



# AIR & VAPOR BARRIER

## Fire Resist Barritech NP60

### Description

Fire Resist Barritech NP60 is a synthetic polymer, non-asphalt air/vapor barrier membrane. The product is applied to concrete masonry unit (CMU) wall surfaces in cavity wall construction. Fire Resist Barritech NP60 is a one-part, air-drying product that is spray-applied at a nominal 0.060" (60-mil) dry thickness. The product cures to a tough, rubber-like consistency. The extra-high film thickness makes Fire Resist Barritech NP60 ideal for application over CMU surfaces. The membrane thickness and rubber-like properties enable Fire Resist Barritech NP60 to bridge gaps, seal around penetrations and cover a variety of surface irregularities. Fire Resist Barritech NP60 functions as an air barrier, vapor barrier and water-resistive barrier.



Spray application of Fire Resist Barritech NP60.



Fire Resist Barritech NP60 cured membrane over CMU.



Fire Resist Barritech NP60 and R2+ SILVER 16" cavity wall insulation.

### Features and Benefits

- Fire-resistant composition allows use in NFPA 285 CMU/brick cavity wall assemblies
- Tough construction & 180-day UV resistance allows flexibility in schedule
- High water resistance of cured membrane permits use in high moisture exposure areas
- Non-flammable & fume-free composition provides safe application
- Easy, water clean-up of tools & equipment reduces harmful chemicals on the jobsite
- Spray-through standard, one-part equipment provides a simple & quick installation
- Monolithic coverage & self-sealing properties around fasteners provide an air- & water-tight application
- Non-asphalt composition permits contact with many window & joint sealants.
- Fire Resist Barritech NP60 is a warranted air/vapor barrier system from CCW

### Specifications/Approvals

- New York City School Construction Authority (NYC-SCA) Section 07272

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### Project Conditions

Building codes and project specifications require continuity of 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. Identify any membranes, coatings, sealants, tapes and joint compounds by others that will come into contact with Fire Resist Barritech NP60 and CCW accessories, and verify compatibility through CCW. All surfaces accepting Fire Resist Barritech NP60 and CCW accessories 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" across shall be filled with materials and technique approved by CCW. As Fire Resist Barritech NP60 and CCW accessories cannot span any gap in excess of ¼" (exception - 1" gap for P/S Elastoform), 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 the air barrier. Please consult CCW's Fire Resist Barritech NP60 details for guidance.

### Substrate Inspection

#### 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 shall be filled with grout or mortar.

#### Concrete Masonry Unit (CMU)

Mortar joints shall be struck flush and shall be free of voids. Mortar droppings shall be removed from brick ties and all other surfaces accepting Fire Resist Barritech NP60 and CCW accessories. Mortar joints shall be allowed to cure 3 days minimum before application of Fire Resist Barritech NP60.

#### OSB, Plywood, Lumber, Pressure-Treated Wood

Wood sheathing inspection follows the protocol for gypsum sheathing. 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 Barritech NP60 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 moisture content requirement.

### Surface Preparation

Apply CCW contact adhesive to ALL surfaces accepting Fire Resist 705FR-A, CCW-705 or CCW-705-TWF. CCW-702, CCW-702LV, CCW-702WB, CCW-715, CAV-GRIP and TRAVEL-TACK are all acceptable for this application. Apply Sure-Seal® EPDM primers to all surfaces accepting P/S Elastoform. Sure-Seal EP-95, HP-250 and Low-VOC EPDM Primer are all acceptable for this application. Follow the application instructions on the respective contact adhesive/primer technical data sheet.

### Installation

Window openings, rooflines, control joints and other transitions shall be flashed with Fire Resist 705FR-A or CCW-705. Alternatively, Liquifiber-W or DCH Reinforcing Fabric embedded in Fire Resist Barritech NP60 may be used. P/S Elastoform may be used to detail expansion joints and window/wall transitions. CCW-705-TWF, CCW PRE-KLEENED™ EPDM TWF or approved through-wall flashings by others shall be used at base of wall, window head, shelf angle and other interruptions in the cavity. Please consult CCW details for guidance.

Apply Fire Resist Barritech NP60 over surfaces at a minimum 0.110" (110 mils) wet in a single coat or multiple coats through approved spray equipment. Recommended spray tip sizes are GHD 635 for high coverage and GHD 429 for detail coat. Theoretical application rate is 14.6 ft<sup>2</sup> per gallon in one coat.

CCW self-adhered flashing details can be applied to the substrate or over cured Fire Resist Barritech NP60. All surfaces shall be prepped with CCW contact adhesive before installation of CCW self-adhered flashing. Follow application instructions on the appropriate CCW contact adhesive technical data sheet. Installer shall apply CCW contact adhesive in a sufficient footprint to extend a minimum of 1" beyond the edges of CCW self-adhered flashing. Neighboring pieces of CCW self-adhered flashing shall lap 2" minimum, except if CCW-705-TWF is used as through-wall flashing it shall be lapped 6" minimum. If CCW self-adhered flashing is installed over Fire Resist Barritech NP60, seal terminating edges with CCW-201, Sure-Seal EPDM Lap Sealant or approved sealant by others. If CCW self-adhered flashing is installed to the substrate, lap Fire Resist Barritech NP60 at least 2" over edges of CCW self-adhered flashing.

For installation of LiquiFiber in Fire Resist Barritech NP60 details, fill all gaps with approved sealant. Apply a bed of Fire Resist Barritech NP60 at a minimum thickness of 30 wet mils. Lay LiquiFiber into Fire Resist Barritech NP60 and press into place with chip brush or drywall knife. Set the LiquiFiber tight into corners (no bridging), and then smooth over

surface. Overlap neighboring pieces of LiquiFiber at least 2" and apply 30 wet mils of Fire Resist Barritech NP60. Cover all LiquiFiber with Fire Resist Barritech NP60 the same day of installation. Liquifiber can be used on inverted surfaces and will conform to complex multi-plane details without precise cutting and fitting.

Installation of DCH Reinforcing Fabric is performed like Liquifiber installation, with the following differences: fill all gaps exceeding ¼" with approved sealant. DCH Reinforcing Fabric is not suitable for use over complex, multi-plane details or on inverted surfaces.

With Fire Resist 705FR-A or embedded reinforcement, Fire Resist Barritech NP60 may be left exposed for up to 6 months (180 days). With CCW-705 detail flashings, system can be left exposed for up to 60 days. During exposure, the membrane surface may darken and lose sheen while the core remains pliable and rubber-like. This is acceptable. If the membrane is damaged during exposure, repair damaged membrane by removing loosely adhered material, cleaning the surface and coating the damaged area with a minimum wet thickness of 0.110" (110 mils) of Fire Resist Barritech NP60.

## Clean Up

Promptly clean uncured Fire Resist Barritech NP60 from hands, tools, surfaces and spray equipment with a solution of tap water and citrus de-greaser. Cured product must be removed mechanically or by soaking in a solvent such as xylene.

## Limitations

- Do not allow product in packaging or spray equipment to freeze.
- Maintain product temperature above 45°F during spray.
- Do not apply at ambient temperature below 40°F or if temperature is expected to fall below 32°F in the next 16 hours.
- Do not apply product in rain. Do not install if rain is expected during product drying time.
- Do not use if temperatures exceeding 180°F are anticipated.
- Product is designed to be used as a positive-side water barrier and will not function as a negative-side water barrier.

## Packaging

### Fire Resist Barritech NP60

60-mil synthetic polymer air/vapor barrier packaged in 50-gal drums and 5-gal pails

### Other CCW Products:

#### Fire Resist 705FR-A

40-mil self-adhering sheet fire- and UV-resistant flashing/membrane provided in 36" X 75' rolls, and 100' rolls of 24", 18", 12", 9", 6" and 4" widths

#### CCW-705

40-mil self-adhered flashing/membrane provided in 36" X 75' rolls, and 100' rolls of 24", 18", 12", 9", 6" and 4" widths

#### CCW Sure-Seal P/S Elastoform Flashing

90-mil malleable, self-adhering EPDM flashing provided in 50' rolls of 12", 9" and 6" widths

#### Sure-Seal EPDM Primers

EP-95 Splicing Cement: solvent-based, packaged in 1-gal cans

HP-250 Primer: solvent-based, packaged in 2.5-gal pails

Low-VOC EPDM Primer: OTC Compliant, solvent-based, packaged in 1-gal cans

#### LiquiFiber

Glass matt consisting of randomly oriented strands in soluble binder, packaged in 300' rolls of 6" and 12" widths

### CCW Contact Adhesives (select any):

#### CAV-GRIP™

Aerosol spray contact adhesive packaged in pressurized cylinders containing 30 lb. fill weight of adhesive. Reusable spray gun and 6', 12' or 18' hose are sold separately and are attached to cylinder for dispense.

#### CCW-702

Solvent-based contact adhesive packaged in 1-gal cans and 5-gal pails

#### CCW-702 LV

OTC-compliant, solvent-based contact adhesive packaged in 5-gal pails

#### CCW-702 WB

Water-based contact adhesive packaged in 5-gal pails

#### CCW-715

Solvent-based contact adhesive for green concrete, packaged in 5-gal pails

#### TRAVEL-TACK™

Aerosol contact adhesive packaged in 12-oz. cans

### Approved Sealants:

#### Barribond (over or under Fire Resist Barritech NP60)

Non-sag, 1-part silane-terminated polyether sealant. Signature blue color. 20 fl-oz sausages, 16/ case

#### LM-800XL (over or under Fire Resist Barritech NP60)

Trowel-grade synthetic rubber sealant packaged in 29 fl-oz cartridges, 12/ case and in 5-gal pails (Note: maximum UV exposure of 60 days)

#### CCW-201 (over or under Fire Resist Barritech NP60)

2-part, non-sag polyurethane sealant packaged in 1½-gal kits

#### Sure-Seal Lap Sealant (over or under Fire Resist Barritech NP60)

1-part, solvent-based synthetic rubber packaged in 10.3 fl-oz cartridges, 25/case

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### Sealants by Others: (over Fire Resist Barritech NP60 only)

Silicone sealants meeting ASTM C920 Type S, Grade NS, Class 25, 35, 50 or 50/100, Use NT

### Storage

Store Fire Resist Barritech NP60 and CCW accessories in a location protected from temperature extremes, precipitation and direct sunlight. Protect Fire Resist Barritech NP60 from freezing temperatures during delivery, storage and handling. Do not use product that has frozen. Shelf life of Fire Resist Barritech NP60 in original, unopened packaging, stored under these conditions, is one year from the date of manufacture.

### Typical Properties

Property	Method	Results
Color	--	Un-Cured: Medium Blue Cured: Dark Blue
Application Temperature	--	Minimum 40°F
Volume % Solids	--	54%
Drying time of 110 wet mil film on CMU at 73°F/50% RH*	--	3 hr until tack-free 48 hr until fully dry
Coverage (Theoretical)**	Percent solids calculation	13.4 to 14.6 ft <sup>2</sup> /gal (110–120 wet mils, 59–65 dry mils)
Volatile Organic Content (VOC)	--	<10 g/L (0.82% wt)
Nail Sealability	ASTM D1970	Pass
Water Vapor Permeance	ASTM E96 A (Desiccant Method)	0.05 Perm
	ASTM E96 B (Water Method)	0.61 Perm
Water Penetration Resistance	AATC 127, modified (product applied over CMU)	Resists a 55 cm (22 inch) column of water for 5 hr
Pull-Off Adhesion	ASTM D4541, modified 4" wood puck	328 psi on CMU
Elongation at Break	ASTM D412	1,000%
Air Permeance (40-mil free film)	ASTM E2178	0.0010 L/s*m <sup>2</sup> @ 75 Pa

Property	Method	Results
Air Permeance (CMU)	ASTM E 2178, mod spray-apply membrane to CMU walls, single coat 80 mils wet	0.003 L/s*m <sup>2</sup> @ 75 Pa
Air Leakage through Assembly	ASTM E2357	<0.05 L/s*m <sup>2</sup> @ 75 PA [0.01 CFM/ft <sup>2</sup> @ 1.57 PSF]
Low-Temp Flexibility	ASTM D1970, 180° bend over 1" mandrel	No cracking at -20°F
Flexibility after UV Aging	180° bend at room temp after exposure for 1,000 hr exposure	No cracking
Aging/ Long-Term Flexibility	CGSB 71-GP-24M Aging 70°C [140°F] for 500 hr then 180° bend	No cracking
Extensibility over crack after heat aging	ASTM C1522	No cracking (Pass)
Low-Temp Crack Bridging	ASTM C1305	No cracking after 10 cycles at -15°F
Wall Assembly Fire Test	NFPA 285	Pass in masonry/brick veneer cavity walls with up to 3.5" R2+ polyiso or up to 3" XPS

\* 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 theoretical 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.