.08 perm 0.10 perm
Pliability	ASTM D146	Passes @ -25°F 0.063” mandrel
Peel Strength	ASTM D903	7.5 lb/in width
Tear Initiation and Propagation (Film)	ASTM D4073	20 lbf
Puncture Resistance	ASTM E154	48 lbf
Tensile Strength	ASTM D882	26 lbf/in
Water Resistance to Hydrostatic Pressure Head	AATCC 127, mod. 22" [55 cm] column of water for 5 hours	No leaking through membrane or 2" bonded lap
Lap Adhesion	ASTM D1876	5 lbf/in (average)
Water Absorption	ASTM D570	0.12% by wt

Property	Method	Results
Air Infiltration	ASTM E283	Pass
Water Penetration	ASTM E331	Pass
Wind Loading	ASTM E330	Pass
Air Permeance	ASTM E2178	0.000 L/s*m2 @ 75 Pa
Installation Temperature	—	Minimum 40°F, ambient & substrate
Maximum Exposure to UV	—	60 days
Service Temperature	—	-25°F to 149°F
Nail Sealability	ASTM D1970	No water leakage
Pull-off Adhesion	ASTM D4541, modified 4" wood puck	18 PSI - glass-faced gypsum sheathing 19 PSI - CMU
Air Barrier Assembly Test	ASTM E2357. Gypsum sheathing over studs, wall assembly with joints and penetrations. CCW-705 applied over surfaces prepped with CCW-702 Contact Adhesive. P/S Elastoform @ window-wall interface.	Air Leakage: Maximum 0.0024 L/s*m² @ 75 Pa [0.0005 CFM / ft² @ 1.57 PSF] infiltration & exfiltration, after deformation, pressure cycling and gust loading. Deformation: No Damage. 600 Pa [12.54 PSF] sustained load for 60 min Pressure Cycling: No damage. 2000 cycles at +/- 800 Pa [16.72 PSF] Gust Load: No damage, 1200 Pa [94 mph wind], windward and leeward load, 10 sec each direction.

* Drying time varies with ambient temperature, ambient humidity, substrate temperature, substrate dampness, coating thickness, sun and wind. Cool, moist, shady conditions and high coating thickness present the worst case scenario, causing the product to take many days to dry. In conditions such as these, it is advisable to tarp, heat and ventilate the area or wait for better weather.

** Actual coverage varies by substrate and is typically less than theortetical coverage due to substrate roughness and porosity, wind, scrap and installer skill. Measurable dry mil thickness may also be lower than theoretical, due to substrate roughness, porosity and measurement technique. On all substrates, coating shall be visibly continuous, with no pinholes. On CMU substrate, dry thickness, measurable with a pin gauge, comb gauge or micrometer shall be a minimum of 40 mils.

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
900 Hensley Lane | Wylie, TX 75098 | 800.527.7092 | **www.carlisleccw.com**