3M Science. Applied to Life.™

Advanced technologies for improving the building envelope

3M Building and
Construction Market Center

3M Air Barrier Technologies

Whether you select a permeable or non-permeable air barrier, you'll get a tough, puncture-resistant membrane that is compatible with most building materials and sealants.

No primer required

Eliminate the time, materials and mess associated with using primer.

No primer required on most construction surfaces.

VAPOR PERMEABLE 3015VP

Apply with unmatched speed

3M™ Vapor Permeable Air Barrier 3015VP

Reverse wound technology reduces labor costs with unmatched installation speeds. The liner is removed after each row of membrane is applied to the wall.

1 YR **UV-resistant for up to 1 year.**

Quick, easy vertical or horizontal applications.

Roll it across the wall, apply adequate pressure with a J-roller, then peel off the liner — that's it.

Weatherproof your project

Immediately safeguard your building from the weather with UV-resistant materials.

Extend your building season

Apply in temperatures as low as 0°F (-18°C) or as high as 150°F (66°C).

NFPA 285 compliant

Multiple approved wall assemblies.

NON-PERMEABLE 3015

See the difference

3M™ Air and Vapor Barrier 3015

High-tack acrylic adhesive enables installation in most weather conditions. The translucent membrane makes it easy to identify stud locations.

1 YR **UV-resistant for up to 1 year.**

Narrower rolls available for detailing doors and windows. Thin film design prevents tape buildup in the corners.

THROUGH WALL FLASHING 3015TWF

Apply even on damp surfaces

3M™ Through Wall Flashing Membrane 3015TWF

Protect the building enclosure with a tough, abrasion-resistant membrane designed to withstand punctures and tears.

2 YRS **UV-resistant for up to 2 years.**

Learn how 3M's advanced technologies can help you and your building occupants breathe easier.

Visit 3M.com/construction or contact your 3M representative at 1-866-513-4026.

Warranty, Limited Remedy, and Disclaimer: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. User is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application. Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price. Limitation of Liability: Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

3M Industrial Adhesives and Tapes Division
Building 225-3S-06
St. Paul, MN 55144-1000
1-866-513-4026
www.3M.com/construction

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3M Canada
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London, Ontario N5V 4M9
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70-0716-9844-6

3M Air Barrier Solutions

Technical Guide

Product Overview

For installation ease and flexibility, 3M™ Air and Vapor Barrier 3015 with high performance 3M™ Acrylic Adhesive grabs on contact to exterior sheathing, concrete, masonry, wood, and other construction substrates. It can be applied without time-consuming priming, torching, or asphalt mess.

- Applied in temperatures as low as 0˚F (-18˚C) to extend the building season
- Proprietary 10-mil engineered membrane self-seals against nail penetrations and conforms to contours for continuous contact
- Resists UV exposure for up to six months

Handling and Storage

Rolls may be stored either vertically or horizontally in the original packaging. Optimum storage conditions are 60° to 80°F (16° to 27°C) and 40% to 60% relative humidity. Rolls must be kept dry.

Typical Physical Properties		
	Typical Value	**Test Method**
Air Permeability of membrane		
@ 75 Pa (0.3 in/wg.)	< 0.0002 L/s·m_2 (< 0.00005 cfm/ft_2)	ASTM E2178
Air Leakage of assembled wall		
Opaque wall @ 75 Pa (0.3 in/wg.)	< 0.01 L/s·m_2 (< 0.002 cfm/ft_2)	ASTM E2357
Penetrated wall @ 75 Pa (0.3 in/wg.)	< 0.03 L/s·m_2 (< 0.006 cfm/ft_2)	ASTM E2357
Air Leakage Rate Classification	A1	CAN/ULC-S742
Water Vapor Transmission		
Desiccant Method	8 ng/Pa·s·m_2 (0.14 US perm)	ASTM E96
Surface Burning Characteristics		
Flame Spread Index	15	ASTM E84
Smoke Developed Value	45	ASTM E84
Rating	Class A	ICC AC 38

Note: This technical information and data should be considered representative or typical only and should not be used for specification purposes.

Installation Best Practices

Substrate Information and Surface Preparation

3M™ Air and Vapor Barrier 3015 can be applied to a wide variety of sheathing substrates, typically without priming. Substrate condition is crucial to the adhesion performance of any adhesive membrane. Substrate surfaces must be free of grease, oil, unbonded paint, corrosion, or other substances that would adversely affect the adhesive bond between the membrane and substrate.

For optimum performance, substrate surface must be dry to the touch with the ambient temperature above 0°F (-18°C). Additionally, consider the following for success with specific surfaces:

- Exterior gypsum sheathing shall have moisture content below 19% with no open joints or cracks wider than ½ inch.
- Plywood substrates shall have moisture content below 16% with no open joints or cracks wider than ½ inch.
- Concrete surfaces shall have fins ground flush and void areas filled.
- Masonry substrates must have mortar joints struck flush.
- Fill gaps and cracks exceeding ¼" width with 3M™ Polyurethane Sealant 540, and tool the surface flush and smooth.
- Fill gaps exceeding ½" width with closed cell foam backer rod, seal with 3M™ Polyurethane Sealant 540, and tool the surface flush and smooth.

Needed Supplies

- 3M™ Air and Vapor Barrier 3015
- 3M™ Polyurethane Sealant 540
- Extended blade razor knife
- J Roller

Installation Layout Planning

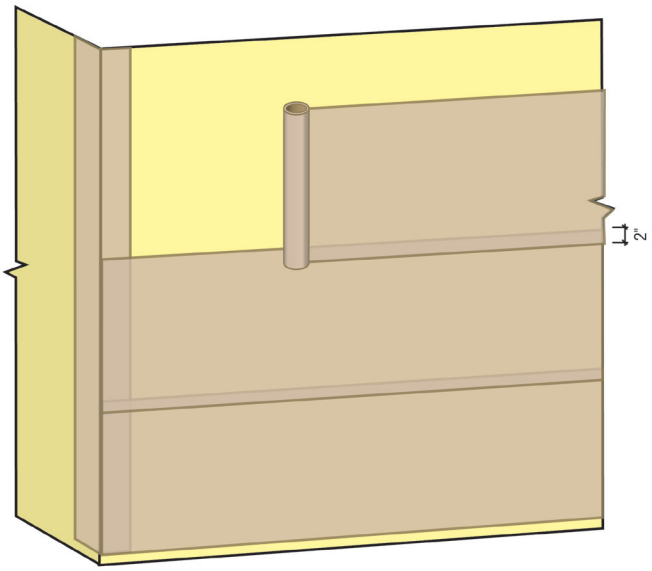
To minimize waste, plan the layout prior to application of 3M™ Air and Vapor Barrier 3015. Particular attention should be given to penetrations where weather exposure and tight installation is critical. Detailing window and door penetrations is recommended before applying the membrane, but if necessary, the membrane can be applied after detailing.

Install 3M™ Air and Vapor Barrier 3015 vertically or horizontally. During installation, keep membrane dry and protect from dust and debris.

For easier handling, pre-cut membrane into individual manageable lengths. Simply pull the material off the main roll to the desired length then cut the square to the factory edges using a razor knife.

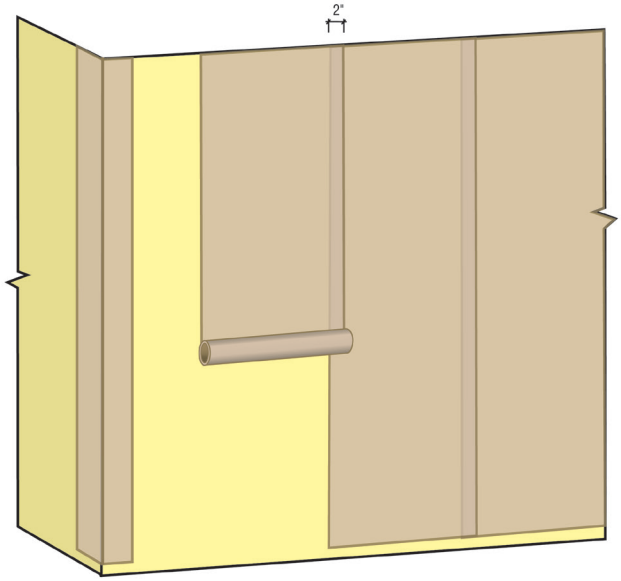
Wall Application

While the membrane may be applied horizontally or vertically, horizontal installation is preferred. Best practice includes a "weatherboard" or "shingle fashion," starting with the first strip of membrane across the bottom of the wall. Moving up the wall, the next strip higher will overlap the lower previous strip by 2 inches.



Buildings are designed to accommodate thermal and seismic movement. To accommodate floor-line movement, limit strip coverage within a single floor area, allowing overlaps at the floor lines.

Minimum overlap on sides and ends is 2 inches. On inside and outside vertical corners, the minimum overlap is 6 inches.



Vertical seams should be staggered from floor to floor, or separated by a horizontally applied strip of 3M™ Air and Vapor Barrier 3015.

Application Techniques

To start:

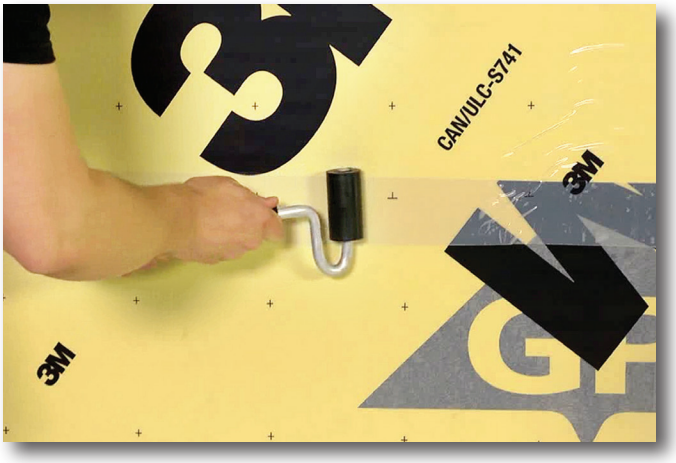
1. Cut material to desired length
2. Wind up into a roll for easy handling
3. Fold the starting edge back over itself to crease the paper release liner
4. Peel back the liner to expose a starting 2-3 inch adhesive strip
5. Keep clean—do not contaminate the starting strip with dust or debris before applying it to the intended surface.

3M™ Air and Vapor Barrier 3015 is ready to apply as soon as the release liner is peeled back. Be careful when aligning product on the wall as repositioning may be challenging. The adhesive is very aggressive and quickly bonds to substrates.

Once aligned, set the membrane in place by rolling the product back against the exposed adhesive.

Wipe the membrane down with a feathering motion from the middle outward to obtain a smooth surface.

Unwind the roll while simultaneously pulling the release liner, maintaining pressure against the wall to tack the membrane in place.



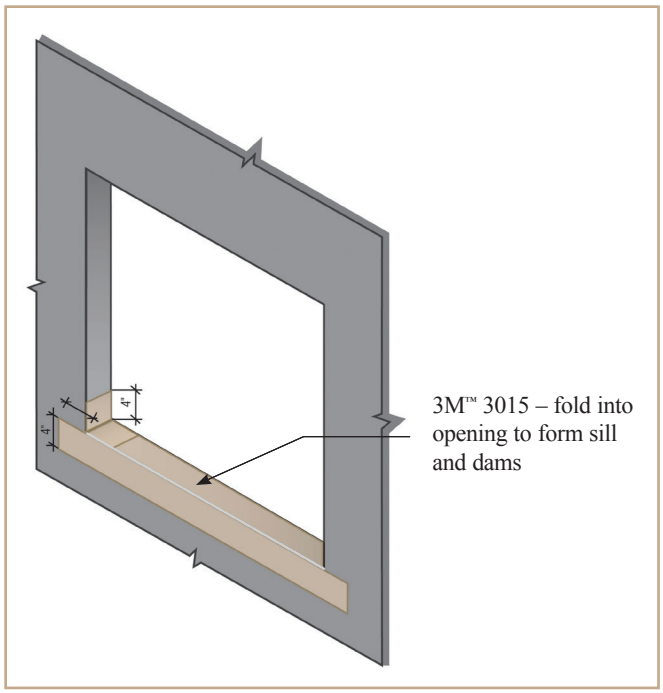
For best air barrier membrane performance, roll the membrane with a rubber roller to ensure a tight seal against the wall and between overlapped edges. Best practice methods recommend sealing the leading edge of the membrane at the end of each work day. 3M recommends the use of 3M™ Polyurethane Sealant 540 if you do this. Smooth the bead to the surface to avoid creating a projecting obstruction when the next layer of membrane is overlapped.

Penetration Areas

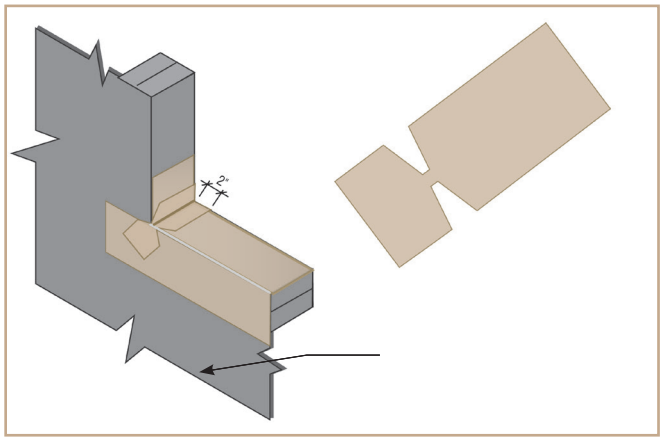
Window and door penetrations can be detailed pre- or post-installation of the membrane. Pre-installation, however, is recommended. All penetrations, including windows and doors, must be installed in proper sequence for appropriate moisture management. Use either 3M™ Air and Vapor Barrier 3015 for flashing and detail work. Penetrations should be additionally sealed with a sealant like 3M™ Polyurethane Sealant 540 to achieve a weather-tight result.

Rough Openings (Windows and Doors)

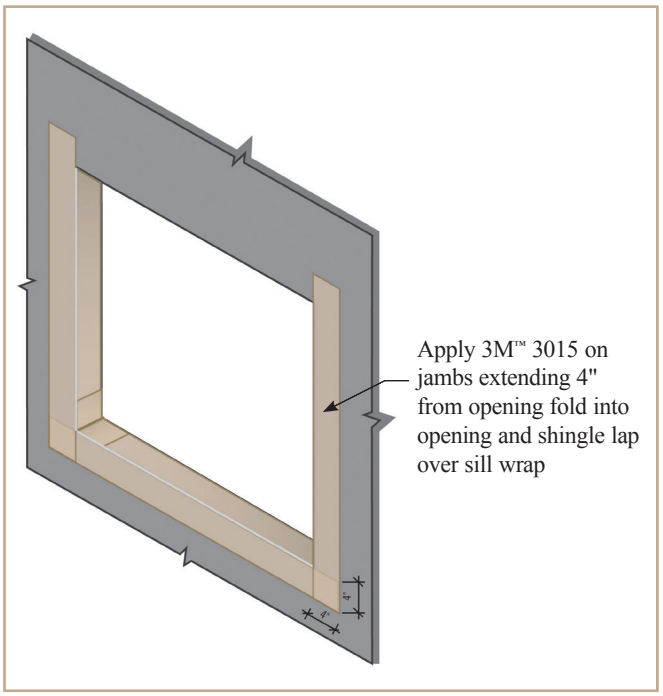
When working with 3M™ Air and Vapor Barrier 3015, always install membrane in “weatherboard” or “shingle fashion.” Begin by pre-cutting membrane into appropriate size, align and position the membrane, remove release liner, and press firmly into place. Roll all laps and membrane with a rubber roller to ensure optimum seal. **Follow these steps:**



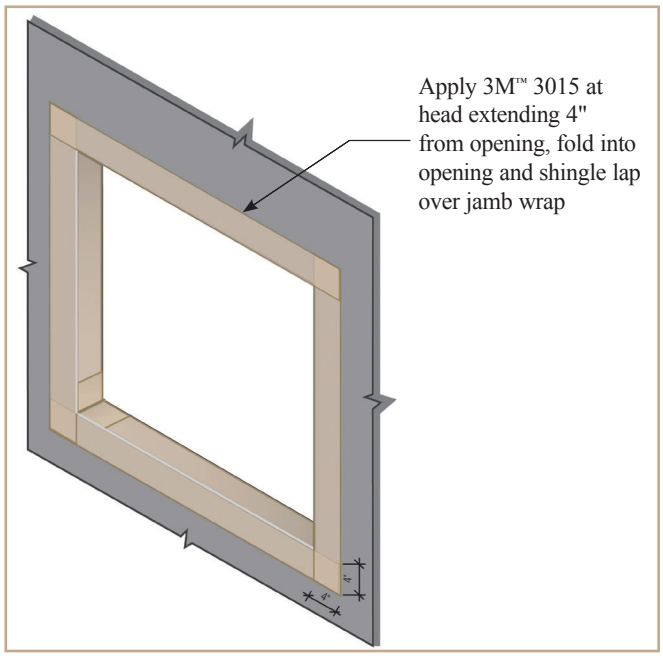
1. Apply appropriately sized piece to the bottom of the opening, folding into the opening to form sill and dams. Ensure a 2" overlap to the exterior face.



2. Apply detail strips of membrane in each sill corner extending the full depth of the sill and a minimum 2" to the jamb, sill, and face.

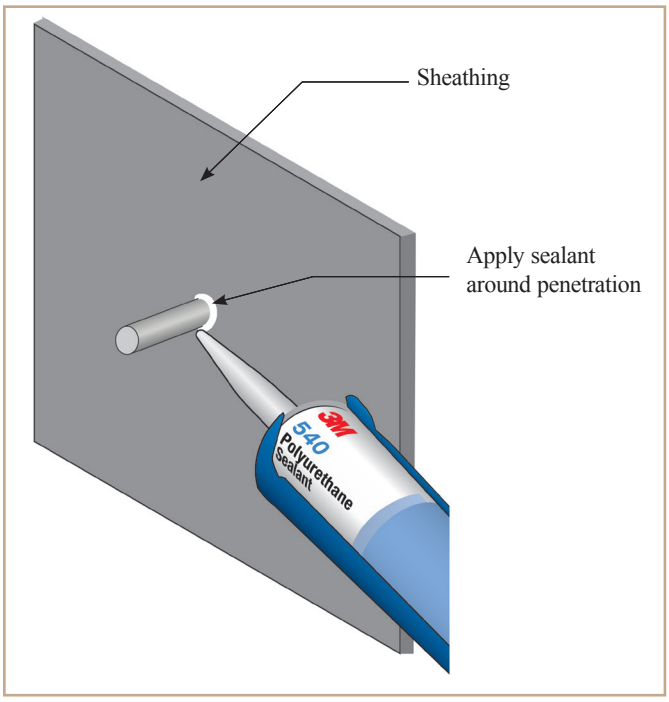


3. Apply appropriately sized pieces on the jambs, extending 4" from the opening to the exterior face. Fold the membrane into the opening and shingle lap over the previously applied sill wrap.

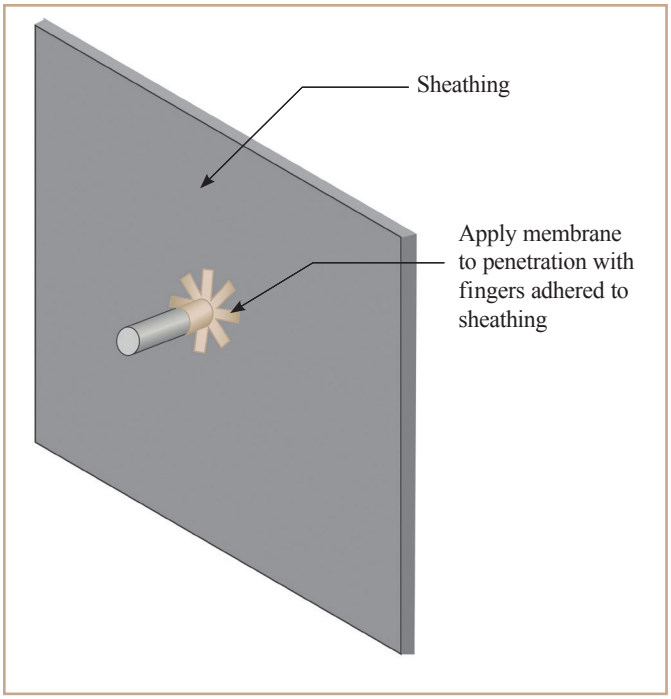


4. Apply appropriately sized piece at the head, extending the membrane 4" from the opening to the exterior face. Fold the membrane into the opening and shingle lap over the jamb wrap.

Vent and Pipe Penetrations

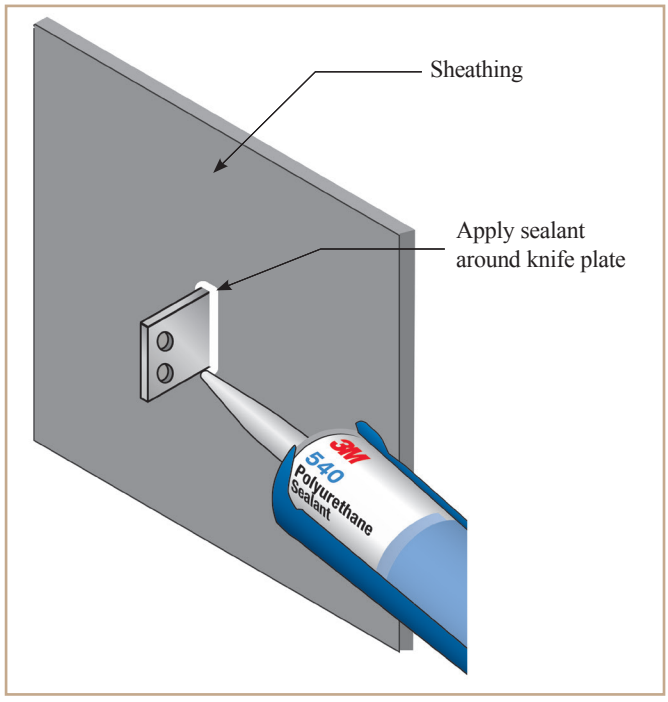


1. Apply 3M™ Polyurethane Sealant 540 in the gap between the penetration and the exterior wall.

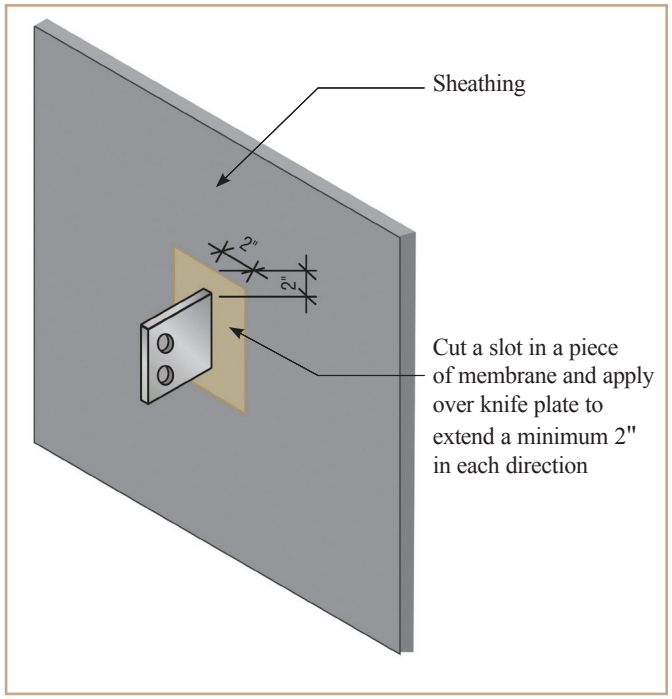


2. Apply membrane to allow continuous 2" overlap onto vent/pipe penetration and cut “fingers” to transition to the exterior wall.

Masonry (Brick) Tie/Knife Plate



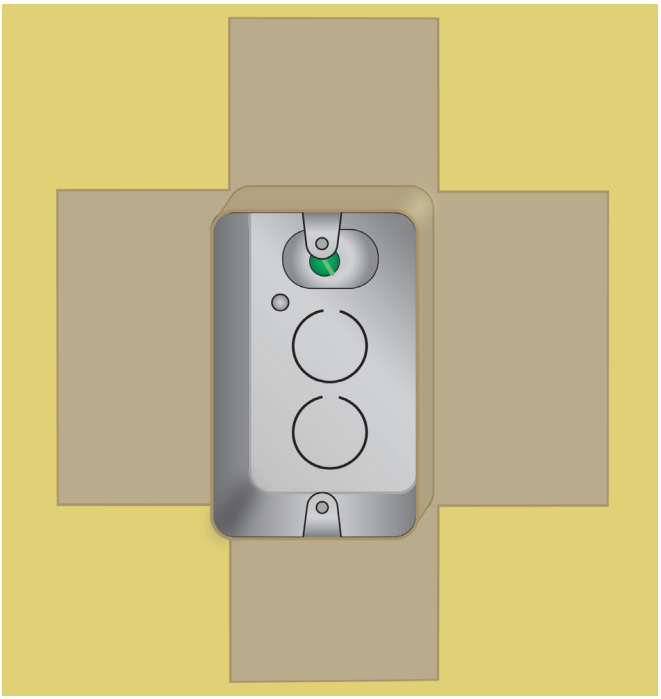
1. Apply 3M™ Polyurethane Sealant 540 where knife plate penetrates the membrane.



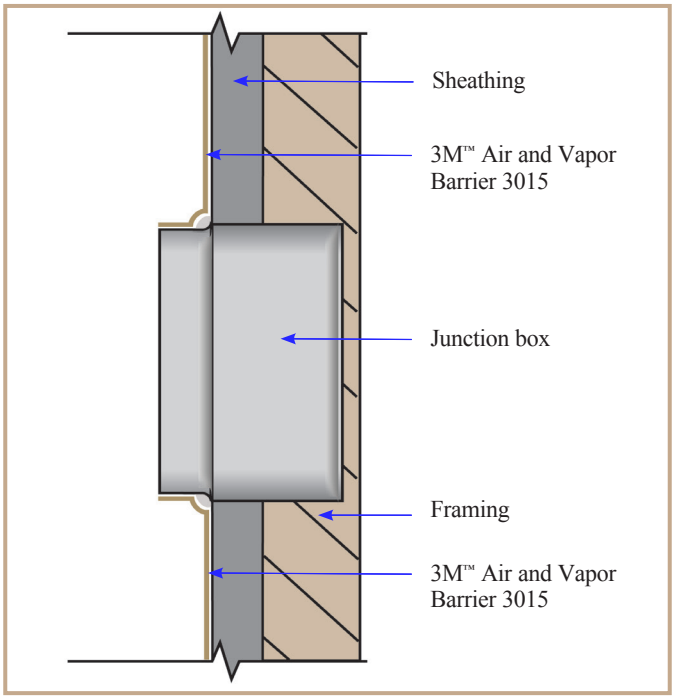
2. Cut a square of membrane that overlaps the knife plate a minimum 2" in each direction. Cut a slot in the center of the square to slip membrane over the knife plate.

Junction Box

1. Apply 3M™ Polyurethane Sealant 540 around junction box.

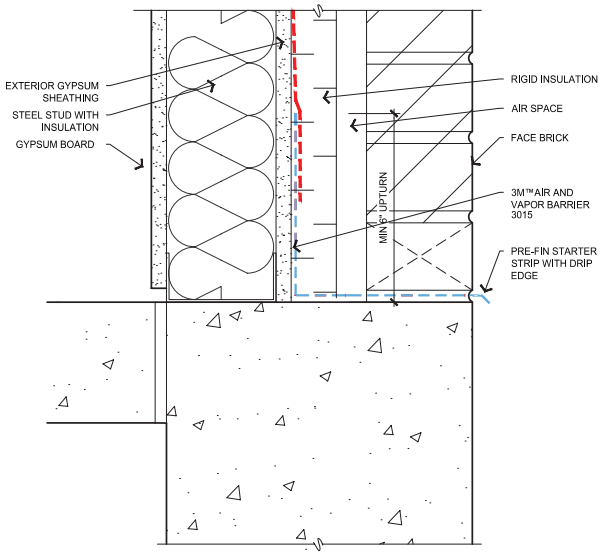


3. Perpendicular to the direction of the wrap, cut four “fingers” so that the membrane can transition down from the box to the exterior wall.



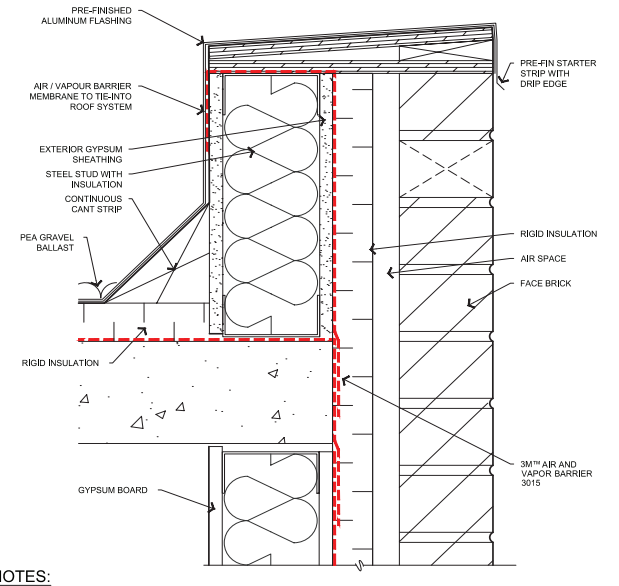
2. Cut piece of membrane to a size that wraps the exterior of the box with one continuous piece, allowing a 2” overlap.

For additional information, please contact the 3M Customer Contact Center at 1-800-362-3550.



NOTES:
1. LAP JOINTS AND SEAMS IN MEMBRANE SYSTEM A MINIMUM OF 2"
2. DOUBLE LAYER OF MEMBRANE MAY BE APPLIED TO THROUGH WALL FLASHINGS
3. POST INSTALLATION DAMAGE TO THROUGH WALL FLASHING SHOULD WITH REPAIRED WITH 3M™ POLYURETHANE SEALANT 540

SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-001
TITLE:	SCALE: N.T.S.	
FOUNDATION WALL DETAIL	DRAWN BY: J.D.G.	



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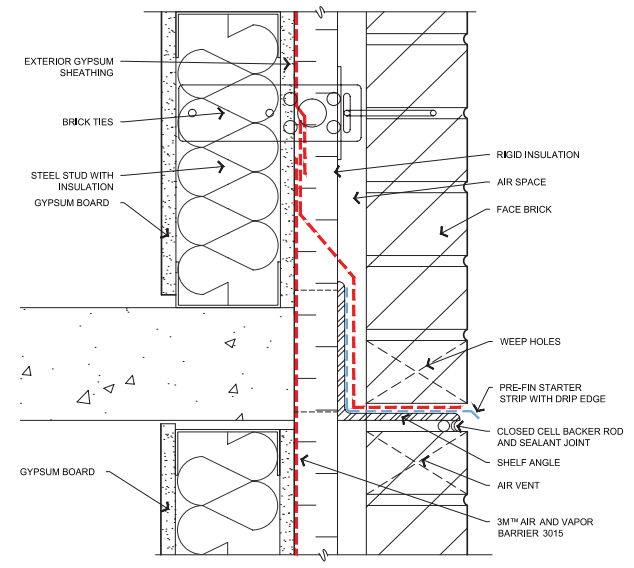
3. POST INSTALLATION DAMAGE TO THROUGH WALL FLASHING SHOULD WITH REPAIRED WITH 3M™ POLYURETHANE SEALANT 540

SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-101
TITLE:	SCALE: N.T.S.	
PARAPET DETAIL	DRAWN BY: J.D.G.	



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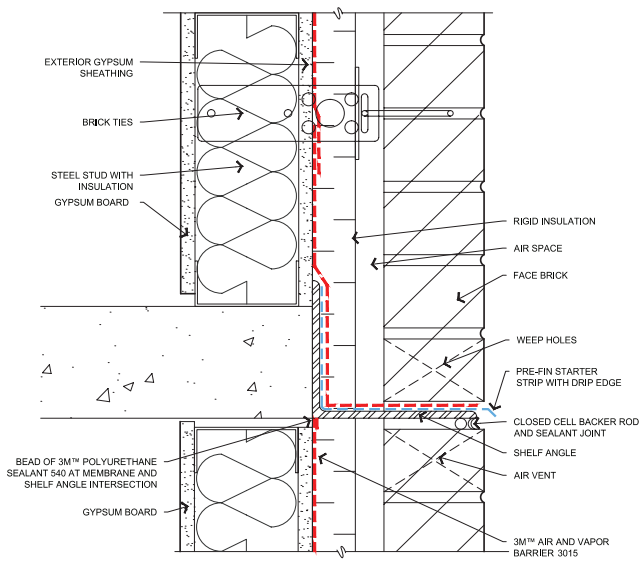
SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-201
TITLE:	SCALE: N.T.S.	
SHELF ANGLE - WITH STAND OFF	DRAWN BY: J.D.G.	



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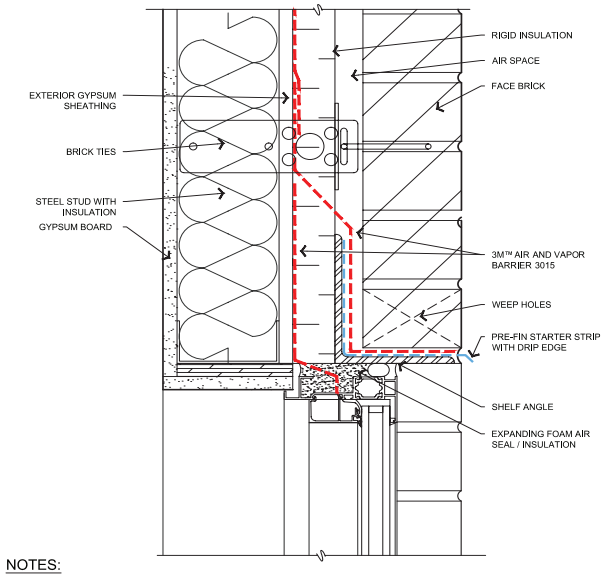
SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-202
TITLE:	SCALE: N.T.S.	
BRICK SHELF ANGLE - NO STAND-OFF	DRAWN BY: J.D.G.	



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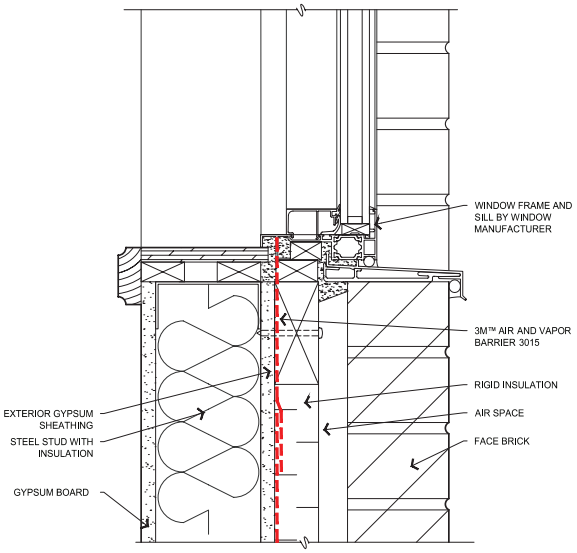
3. POST INSTALLATION DAMAGE TO THROUGH WALL FLASHING SHOULD WITH REPAIRED WITH 3M™ POLYURETHANE SEALANT 540
4. CONNECTION OF AIR AND VAPOUR BARRIER TO WINDOW OR DOOR SYSTEM TO BE CONFIRMED WITH WINDOW OR DOOR MANUFACTURER

SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-301
TITLE:	SCALE:	
WINDOW HEAD DETAIL	N.T.S.	
	DRAWN BY: J.D.G.	



NOTES:
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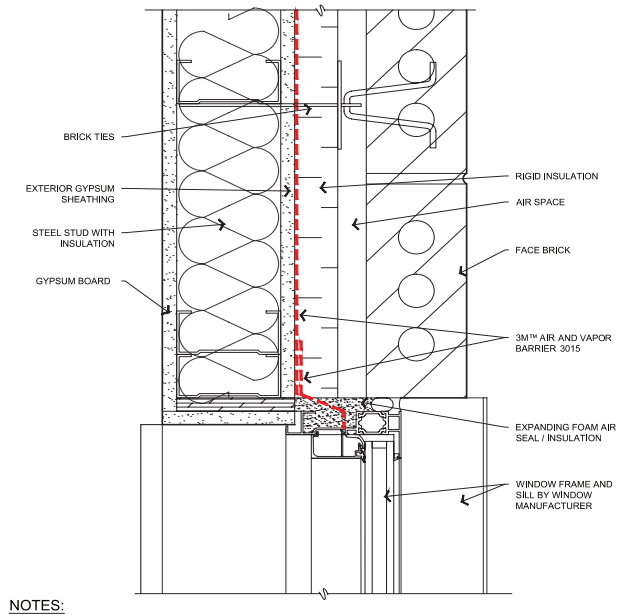
2. CONNECTION OF AIR AND VAPOUR BARRIER TO WINDOW OR DOOR SYSTEM TO BE CONFIRMED WITH WINDOW OR DOOR MANUFACTURER

SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-302
TITLE:	SCALE:	
WINDOW SILL DETAIL	N.T.S.	
	DRAWN BY: J.D.G.	



NOTES:
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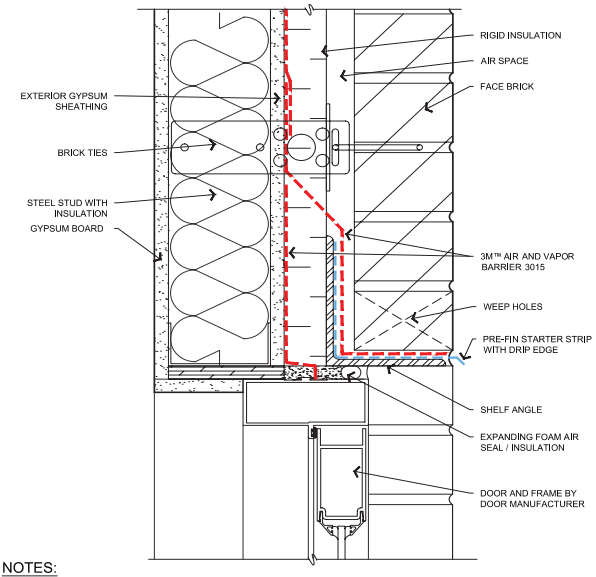
SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-303
TITLE:	SCALE:	
WINDOW JAMB DETAIL	N.T.S.	
	DRAWN BY: J.D.G.	



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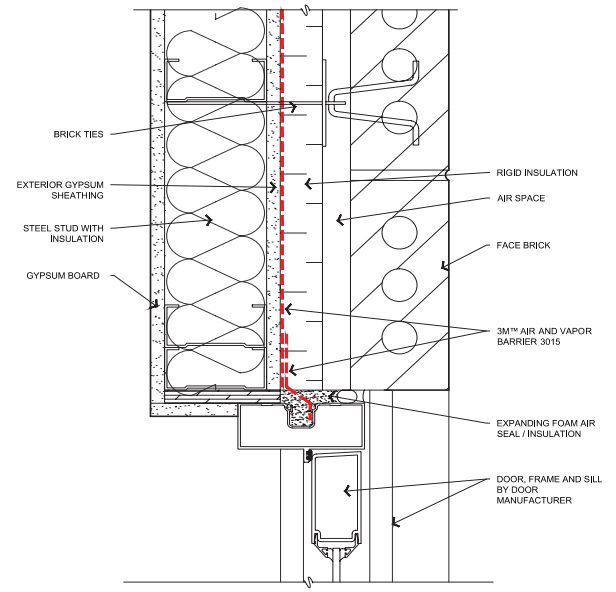
3. POST INSTALLATION DAMAGE TO THROUGH WALL FLASHING SHOULD WITH REPAIRED WITH 3M™ POLYURETHANE SEALANT 540
4. CONNECTION OF AIR AND VAPOUR BARRIER TO WINDOW OR DOOR SYSTEM TO BE CONFIRMED WITH WINDOW OR DOOR MANUFACTURER

SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-401
TITLE:	SCALE:	
DOOR HEAD DETAIL	N.T.S.	
	DRAWN BY: J.D.G.	



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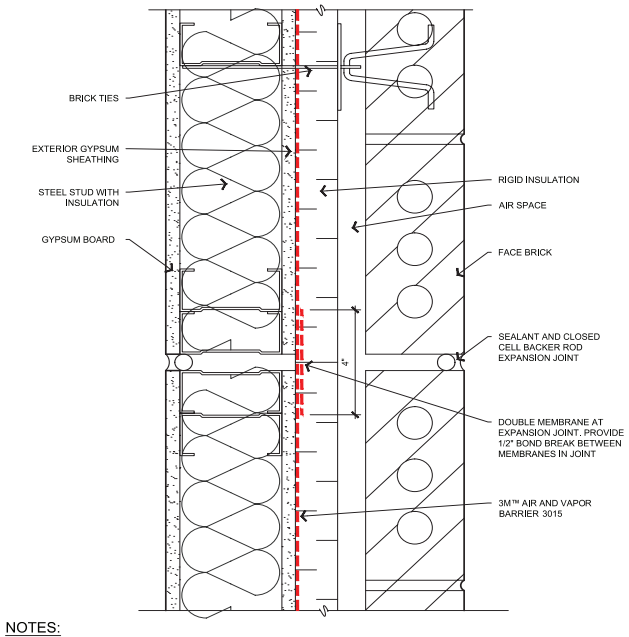
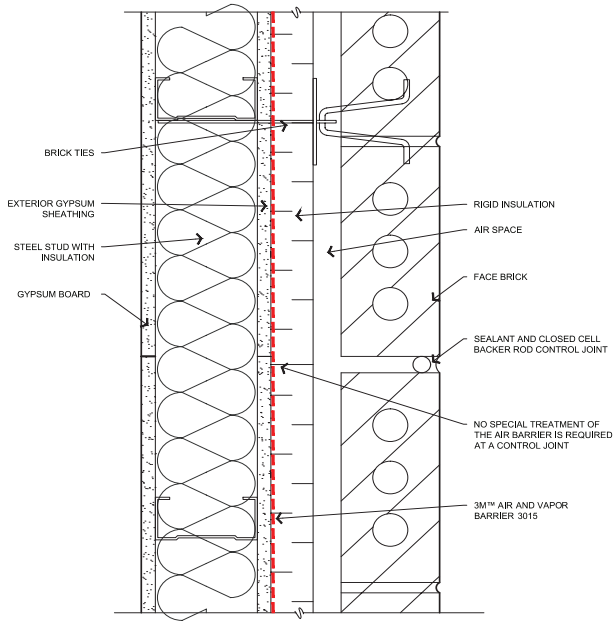
SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-402
TITLE:	SCALE:	
DOOR JAMB DETAIL	N.T.S.	
	DRAWN BY: J.D.G.	



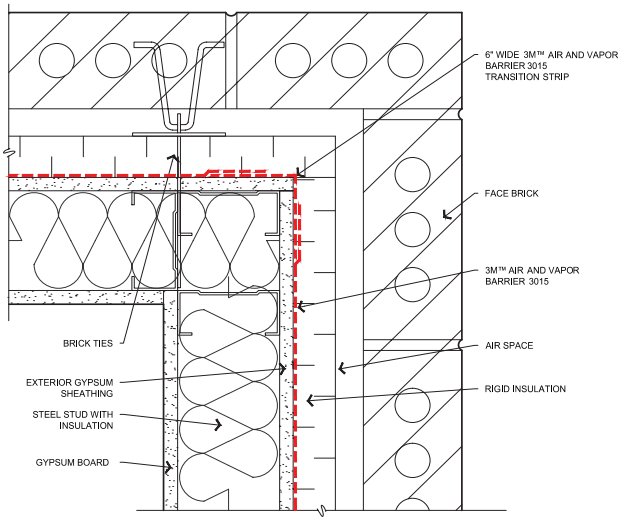
NOTES:
1. LAP JOINTS AND SEAMS IN MEMBRANE SYSTEM A MINIMUM OF 2"

SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-501
TITLE:	SCALE:	
EXPANSION JOINT DETAIL	N.T.S.	
	DRAWN BY: J.D.G.	

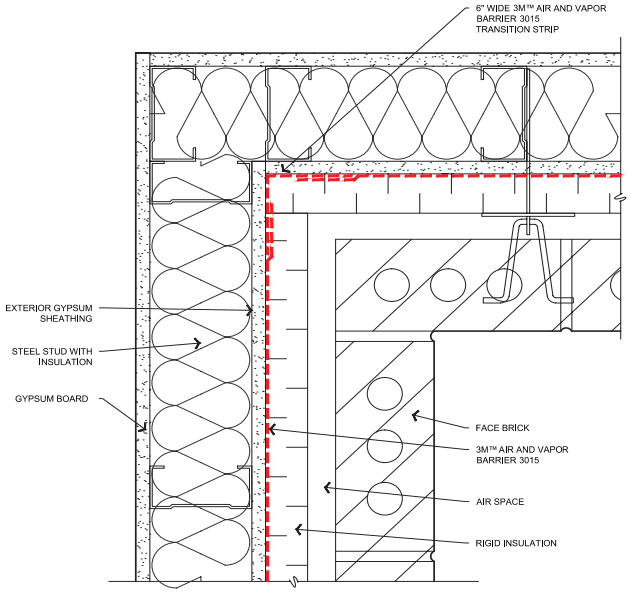


NOTES:
1. LAP JOINTS AND SEAMS IN MEMBRANE SYSTEM A MINIMUM OF 2"

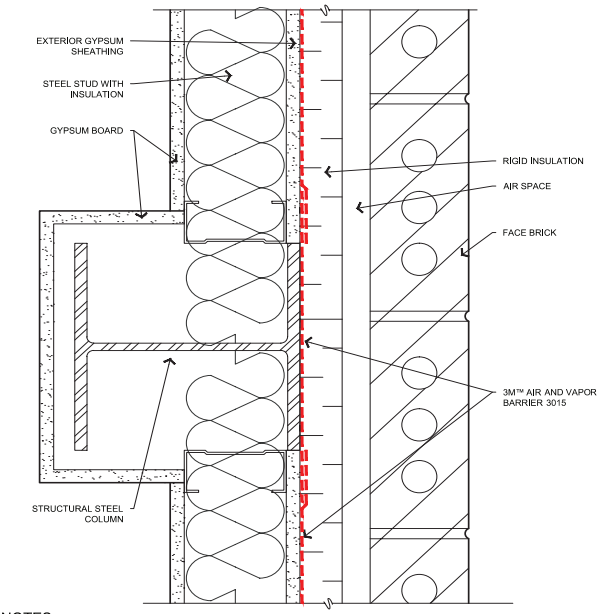
SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-502
TITLE:	SCALE:	
CONTROL JOINT DETAIL	N.T.S.	
	DRAWN BY: J.D.G.	



SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-503
TITLE:	SCALE:	
EXTERIOR CORNER DETAIL	N.T.S.	
	DRAWN BY: J.D.G.	

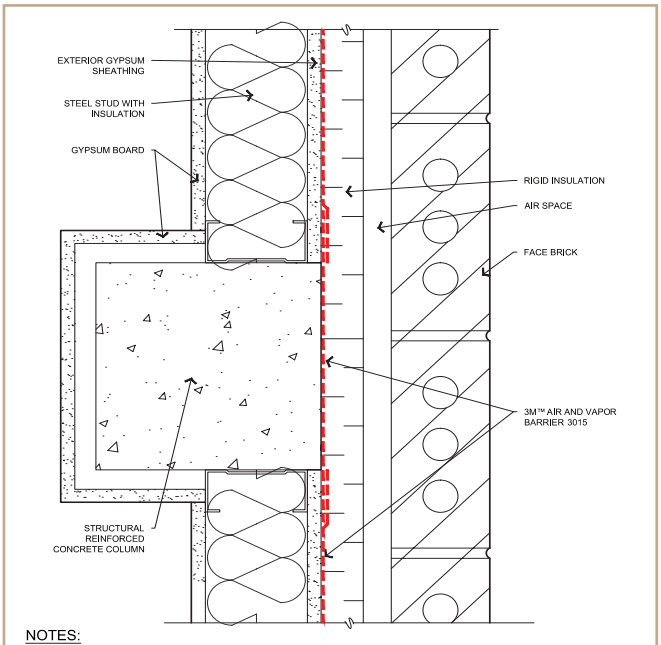


SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-504
TITLE:	SCALE: N.T.S.	
INTERIOR CORNER DETAIL	DRAWN BY: J.D.G.	



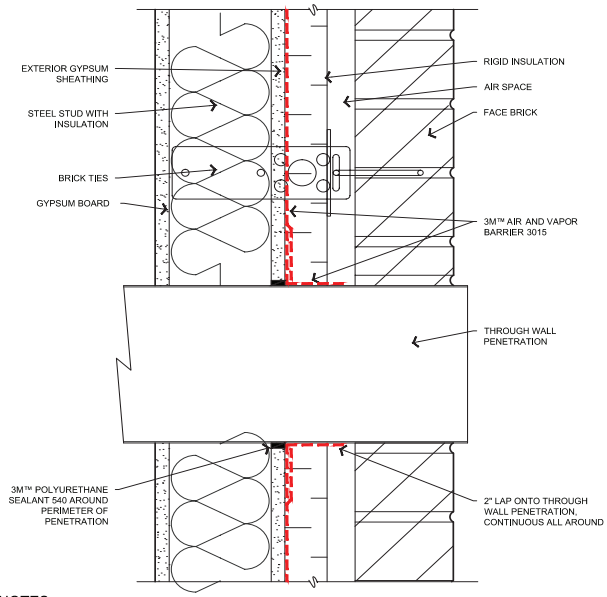
NOTES:
1. LAP JOINTS AND SEAMS IN MEMBRANE SYSTEM A MINIMUM OF 2"

SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-505
TITLE:	SCALE: N.T.S.	
STEEL COLUMN CONNECTION DETAIL	DRAWN BY: J.D.G.	



NOTES:
1. LAP JOINTS AND SEAMS IN MEMBRANE SYSTEM A MINIMUM OF 2"

SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-506
TITLE:	SCALE: N.T.S.	
CONCRETE COLUMN CONNECTION DETAIL	DRAWN BY: J.D.G.	



NOTES:
1. LAP JOINTS AND SEAMS IN MEMBRANE SYSTEM A MINIMUM OF 2"
3. POST INSTALLATION DAMAGE TO THROUGH WALL FLASHING SHOULD WITH REPAIRED WITH 3M™ POLYURETHANE SEALANT 540

SYSTEM:	DATE:	DETAIL No:
Brick Veneer / Steel Stud Wall	MAY 14/12	3M-601
TITLE: THROUGH WALL PIPE OR DUCT PENETRATION	SCALE: N.T.S.	
	DRAWN BY: J.D.G.	

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70-0716-1658-8

Air and Vapor Barrier 3015

Technical Data March 2017

Product Description

3M™ Air and Vapor Barrier 3015 is an air, moisture and water impermeable membrane with an aggressive, high-tack acrylic pressure sensitive adhesive that does not require the use of a primer on most construction surfaces. It even adheres to damp surfaces. This product has a unique acrylic pressure sensitive adhesive that aggressively sticks and stays stuck both at lower and higher application temperatures than traditional air barrier products.

The proprietary backing seals around hand driven nails and staples to prevent moisture intrusion. This backing is also tough, resists punctures and tears, yet it is thin to fit conveniently into corners.

Product Construction

Backing	Adhesive	Color	Liner
Multilayer Elastomeric Film	Acrylic	Tan, semi-translucent	Polycoated Kraft

Typical Physical Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

		Test Method
Air Permeance of membrane:		
@ 75 Pa (0.3 in/wg.)	< 0.0002 L/s·m^2 (<0.00005 cfm/ft^2)	ASTM E2178
Air Leakage of assembled wall:		
Opaque wall @ 75 Pa (0.3 in/wg.)	< 0.01 L/s·m^2 (<0.002 cfm/ft^2)	ASTM E2357
Penetrated wall @ 75 Pa (0.3 in/wg.)	< 0.03 L/s·m^2 (<0.006 cfm/ft^2)	ASTM E2357
Air Leakage Rate Classification	A1	CAN/ULC-S742
Water Vapor Transmission		
Desiccant Method	8 ng/Pa·s·m^2 (0.14 US perm)	ASTM E96
Water Method	15 ng/Pa·s·m^2 (0.26 US perm)	ASTM E96
Water Resistance		
55 cm (21.6 inches) of water for 5 hours	No Leakage	AATCC 127 (deviated)
Low Temperature Flexibility		
@ -30°C (-22°F)	Bend Test – pass Water Head Test – No Leakage	ASTM D1970, Section 7.6
Nail Sealability		
127 mm (5 inches) water head after 3 days	Dry / Pass	ASTM D1970, Section 7.9
Initial	Pass	ASTM E331/547 as modified per AAMA-711-07, Annex 1
After Thermal Cycling	Pass	

3M™ Air and Vapor Barrier 3015

Typical Physical Properties *(continued)*

Wall Assembly Fire Test		
Pass as part of various assemblies with foam plastic insulation	Pass	NFPA 285
Surface Burning Characteristics		
Flame Spread Index	15	ASTM E84
Smoke Developed Value	45	ASTM E84
Rating	Class A	ICC AC 38

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

		Test Method
Backing Thickness:	5 mils (0.13 mm)	ASTM D3652
Total Thickness (coated membrane):	10 mils (0.25 mm)	ASTM D3652
Tensile Strength (coated membrane):	1740 psi (12 MPa)	ASTM D882
Elongation at Break:	700%	ASTM D882
Lap Adhesion	40 oz/in (0.44 N/mm)	ASTM D3330
Pull Adhesion	16 psi (0.11 MPa)	ASTM D4541

Available Sizes

2-3/8", 4", 6", 9", 12", 18", 26", 36", 48" x 75 feet.

	Roll Weight	Theoretical Coverage
18" by 75 ft	10.5 lbs (4.8 kg)	106 ft^2 (9.8 m^2)
36" by 75 ft	21 lbs (9.5 kg)	212 ft^2 (19.7 m^2)
48" by 75 ft	28 lbs (12.7 kg)	282 ft^2 (26.2 m^2)

Features

- Meets the requirements of ASTM E2178 and CAN/ULC S741-08.
- Assemblies of 3M™ Air and Vapor Barrier 3015 and 3M™ Polyurethane Construction Sealant 525 or 3M™ Polyurethane Sealant 540 meet the requirements of ASTM E2357 and CAN/ULC-S742-11.
- Compatible with many building sealants: No adverse reaction with synthetic rubber, butyl, polyurethane, silicone and silane terminated hybrid sealants.
- Service Temperature from -40° to 240°F (-40° to 116°C).
- Can be applied to substrates from 0° to 150°F (-18° to 66°C).
- Meets the criteria to contribute to the Environmental Quality (“EQ”) Credit 4.1: Low-Emitting Materials: Adhesives & Sealants under the United States Green Building Council’s Rating System for New Construction and Major Renovations (LEED-NC), Version 2.2, Core and Shell (LEED-CS), Version 2.0 and Commercial Interiors (LEED-CI), Version 2.0.
- Impermeable to air, moisture vapor and water.
- Excellent adhesion to concrete, concrete block, anodized aluminum, galvanized metal, plywood and most exterior grade fiberglass matt gypsum boards without the use of any primer. Contact your local 3M representative or refer to 3M Technical Bulletins on 3M™ Air and Vapor Barrier 3015 for details.

3M™ Air and Vapor Barrier 3015

Features (continued)	• Adhesive provides a unique combination of both cold and hot temperature adhesion to most substrates, which can extend the construction season in many climates. • Unique adhesive even adheres to damp surfaces that have not absorbed water, like metals, glass and plastics. • Multilayer Elastomeric Film seals around nails and staples to prevent moisture intrusion. • Resists UV exposure for up to 12 months. • Membrane has measurement markings at 6 inch grid intersections for ease in alignment and cutting.
Application Ideas	• Designed for use as a self-adhered air, vapor and water barrier for new and remedial commercial and residential applications. • Can be installed onto exterior wall sheathing and behind exterior cladding. • Can be used to transition the building envelope from one substrate to another, or other openings and penetrations.
Surface Preparation	• To obtain the best adhesion, 3M™ Air and Vapor Barrier 3015 should be installed when outdoor temperatures range from 0°F to 150°F (-18°C to 66°C). • Surfaces should be clean, free from dirt and debris and have not absorbed water. • Surfaces should be free of any damaged, unsupported areas, sharp protrusions or voids. • Concrete must be cured a minimum of 7 days before application. • Block or brick walls should have mortar joints stuck flush. • While 3M air and vapor barrier 3015 can be applied as low as 0°F (-18°C), surfaces must be clear of snow, ice or frost. • 3M air and vapor barrier 3015 adheres to most common building materials. For difficult to stick to surfaces, test adhesion before application. If needed, apply 3M™ Hi-Strength 90, 3M™ Hi-Strength 94 ET Spray Adhesive, 3M™ Scotch-Weld™ Holdfast 70, or 3M™ Fastbond™ Contact Adhesive 30NF to prime the substrate prior to applying the membrane. Products are available as either an aerosol or cylinder spray adhesive.

3M™ Air and Vapor Barrier 3015

Application Instructions

- Refer to 3M™ Air and Vapor Barrier 3015 Specification Guide for detailed application information.
- 3M air and vapor barrier 3015 must be lapped a minimum of 2" on sides and ends. Cut membrane to desired length and wind up into a roll for easy handling. Fold the starting edge back over itself to crease the paper release liner. Peel back the liner to expose a starting 2-3 inch adhesive strip.
- 3M air and vapor barrier 3015 does not need a primer on most construction surfaces. It is ready to apply as soon as the release liner is removed. The adhesive is very aggressive and quickly bonds to substrates. Do not contaminate the starting strip with dust or debris before applying it to the intended surface. Be careful when aligning product on the wall as repositioning may be challenging.
- Once aligned, set the membrane in place by rolling the product back against the exposed adhesive. Unwind the roll while simultaneously pulling the release liner, maintaining pressure against the wall to tack the membrane in place. Wipe the membrane down with a feathering motion from the middle outward to obtain a smooth surface. For best air barrier membrane performance, roll the membrane with a rubber roller to ensure a tight seal against the wall and between overlapped edges.
- Detail work must be carefully executed to ensure a continuously sealed building envelope.
- Rough openings may be flashed with detail widths of 3M air and vapor barrier 3015.

3M™ Air and Vapor Barrier 3015

Storage	Optimum storage conditions are 60° to 80°F (16° to 27°C) and 40 to 60% relative humidity in the original packaging material.
Shelf Life	To obtain best performance, use this product within 24 months from date of manufacture.
Technical Information	The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.
Product Use	Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.
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Vapor Permeable Air Barrier 3015VP

Technical Data August 2017

Product Description

3M™ Vapor Permeable Air Barrier 3015VP is a water vapor permeable, air and water impermeable membrane with an aggressive, high-tack acrylic adhesive that does not require the use of a primer on most construction surfaces.

Product Construction

Backing	Adhesive	Colors	Liner
Elastomeric Coated Nonwoven	Acrylic Pattern Coated	White	Polyester

Typical Physical Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

		ASTM Test Method
Liner Thickness:	3 mils (0.078 mm)	ASTM D3652
Total Thickness (coated membrane):	15 mils (0.50 mm)	ASTM D3652
Tensile Strength (coated membrane):	1177 psi (8.1 MPa)	ASTM D882
Elongation at Break:	40%	ASTM D882
Lap Adhesion (Stainless Steel):	50 oz./in (0.44 N/mm)	ASTM D3330

Water Vapor Transmission per ASTM E96, US perms
Dry Cup 12
Wet Cup 17

Nail Sealability
127 mm (5 inches) water head after 3 days Dry / Pass ASTM D1970-14, Section 7.9

Surface Burning Characteristics
Flame Spread Index 5 per ASTM E84
Smoke Developed Value 0 per ASTM E84
Rating Class A

3M™ Vapor Permeable Air Barrier3015VP

Features	• Meets the requirements of ASTM E2178 and CAN/ULC S741-8. • Passes NFPA 285 as part of various exterior wall constructions. •Service temperature from -40° to 240°F (-40° to 116°C). • Can be applied to substrates from 0° to 150°F (-18° to 66°C). • Permeable to water vapor, impermeable to air and water. • Resists UV exposure for up to 12 months. • Compatible with many building sealants: No adverse reaction with synthetic rubber, butyl, polyurethane, silicone and silane terminated hybrid sealants. • Excellent adhesion to concrete, concrete block, anodized aluminum, galvanized metal, plywood and most exterior grade fiberglass matt gypsum boards without the use of any primer. Contact your local 3M Sales Representative or refer to the Technical Bulletins for details. • Adhesive provides a unique combination of both cold and hot temperature adhesion to most substrates, which can extend the construction season in many climates. • Unique adhesive even adheres to damp surfaces that have not absorbed water, like metals, glass and plastics. • Seals around nails and staples to prevent moisture intrusion.
Surface Preparation	To obtain the best adhesion, 3M™ Vapor Permeable Air Barrier 3015VP should be installed when outdoor temperatures range from 0°F (-18°C) to 150°F (66°C). • Surfaces should be clean, free from dirt and debris and have not absorbed water. • Surfaces should be free of any damaged, unsupported areas, sharp protrusions or voids. • Concrete must be cured a minimum of 7 days before application. • Block or brick walls should have mortar joints stuck flush. • While it can be applied as low as 0°F (-18°C), surfaces must be clear of snow, ice or frost. • Adheres to most common building materials. For difficult to stick to surfaces, test adhesion before application. If needed, apply 3M™ Hi-Strength 90 Spray Adhesive, 3M™ Hi-Strength 94 ET Spray Adhesive, 3M™ Holdfast 70 Spray Adhesive or 3M™ Fastbond™ Contact Adhesive 30NF to prime the substrate prior to applying the membrane. Products are available as either an aerosol or cylinder spray adhesive.

3M™ Vapor Permeable Air Barrier 3015VP

Application Instructions	Refer to 3M™ Vapor Permeable Air Barrier 3015VP Installation Guide for detailed application information. • Remove outer protective film to expose adhesive surface. • Must be lapped a minimum of 2" on sides and ends. Remove protective film cover before installing the next layer. • No primer is needed on most construction surfaces. • The adhesive is very aggressive and quickly bonds to substrates. Do not contaminate the adhesive area with dust or debris before applying it to the intended surface. Be careful when aligning product on the wall as repositioning may be challenging. • Once aligned, set the membrane in place by rolling the product back against the exposed adhesive. Unwind the roll while maintaining pressure against the wall to tack the membrane in place. Wipe the membrane down with a feathering motion from the middle outward to obtain a smooth surface. For best air barrier membrane performance, roll the membrane with a rubber roller to ensure a tight seal against the wall and between overlapped edges. • Remove film covering membrane. • Detail work must be carefully executed to ensure a continuously sealed building envelope. • Rough openings may be flashed with detail widths of 3M™ Air and Vapor Barrier 3015.

3M™ Vapor Permeable Air Barrier 3015VP

Storage	Optimum storage conditions are 60° to 80°F (16° to 27°C) and 40 to 60% relative humidity in the original packaging material.
Shelf Life	To obtain best performance, use this product within 24 months from date of manufacture.
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Installation Guide

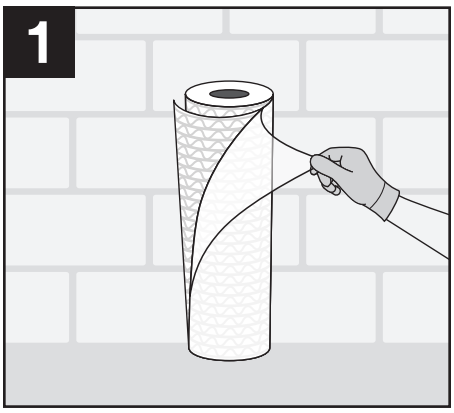
March 2017

3M™ Air Barrier 3015VP

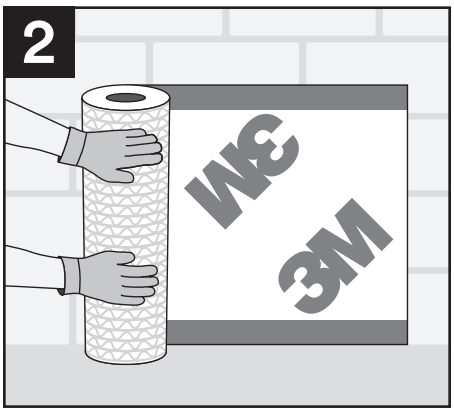
3M™ Air Barrier 3015VP with high performance 3M™ Acrylic Adhesive adheres on contact to most exterior building surfaces without the use of adhesive primer. It can be applied in temperatures between 0°F and 150°F (-18°C and 66°C) ensuring that construction projects are not delayed due to severe temperatures. 3M Air Barrier 3015VP is highly UV resistant and does not need to be covered until after six months. It can be installed vertically or horizontally. When product is installed horizontally, it must be installed starting at the base of the building in a shingled fashion, such that the lower courses are under the upper courses and water running down the wall will flow over the joints without getting behind the membrane. Each course and butt joints must be overlapped by 2". All penetrations pipes, ducts, windows and doors must be flashed with 3M™ Air and Vapor Barrier 3015 (elastic film) such that water drains on top of membrane and not behind it. No primer is needed on most construction surfaces.

3M Air Barrier 3015VP is reverse wound for ease of installation. The impermeable release liner **MUST** be removed after each lap has been installed to ensure product performance. Any warranty is null and void if the release liner is not removed from the backing. The adhesive is very aggressive and quickly bonds to substrates. Do not contaminate the adhesive area with dust or debris before applying it to the intended surface. Be careful when aligning product on the wall as repositioning may be challenging.

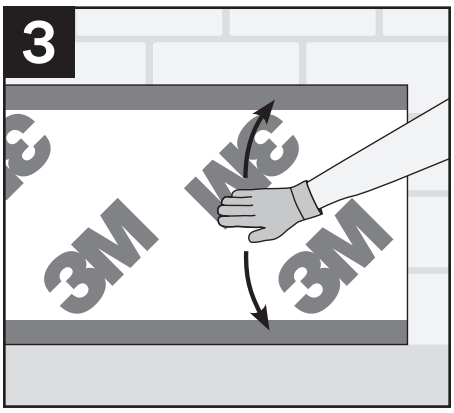
Refer to 3M™ Vapor Permeable Air Barrier 3015VP Specification Guide for detailed application information.



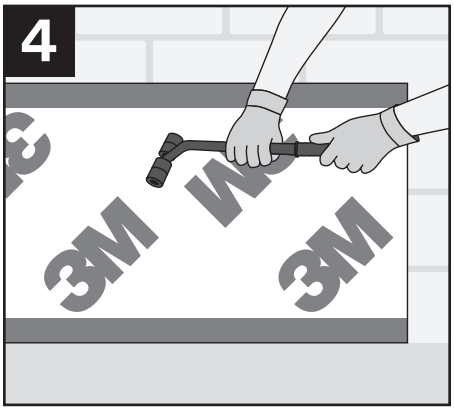
Prepare roll of 3M™ Air Barrier 3015VP by removing the protective film wrap to expose the adhesive.



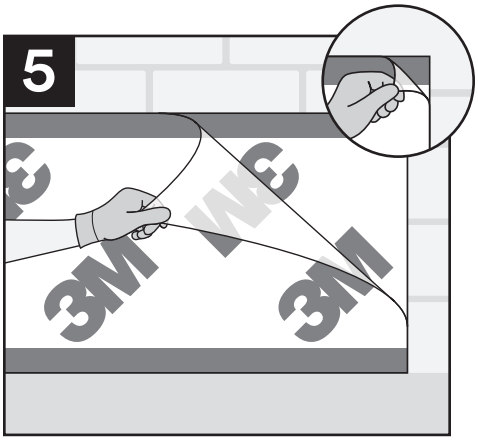
Unwind the roll with adequate pressure on it, to ensure a good initial bond to the building substrate, as you move along the wall.



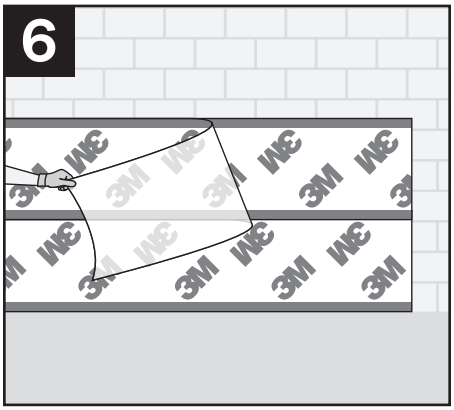
Wipe the membrane down with a feathering motion from the middle outward to obtain a smooth application.



Roll the membrane with a rubber roller to ensure a tight bond to the wall and overlaps.



Ensure that the clear protective film/release liner is removed from the membrane backing before installing the next lap of 3015VP.



Repeat steps 1–5 for each lap of 3015VP. To ensure adequate permeability and adhesion remove clear protective film/release liner **before** installing next lap.

3M™ Air Barrier 3015VP Installation Best Practices

Substrate Surface Requirements
3M™ Air Barrier 3015VP can be applied to a wide variety of sheathing substrates, typically without priming. Substrate condition is crucial to the adhesion performance of any adhesive membrane.
- Substrate surfaces must be free of grease, oil, un-bonded paint, corrosion or other substances that would adversely affect the adhesive bond between the membrane and substrate
- Substrate surface must be dry to the touch for optimum performance
- Ambient temperature must be between 0°F and 150°F (-18°C and 66°C)
- Rolls must be stored at a temperature between 0°F and 150°F (-18°C and 66°C) to ensure initial bond performance

Surface Preparation
- Fill gaps and cracks exceeding 1/4" but less than 1/2" width with 3M™ Polyurethane Construction Sealant 540 (or similar), and tool the surface flush and smooth
- Fill gaps exceeding 1/2" width with closed cell foam backer rod, seal with 3M Polyurethane Construction Sealant 540 (or similar), and tool the surface flush and smooth
- Concrete substrates shall have fins ground flush and void areas filled
- Masonry substrates must have mortar joints struck flush

Substrate Specific Guidelines
- Exterior gypsum sheathing shall have moisture content below 19%, with no open joints or cracks wider than 1/2"
- Plywood sheathing shall have moisture content below 16%, with no open joints or cracks wider than 1/2"

Details, Penetrations, Windows and Doors
It is recommended to detail window and door penetrations before installing the field membrane, but post-installation is acceptable. All penetrations, including windows and doors, must be installed in proper sequence for appropriate moisture management. 3M recommends using 3M™ Air and Vapor Barrier 3015 for flashing and detail work. Penetrations should be additionally sealed with 3M Polyurethane Construction Sealant 540 (or similar) to achieve a weather-tight result. Vertical seams should be staggered from floor to floor, or separated by a horizontally applied strip of 3M Air Barrier 3015VP.

Membrane Installation
3M Air Barrier 3015VP is wound with the adhesive on the outside surface of the roll to provide easy installation. Follow these steps to ensure a properly installed product.
1. Prepare roll of 3M Air Barrier 3015VP by removing the protective film wrap to expose the adhesive.
2. Plan the course and once aligned, apply the air barrier by pressing the roll with the exposed adhesive against the building substrate.
3. Unwind the roll with adequate pressure on it, to ensure a good initial bond to the building substrate, as you move along the wall.
4. Wipe the membrane down with a feathering motion from the middle outward to obtain a smooth application.
5. Roll the membrane with a rubber roller to ensure a tight bond to the wall and between overlapped edges.
6. **Ensure that the clear protective film/release liner is removed from the membrane backing** before the next lap of 3M Air Barrier 3015VP is installed to ensure adequate permeability and lap adhesion.
7. Seal the exposed leading edge of the membrane at the end of each work day using 3M Polyurethane Construction Sealant 540 (or similar). Smooth the bead to the surface to avoid creating areas where water may collect.

Learn about 3M's advanced technologies for controlling airflow and optimizing the indoor climate at **3M.com/construction** or contact your 3M representative at **866-513-4026**.

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Please refer to the Technical Data Page for additional information.

3M
Self-Adhered Through Wall Flashing Membrane 3015TWF

Technical Data **April 2016**

Product Description

3M™ Self-Adhered Through Wall Flashing Membrane 3015 TWF is specially designed for use as a through wall flashing and damp proof course. 3M™ 3015 TWF is an impermeable membrane with an aggressive, high tack acrylic pressure sensitive adhesive that does not require the use of a primer on most construction surfaces.

Product Construction

Backing	Adhesive	Colors	Liner
Polyethylene	Acrylic	Black	Polycoated Kraft

Typical Physical Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

		ASTM Test Method
Thickness:	15.5 mils (0.40 mm)	
Film Thickness:	7.5 mils (0.19 mm)	
Elongation at Break:	>600%	D-412, Die C
Tensile Strength	>7.0 MPa (>1000 psi)	D-412 ,Die C
Temperature Use Range:	0° to 150°F (-18° to 66°C)	
Puncture Resistance membrane:	>170 N (>38 lbf)	E-154
Water Vapor Permeance:	0.05 Perms	E96 Method B
Lap adhesion:	>4.2 N/cm	D1876
Moisture absorption:	CGSB 37GP56M	D570
Low Temperature Flexibility	30°C Bend Test	

3M™ Self-Adhered Through Wall Flashing Membrane 3015TWF

Features

- Exceptional puncture and abrasion resistance.
- Excellent adhesion to concrete, concrete block, anodized aluminum, galvanized metal, exterior gypsum sheathing and plywood. Primer not required in most applications.
- Flexible at low temperatures.
- Unique adhesive even adheres to damp surfaces that have not absorbed water, like metals, glass and plastics.
- Compatible with many building sealants including polyurethane, silicone and silane terminated hybrid sealants.
- Service temperature from -40°F to intermittently 240°F (-40° to 116°C).
- Can be applied from 0° to 150°F (-18° to 66°C)
- Resists UV exposure for up to 24 months.

Surface Preparation

- To obtain the best adhesion, 3M™ 3015 TWF should be installed when outdoor temperatures measure above 0°F to 150°F (-18°C to 66°C). Excellent adhesion to concrete, concrete block, anodized aluminum, galvanized metal, exterior gypsum sheathing and plywood. Primer not required in most applications.
- Surfaces should be clean, free from dirt and debris and have not absorbed water.
- Surfaces should be free of any damaged, unsupported areas, sharp protrusions or voids.
- Concrete must be cured a minimum of 7 days before application.
- Block or brick walls should have mortar joints stuck flush.
- 3M™ 3015 TWF adheres to most common building materials. For difficult-to-stick-to surfaces, test adhesion before application. If needed, apply 3M™ Hi-Strength 90, 3M™ Hi--Strength 94 ET Spray Adhesive, 3M™ ScotchWeld™ Holdfast 70, or 3M™ Fastbond™ Contact Adhesive 30NF to prime the substrate prior to applying the membrane.

Application Instructions

- Overlap all joints by 50mm (2"). Keep 3M™ 3015 TWF back 12mm (½") to 25mm (1") from outside face of wall or veneer.

- Detail work must be carefully executed to ensure a continuously sealed building envelope: at all laps, seams, penetrations, and along top edges of 3015 TWF, apply a continuous bead of sealant such as 3M™ Polyurethane Sealant 540. Form end dams as required and use sealants at laps. Top or leading edge of 3M™ 3015 TWF must be sealed to prevent rain water from migrating behind the membrane.

Available Sizes

300mm (12”), 400mm (16”), 450mm (18”) x 75 feet.

Roll size	Theoretical Coverage
12" by 75 ft (30.48 cm x 22.86 m)	75 ft^2 (7 m^2)
16" by 75 ft (40.64 cm x 22.86 m)	100 ft^2 (9.3 m^2)
18" by 75 ft (45.72 cm x 22.86 m)	112.5 ft^2 (10.45 m^2)

3M™ Self-Adhered Through Wall Flashing Membrane 3015TWF

Storage	Store under normal conditions of 60° to 80°F (16° to 27°C) and 40 to 60% relative humidity in the original carton.
Shelf Life	To obtain best performance, use this product within 24months from date of manufacture.
Technical Information	The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.
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Self-Adhered Air and Vapor Barrier Membrane 3015

Building Envelope Solutions
Statements of Material Compatibility

Technical Bulletin 3015-0001 **May, 2013**

Introduction

3M™ Self-Adhered Air and Vapor Barrier Membrane 3015 features an aggressive, non-staining, high tack acrylic pressure sensitive adhesive that does not require the use of a primer on most construction surfaces.

The membrane is compatible with many building sealants: There is no adverse reaction with synthetic rubber, butyl, polyurethane, silicone and silane terminated hybrid sealants.

3M Self-Adhered Air and Vapor Barrier Membrane 3015 has excellent adhesion to concrete, concrete block, anodized aluminum, galvanized metal, plywood, extruded polystyrene and most exterior gypsum sheathing without the use of primer.

Limitations

3M Self-Adhered Air and Vapor Barrier Membrane 3015 is not compatible with flexible vinyl membranes such as PVC roofing membrane. However, rigid PVC pipe or window trim are acceptable substrates.

3M Self-Adhered Air and Vapor Barrier Membrane 3015 bonds well to the smooth side of OSB panels but a primer may be necessary if the membrane is being applied to the waffle side of the board.

3M Self-Adhered Air and Vapor Barrier Membrane 3015 bonds well with no primers or additional adhesives to Georgia Pacific DensGlass® Sheathing, USG Securock® Sheathing and National Gypsum Gold Bond® eXP® Extended Exposure. A primer may be necessary when bonding to CertainTeed GlasRoc® Sheathing.

3M Self-Adhered Air and Vapor Barrier Membrane 3015 will discolor when placed in contact with any self adhered membrane with a PE (polyethylene) backing and bitumen adhesive. Accelerated aging testing indicates the bond between the products is not adversely affected by the discoloration. No discoloration occurs between the foil surface of a foil backed bitumen based membrane and 3M 3015, although there is discoloration at the end of the overlap where the bitumen adhesive is directly exposed to 3M 3015 membrane.

3M Self-Adhered Air and Vapor Barrier Membrane 3015 has been shown to bond well to certain types of EPDM or TPO membranes. See Technical Bulletin 3015-0002, Adhesion to Roofing Membranes, for more information. Samples should be submitted for evaluation for specific projects.

Primer

If required, an installer has several options for primers that are compatible with 3M™ Self-Adhered Air and Vapor Barrier Membrane 3015:

3M™ Scotch-Weld™ Holdfast 70 is packaged in pressurized cylinders and is very convenient when large surface areas need to be covered.

3M™ Hi-Strength 90 or 3M™ Hi-Strength 94 ET Spray Adhesive are packaged in aerosol cans and are convenient for small areas.

3M™ Fastbond™ Contact Adhesive 30NF is packaged in pressurized cylinders, cans or pails for use when a waterbased primer is desired.

For additional information, please contact 1-800-362-3550.

3M™ Self-Adhered Air and Vapor Barrier Membrane 3015

Building Envelope Solutions

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3M™ Air and Vapor Barrier 3015

Building Envelope Solutions

Compatibility with Roofing Membranes

Technical Bulletin 3015-0002 **February 2014**

3M Air and Vapor Barrier 3015 has been tested for compatibility to determine if there would be any adverse effects and/or reactions to the membrane products listed. Samples of 3M™ Air and Vapor Barrier 3015 were adhered to the subject roofing membranes, allowed to dwell for at least 24 hours, and then heat aged at conditions varying from 30 days @ 49°C (120°F), to one week @ 80°C (176°F). ASTM D3330 Peel Adhesion (90 Degree peel) was then performed to compare original to aged properties and determine if the adhesive bond of membrane was stable or adversely affected.

Testing of 3M™ Air and Vapor Barrier 3015 on Roofing Membranes

Material Tested:	3M™ Air and Vapor Barrier 3015
Carlisle® Syntec Systems	
Sure-Weld® TPO Membrane	No effects
Sure-Seal® EPDM Membrane	No effects
Sure-Flex™ White PVC Membrane	Not Recommended
Firestone Building Products	
RubberGard™ LS FR EPDM Membrane	No effects
Johns Manville	
JM EPDM R 75 mil	No effects
Sika®	
Sarnavap Self-Adhered	No effects

For additional information, please contact 1-800-362-3550.

3M™ Air and Vapor Barrier 3015
Building Envelope Solutions
Compatibility with Roofing Membranes

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3M™ Air and Vapor Barrier 3015
Building Envelope Solutions
Mock Wall Performance

Technical Bulletin 3015-0006 **May 2014**

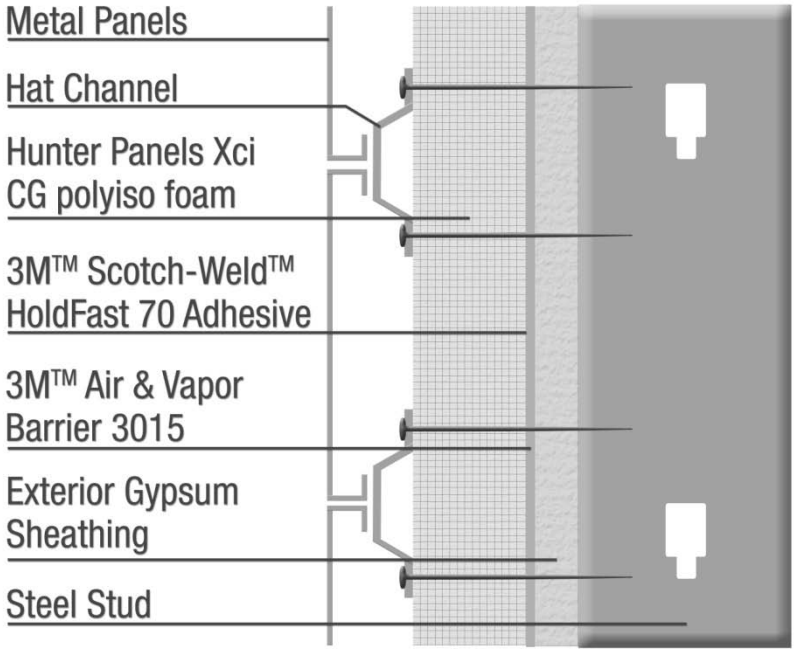
3M™ Air and Vapor Barrier 3015 has a unique multilayer elastomeric film backing that provides many advantages like translucency that allows installers to see stud lines for installation of masonry ties, furring or framing, and verification of substrate preparation for inspectors or consultants. The film is also receptive to sealing with difficult bonding materials like silicone sealants.

This product also features high elongation and aggressive adhesion which make it a great exterior building wrap because it allows the structure its natural movement while retaining an airtight seal. To show this we subjected a test wall (building mock up) to ASTM E283 Air Leakage at 6.24 psf (300 Pa) pressure differential, both before and after a series of water penetration, vertical interstory movement, and thermal cycle conditioning.

The testing was done in conjunction with the construction of a mock wall for the 3M Center Laboratory Building 280. A mock up of the design including both glass curtain wall and 3M's NFPA 285 approved metal panel finish wall was built at Architectural Testing Inc., in West Palm Beach, FL.

3M™ Air and Vapor Barrier 3015 was installed in an assembly consisting of steel stud framing (no interior insulation), 5/8" thick Type X exterior gypsum sheathing, 3M 3015, 3M™ Scotch-Weld™ HoldFast 70 spray adhesive, Hunter Panels Xci CG polyisocyanurate foam board insulation (3" thick), and metal panels attached to hat channels installed on top of the insulation, as seen in Figure 1 below. The assembly conforms to 3M's NFPA 285 passing system, as outlined in 3M Technical Bulletin 3015-0005. This wall was connected to a curtain wall system designed and built by Harmon, Inc.

Figure 1 – Cross section diagram of test wall



3M™ Air and Vapor Barrier 3015

Building Envelope Solutions

Mock Wall Performance

The entire assembly was subjected to the following test procedure:

Step	Condition	Method	Specification	Result
1	Preload	ASTM E330 positive differential (inward acting) of 9.0 psf (431 Pa) [50% design load] for 10 s.	No visible signs of failure	Pass
2	Static Air Infiltration	ASTM E283 – positive static pressure differential of 6.24 psf (300 Pa)	0.06 cfm/ft² (0.3 L/s·m²) leakage maximum	0.02 cfm/ft² (0.1 L/s·m²)
3	Static Water Penetration	ASTM E331 – 5 gal/hr/ft² at a pressure differential of 12.0 psf (575 Pa) for 15 minutes	No uncontrolled water leakage	Pass
4	Dynamic Water Penetration	AAMA 501.1 – 5 gal/hr/ft² at a dynamic air stream equivalent to static pressure of 12.0 psf (575 Pa) for 15 minutes	No uncontrolled water leakage	Pass
5	Uniform Structural Design Load	ASTM E330 – 10s at each pressure differential: +9.0 psf (431 Pa) [50% of Positive Design Load] +18.0 psf (863 Pa) [100% of Positive Design Load] -16.5 psf (-791 Pa) [50% of Negative Design Load] -33.0 psf (-1581 Pa) [100% of Negative Design Load]	Deflection normal to Wall Plane: L/175 for spans up to 162" L/240 + 1/4" for spans greater than 162"	Pass
6	Repeat Tests 1, 2, 3, and 4 above			
7	Interstory Differential Vertical Movement	AAMA 501.7 – 5/8" down, then back to zero, then 5/8" up then back to zero (one cycle). Three complete cycles.	No failure or gross permanent distortion	Pass
8	Repeat Tests 1, 2, 3, and 4 above			
9	Thermal Cycles	AAMA 501.5 – wall interior temperature maintained at 75 ± 5°F (23.8 ± 2.7°C). Down to -14°F (-25.5°C) for 2 hrs after establishing equilibrium, followed by up to +180°F (+82°C) for 2 hrs after establishing equilibrium (one cycle). Three cycles.	All components withstand thermal movements without failure	Pass
10	Condensation Evaluation	Conditions of -14°F exterior temperature, 70°F (21°C) & 35% relative humidity interior temperature, held for 2 hours after reaching equilibrium.	No thermocouples measure lower than 41°F (dew point) on interior wall	Pass
11	Repeat Tests 1, 2, 3, and 4 above			
12	Uniform Structural Over Load Test	ASTM E330 – 10s at each pressure differential: +13.5 psf (647 Pa) [75% of Positive Design Load] +27.0 psf (1294 Pa) [150% of Positive Design Load] -24.8 psf (-1188 Pa) [75% of Negative Design Load] -49.5 psf (-2372 Pa) [150% of Negative Design Load]	Net permanent set shall not exceed 1/16"	Pass
13	Static Air Infiltration	ASTM E283 – positive static pressure differential of 6.24 psf (300 Pa)	0.06 cfm/ft² (0.3 L/s·m²) leakage maximum	0.03 cfm/ft² (0.15 L/s·m²)

3M™ Air and Vapor Barrier 3015 withstands the rigors expected for the building performance, maintaining its airtight and watertight seal throughout all of the tested conditions.

For additional information, please contact your local 3M representative.

3M™ Air and Vapor Barrier 3015
Building Envelope Solutions
Mock Wall Performance

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Air and Vapor Barrier 3015
Building Envelope Solutions
NFPA® 285 Wall Assemblies

Technical Bulletin 3015-0005 **February, 2014**

Section 2603.5.5 of the International Building Code (2006, 2009 and 2012 editions) requires that exterior wall systems that incorporate foam plastic insulation shall meet the requirements of NFPA® 285, "Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies Containing Combustible Components"

Additionally, Section 1403.5 of the International Building Code (2012 edition) requires that exterior walls systems greater than 40 feet above grade plane on buildings of Type I, II, III or IV construction that incorporate combustible water-resistive barriers shall also meet the requirements of NFPA® 285.

3M has performed NFPA® 285 fire tests on a number of exterior wall system assemblies that incorporate 3M™ Air and Vapor Barrier 3015 as the weather resistive barrier (WRB) applied to the base wall. The summary of wall components that have been determined to meet the performance requirements of NFPA® 285 is listed below in Table 1.

Table 1 – Walls with 3M™ Air and Vapor Barrier 3015

Wall Component	Materials
Base Wall System – Use either 1, 2, 3 or 4	1 – Concrete Wall. 2 – Concrete Masonry Wall. 3 – Standard clay brick wall without other combustible materials. 4 – Steel Stud Framed Wall (24" o.c. max.) – Minimum 20-gauge, 3-5/8" studs, with lateral bracing every 4 ft. vertically, with a minimum of 1 layer of 5/8" Type X gypsum wallboard on the interior face of studs.
Floorline Firestopping	With base wall system No. 4 above, 4 lb/ft³ mineral wool in each stud cavity and at each floorline – friction fit or attached with Z-clips or equivalent.
Cavity Insulation – Use either 1 or 2	1 – None. 2 – Any noncombustible insulation (faced or unfaced).
Exterior Sheathing – Use either 1 or 2	1 – 1/2 inch thick, exterior type gypsum sheathing. 2 – 5/8 inch thick, Type X, exterior type gypsum sheathing.
Weather resistive barrier applied to exterior sheathing	3M™ Air and Vapor Barrier 3015 **Note:** Air/Vapor barrier to be installed in accordance with manufacturers recommended installation instructions. As an option, use 3M™ Scotch-Weld™ HoldFast 70 spray adhesive to provide temporary attachment of the exterior insulation.
Exterior Insulation – Use either 1 or 2	1 – Dow Thermax™ Brand Rigid Insulation – total thickness to be a minimum 5/8 inch to a maximum 3 inch thickness. 2 – Hunter Panels Xci CG Insulation – total thickness to be a minimum of 5/8 inch to a maximum of 3.5 inch thickness.

Table 1 – Walls with 3M™ Air and Vapor Barrier 3015 *(continued)*

Wall Component	Materials
Flashing of exterior insulation joints	Optional – Flash all exterior insulation joints and veneer tie penetrations with acrylic, asphalt or butyl-based flashing tape or equivalent – maximum 4 inch wide (AAMA 711 or ICC-ES AC 148 complying). **NOTE:** Optional – Spray primer to aid in adhesion applied at a maximum of 5 inches wide.
Exterior Veneer – Use either 1, 2, 3, 4, 5, 6, 7, 8, 9, or 10	1 – Brick – Brick veneer anchors – standard types – installed maximum 24 inches o.c. vertically on each stud. – Maximum 2-inch air gap between exterior insulation and brick, – Standard nominal 4-inch thick, clay brick 2 – Stucco – Minimum 3/4 inch thick, exterior cement plaster and lath. A secondary water-resistive barrier can be installed between the exterior insulation and the lath. The secondary water-resistive barrier shall not be full coverage asphalt or butyl-based self-adhered membranes. 3 – Stone veneer – Minimum 2-inch thick, Limestone or natural stone veneer or minimum 1-1/2 inch thick cast artificial stone veneer. Any standard installation technique can be used. 4 – Terracotta cladding – Use any terracotta cladding system in which terracotta is minimum 1-1/4 inch thick. Any standard installation technique can be used. 5 – Metal veneer such as steel, aluminum, copper, etc. Any standard installation technique can be used. 6 – Fiber cement siding or fiber cement panels – Any standard installation technique can be used. 7 – MCM System – Use any Metal Composite Panel that has been successfully tested by the panel manufacturer via NFPA® 285 test method. 8 – Concrete Masonry Units (CMU) – Minimum 4 inch thick CMU, with 2 inch maximum air gap between exterior insulation and CMU. 9 – Concrete Panels – Minimum 2 inch thick panel, with a 2 inch maximum air gap between exterior insulation and concrete panel. 10 – Insulated Concrete Sandwich Panels – Minimum 2-inch thick outer and inner faces. Maximum 2 inch air gap between inner face and wall system. **NOTE:** All exterior veneer/cladding system must be installed in accordance with manufacturers recommended installation instructions and with applicable building codes.
Flashing of window, door and other exterior wall penetrations	As an option, flash window, door and other exterior penetrations with limited amounts of asphalt, acrylic or butyl-based flashing tape – maximum 12 inch width.

3M™ Air and Vapor Barrier 3015

Building Envelope Solutions
NFPA® 285 Wall Assemblies

For Additional Information

For additional information, please contact 1-800-362-3550.

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