

Fire ResistSM 705FR

Self-Adhering Sheet, Fire-Resistant Air & Vapor Barrier

CARLISLE COATINGS & WATERPROOFING INCORPORATED

DESCRIPTION

Fire Resist 705FR, manufactured by Carlisle Coatings & Waterproofing Incorporated (CCW), is a self-adhering sheet membrane of inherent fire-resistant composition. It is a 40-mil (0.040 inch) thick composite membrane consisting of foil-faced glass laminated with a proprietary, fire-resistant, pressure-sensitive, butyl adhesive. The foil facing has a non-reflective coating and is clearly imprinted with manufacturer's name and brand. Fire Resist 705FR 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. Fire Resist 705FR does not require any torching, spray equipment or any other special equipment.



TYPICAL USE

Fire Resist 705FR is designed for use in above-grade wall assemblies to function as an air, vapor and water barrier. Fire Resist 705FR can be applied over many common building materials including gypsum sheathing, concrete masonry unit (CMU), foam insulation board, concrete, wood, structural steel, metal flashings, aluminum extrusions and rigid PVC (examples: pipe/conduit or window frame). All substrates are prepared with a CCW contact adhesive to guarantee consistent adhesion of Fire Resist 705FR in jobsite conditions.

FEATURES AND BENEFITS

- Fire-resistant composition permits use in many wall assemblies (NFPA 285 compliant)
- Printed facer provides easy product identification
- Toughness and 180-day UV resistance allows long exposure time and scheduling flexibility
- Factory-controlled composition provides uniform coverage and instant rain resistance after installation
- Self-adhering membrane provides easy installation, which can be completed over a wide temperature range (25°F and above)
- Membrane seals around fasteners and bridges cracks, providing an air- and water-tight assembly
- Non-asphalt Butyl adhesive is compatible with silicone and polyurethane sealants
- Coated foil facing provides an excellent substrate for window silicone and polyurethane sealants and insulation adhesives
- Fire Resist 705FR is a complete system warranted by CCW



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TECHNICAL DATA

PROPERTY	METHOD	RESULTS
Thickness	--	0.040 inch (40 mils)
Service Temperature	--	-40°F to 180°F
Application Temperature*	--	Minimum 25°F, ambient and substrate
Water Vapor Permeance 50% to 100% RH	ASTM E96 B (water method) ASTM E96 A (desiccant method)	0.014 Perm 0.011 Perm
Low-Temp Flexibility	ASTM D1970, 180°F bend over 1-inch mandrel	No cracking at -20°F
Low-Temp Crack Bridging	ASTM C1305	No cracking after 10 cycles at -15°F
Puncture Strength	ASTM E154	70 lb minimum
Tensile Strength	ASTM D882	65 lb/in width, minimum
Lap Peel Strength	ASTM D1876	10 lb/in width, minimum
Pull Adhesion	ASTM D4541, modified. 4-inch wood puck	20 PSI on glass-faced gyp sheathing 20 PSI minimum on CMU (all substrates prepared with CCW-702)
Tear Initiation and Propagation (film)	ASTM D4073	60 lb/in width, minimum machine and cross direction
Water Resistance	AATC 127-03, mod. 3 inch lap included in sample	55 cm [22 inch] column of water for 5 hours. No leakage.
Air Permeance	ASTM E2178	0.001 L/s*m ² @ 75 Pa [0.0002 CFM/ft ² @ 1.57 PSF]
Nail Sealability	ASTM D1970	No water leakage
Air Barrier Assembly Test	ASTM E 2357. Gypsum sheathing over steel studs, wall assembly with joints and penetrations. CCW-705 FR applied over surfaces prepped with CCW-702 WB contact adhesive. P/S Elastoform @ window-wall interface.	Air Leakage: Maximum 0.053 L/s*m ² @ 75 Pa [0.0105 CFM / ft ² @ 1.57 PSF] infiltration & exfiltration, after deformation, pressure cycling and gust loading. Deformation: No Damage. 600 Pa [12.56 PSF] sustained load for for 60 min Pressure Cycling: No damage. 2000 cycles at +/- 800 Pa [16.75 PSF] Gust Load: No damage, 1400 Pa [110 mph wind], windward and leeward load, 10 sec each direction.
Surface Burning	ASTM E 84, product applied at full coverage to cement board substrate prepped with CCW-702 WB contact adhesive	Flame Spread Index: 15 Smoke Generation Index: 80
Wall Assembly Burn Test	NFPA 285	Pass - Various wall assemblies with up to 3 inches of polyiso or XPS insulation. Consult CCW or Insulation Manufacturer's Tech Bulletin for assembly details.

*Installation below 40°F requires special procedures. See STORAGE and INSTALLATION

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 705FR shall be clean, dry, frost 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. Gaps and cracks exceeding ¼ inch across shall be filled with materials and technique approved by CCW. As Fire Resist 705FR cannot span any gap in excess of ¼ inch; 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 705FR. Please consult the Fire Resist 705FR details for guidance.

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 inch 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 Fire Resist 705FR.

Gypsum 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 damage or if sheathing boards have exceeded the exposure duration or exposure conditions as required by the sheathing manufacturer.

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 705FR if moisture content is 20% or more. Do not encapsulate wood (such as blocking/nailers) with Fire Resist 705FR, as this will cause premature rot.

SURFACE PREPARATION

Apply CCW contact adhesive to ALL surfaces accepting Fire Resist 705FR. 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 product data sheet.

INSTALLATION

Install Fire Resist 705FR 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 Fire Resist 705FR a minimum of 3 inches. Use Fire Resist 705FR Strips 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 SURE-SEAL® Lap Sealant or other approved sealant to field-cut edges, T-joints, reverse laps and terminations. After CCW-705 FR installation, P/S Elastofom may be used to detail expansion joints and window wall transitions.

Special procedures required for installation when ambient or substrate temperature is below 40°F: Store product in a heated area above 40°F until use. Prep substrate with CCW-702 or CCW-702 LV Contact Adhesive. Prep laps with CCW-702 or CCW-702 LV Contact Adhesive OR use a heat gun to assist bond of laps.

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 705FR with cladding system as soon as schedule permits. Once Fire Resist 705FR is installed, avoid heating the building until the insulation is installed. Fire Resist 705FR can be left exposed to sunlight for a maximum of 180 days. Repair damage to membrane by removing loosely adhered material and re-covering with Fire Resist 705FR patch, extending beyond the damage by at least 3 inches. Where Fire Resist 705FR patch or re-cover is installed, clean debris from surfaces of the old Fire Resist 705FR 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 SURE-SEAL Lap Sealant or other approved sealant. If multiple sheets are used in Fire Resist 705FR repair/re-cover, offset seams of new installation 12 inches minimum versus underlying Fire Resist 705FR.

LIMITATIONS

- Do not proceed with installation unless ambient and substrate temperature are 25°F or above.
- Do not install in areas expected to reach 181°F or higher.
- Fire Resist 705FR is a vapor barrier. The design professional shall determine appropriate use in project wall assemblies.
- Do not leave exposed for more than 180 days.
- Not intended for traffic resistance or as a wearing surface.
- Do not install on roofs.
- Do not install over un-cured sealants, except SURE-SEAL Lap Sealant.

PACKAGING

Fire Resist 705FR

48" x 50' roll, 1 per box
24" X 50' roll, 1 per box

Fire Resist 705FR Strips

12" X 50' roll, 4 per box
9" X 50' roll, 4 per box
6" X 50' roll, 8 per box
4" X 50' roll, 12 per box

CCW Contact Adhesives

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

CCW Sealants

CCW-201 2-part Polyurethane, 1.5-gal kit
SURE-SEAL Lap Sealant, 10.3-fl-oz tubes, 25 per carton

Other Approved Sealants

Silicone or polyurethane joint sealants meeting ASTM C920, type S or M, grade NS, Class 25, 35, 50 or 50/100, Use NT are approved for use over Fire Resist 705FR. Fire Resist 705FR can be installed over fully-cured polyurethane sealant. The adhesive side of Fire Resist 705FR will not stick to cured silicone.

STORAGE

Store Fire Resist 705FR in a protected area between 40°F and 90°F. Shelf life in original, un-opened packaging is 1 year.

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.