



# AIR & VAPOR BARRIER

## Fire Resist 705 VP

### Description

Fire Resist 705 VP Air Barrier, manufactured by Carlisle Coatings and Waterproofing, is a composite membrane consisting of a breathable specially engineered film fully coated on one side with a permeable adhesive. The adhesive side of Fire Resist 705 VP has a silicone-coated release film, which is removed and discarded during installation. Fire Resist 705 VP is provided in rolls of various widths and will adhere firmly when pressed against the substrate. Fire Resist 705 VP membrane permits passage of water vapor, yet it performs as a barrier to air and liquid water.

Fire Resist 705 VP is designed for use in above-grade wall assemblies to function as an air- and water-resistive barrier. Fire Resist 705 VP can be applied over many common building materials including gypsum sheathing, foam sheathing, concrete masonry unit (CMU), concrete, wood, structural steel, metal flashings, aluminum extrusions and rigid PVC (i.e. pipe/conduit, window frames). Surface preparation with CCW-702 WB, CAV-GRIP™ or TRAVEL-TACK™ contact adhesive is generally required to promote consistent adhesion.

### Features and Benefits

- Composition and low fuel contribution enable use in many NFPA 285 Wall Assemblies.
- Immediate rain resistance, including wind-driven rain, after installation
- Printed facer provides easy product identification
- Factory-controlled composition provides uniform coverage
- Self-adhering membrane provides easy, reliable installation
- No spray equipment or mil-thickness measurements required
- Breathable membrane allows passage of water vapor, permitting use in wall assemblies where a vapor barrier is not needed
- Lightweight 4-ft. width rolls allow for fast and easy installation
- Airtightness allows for improved building performance
- Fire Resist 705 VP is a warranted air 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 Fire Resist 705 VP shall be clean, dry, frost /moisture free and of sound condition. Verify that wall assemblies are dried in, such that water intrusion will not occur from above, behind or around the membrane installation. Manage construction-generated moisture by ventilating and de-humidifying the interior. Gaps and cracks exceeding ¼" in width shall be filled with materials and technique approved by CCW. As Fire Resist 705 VP shall not 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 may require extra work and materials to provide suitable surfaces for continuous installation of Fire Resist 705 VP.

### Substrate Inspection

#### Concrete

Shall be cured in place for 7 days minimum. It shall be smooth, with sharp protrusions such as form joints ground flush. Honeycomb and holes/cracks exceeding ¼" across in width 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" across. Mortar droppings shall be removed from brick-ties and all other surfaces accepting Fire Resist 705 VP. Mortar joints shall be allowed to cure 3 days minimum prior to installation of Fire Resist 705 VP.

#### Gypsum, Wood or Foam Sheathing

Sheathing boards shall be flush at joints, with gaps between boards spaced 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

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damage or if sheathing boards have exceeded the exposure duration or exposure conditions as required by the sheathing manufacturer. Fill all joints exceeding ¼" in width with approved sealant and strike flush.

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. In addition, 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 Fire Resist 705 VP if moisture content is 20% or more. Do not encapsulate wood (such as blocking/nailers) with Fire Resist 705 VP, 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 Fire Resist 705 VP. CCW-702 WB, CAV-GRIP and TRAVEL-TACK are all acceptable for this application. Follow the application instructions on the respective contact adhesive product data sheet. Under certain conditions, Fire Resist 705 VP can be installed over specific exterior sheathing materials without using contact adhesive. Please consult the CCW Technical Bulletin for more information.

Note: CCW-702, CCW-715 and CCW-702 LV solvent-based contact adhesives are generally NOT acceptable for use with Fire Resist 705 VP, because these contact adhesives are impermeable. CCW-702 or CCW-702 LV may be used in applications where the vapor-permeable feature of Fire Resist 705 VP is not necessary, such as installation over R2+ SHEATHE or similar foil-faced polyiso insulation.

### Installation

Install Fire Resist 705 VP 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 J-roller, especially at laps, corners and terminations. Overlap adjoining pieces of Fire Resist 705 VP a minimum of 3". Use Fire Resist 705 VP strips for detailing. Sequence the installation to provide shingled laps. Membrane shall bear minimum 3" onto each side of transitions such as joints, angle changes and substrate changes. Membrane shall bear 6" minimum onto adjacent membrane systems such as foundation waterproofing or roofing. **Install self-adhered flashing details directly to substrate, not to Fire-Resist 705 VP.** Use CCW self-adhered flashings to wrap window openings, to treat pipe/duct penetrations and to cover expansion joints as shown in Fire Resist 705 VP details. Seal termination of 705 VP onto self-adhered flashings with approved termination sealant as listed in the 705VP details. Lower installation temperature and dusty conditions may require prepping laps with CCW-702 WB, TRAVEL-TACK or CAV-GRIP as required. Installation below 40°F requires preparation of substrates and laps with CAV-GRIP or TRAVEL-TACK.

### Inspection, Repair And Schedule

Protect membrane from damage by other trades. Do not cover work until it has been inspected according to project requirements. Cover Fire Resist 705 VP with cladding system as soon as schedule permits. Do not exceed maximum recommended exposure time of product and accessories. Repair damage to membrane by removing loosely adhered material and re-covering with Fire Resist 705 VP patch, extending beyond the damage by at least 6" in all directions. Where Fire Resist 705 VP patch or re-cover is installed, clean debris from surfaces of the old Fire Resist 705 VP and prepare with CCW contact adhesive. TRAVEL-TACK, a CCW contact adhesive provided in convenient aerosol cans, can be used for this and similar patch or recover applications. Seal terminations of repair patch with approved sealant as listed in 705VP details. If multiple sheets are used in Fire Resist 705 VP repair/re-cover, offset seams of new installation 12" minimum versus underlying Fire Resist 705 VP.

## Limitations

- Do not allow any sealants or liquid membranes to contact 705 VP except those listed in the 705VP details or those approved in writing by CCW
- Do not proceed with installation unless ambient and substrate temperature are 20°F or above
- Maximum exposure time of 705VP sheet 180 days. System exposure time is limited by the least UV-resistant component.
- Will not perform as a water resistive barrier in negative side applications
- Do not install below grade, or in areas where ponding water is expected
- Do not install in areas expected to exceed 180°F
- Not intended for traffic resistance or as a wearing surface

## Packaging

### Fire Resist 705 VP Full Rolls

48" X 100' roll, 1 rolls/box

### Fire Resist 705 VP Slit Rolls

6" X 100' roll, 4 rolls/carton

18" X 100' roll, 1 roll/carton

24" X 100' roll, 1 roll/carton

### Other CCW Products:

#### Self-Adhered Flashings

CCW-705 (60 day exposure limit), Fire-Resist 705 FR-A or AlumaGRIP 701 (use over R2+ and other foam sheathing). Available in various sizes. Consult product literature.

#### Sure-Seal Pressure-Sensitive Elastoform Flashing

6" X 100' roll, 2 rolls/carton

9" X 50' roll, 1 roll/carton

12" X 50' roll, 1 roll/carton

#### CCW Contact Adhesives

CCW-702 WB Water Based

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

Barribond HP, 20 fl-oz sausages, 20 per box

LM 800 XL (60 day exposure limit) 29 fl-oz tubes, 12 per box or 5-gal pail

CCW Greenbond WB (60 day exposure limit), 5-gal pail

### Other Approved Sealants

Please consult detail 705VP-0A

## Storage

Store Fire Resist 705 VP in a protected area below 90°F. In cold weather, condition rolls to 50°F or warmer to facilitate use. Shelf life in original, un-opened packaging is 1 year.

## Typical Properties

| Property                                   | Method   | Results  |
|--|--|--|
| Color                                      | --   | White with black print   |
| Nominal Thickness                          | ASTM D1177   | 0.023 inch (23 mils)   |
| Fabric Composition                         | --   | Multi-layer Polyester Composite  |
| Adhesive Composition                       | --   | Pressure-sensitive, permeable acrylic, full coverage of fabric                   |
| Tensile Strength                           | ASTM D882  | Minimum 40 lbf/in width  |
| Lap Peel Strength                          | ASTM D1876   | 1.0 lbf/in width, minimum  |
| Water Resistance to Hydrostatic Pressure   | AATCC-127-03, mod. 22" [55 cm] column of water for 5 hours | No leaking through membrane or 2" bonded lap                                     |
|  | ICC-ES AC-38   | Pass   |
| Water Vapor Permeance of membrane          | ASTM E96 B (Water Method)                                  | 10.53 perms, minimum   |
|  | ASTM E96 A (Desiccant Method)                              | 9.05 perms, minimum  |
| Water Vapor Permeance of Contact Adhesive* | ASTM E96B (water method)                                   | 15 Perms, minimum  |
| Air Permeance                              | ASTM E2178   | <=0.001 L/s*m <sup>2</sup> @ 75 Pa [0.0002 CFM/ft <sup>2</sup> @ 1.57 PSM]       |
| Air Leakage Through Assembly               | ASTM E 2357  | Maximum 0.017 L/s*m <sup>2</sup> @ 75 Pa [0.0034 CFM/ft <sup>2</sup> @ 1.57 PSF] |
| Low Temp Flexibility                       | ASTM D1970 180° bend over 1" mandrel                       | No cracking at -20°F   |

\* Applied on exterior side of DensGlass Gold. Bare substrate measured 29.75 Perms.

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| Property                                  | Method     | Results  |
|---|------------|--|
| Peel Adhesion                             | ASTM D903  | 5 pli typical value applied over DensGlass with recommended primer   |
| Tear Initiation and Propagation           | ASTM D4073 | >30 lbf  |
| Surface Burning                           | ASTM E84   | Flame Spread Index - 10<br>Smoke Spread Index - 5  |
| Water Penetration                         | ASTM E331  | Passes 10 PSF after 15 minutes   |
| Heat Release Measured by Cone Calorimeter | ASTM E1354 | Effective Heat of Combustion:<br>16.82 MJ/kg<br>Peak Heat Release Rate:<br>183 kW/m <sup>2</sup><br>Total Heat Release:<br>6.1 MJ/m <sup>2</sup> |