Rainscreen Technology and Mortar Deflection

For moisture protection, one name stands out.

ADVANCED
Building Products Inc.

www.advancedflashing.com

Keep masonry walls dry and mold-free for life with MortairVent®

featuring RainScreen Technology

The distinctive look and durability of brick and stone home cladding systems have made them extremely popular. But they're not waterproof. Hairline cracks can form in the mortar joints—especially in areas with frequent freeze-thaw cycles— allowing wind-driven rain to penetrate the

mortar and collect in the wall. Once the moisture gets in, it has nowhere to go, creating the perfect environment for toxic mold growth. That's why Advanced Building Products has created Mortairvent®, a two-ply mortar deflection and ventilation system specifically designed for use with manufactured stone, stucco, EIFS and brick.

Innovative RainScreen Technology creates a ventilation cavity between the vapor barrier and exterior wall. The blue polymer-core mesh creates the airspace. The filter fabric blocks mortar droppings from seeping into this newly formed cavity, while allowing moisture to pass through. This combination of drainage and ventilation eliminates the threat of toxic mold, come rain or come shine, for generations to come.

	United States	Canada
Core Material	Polypropylene	Polypropylene
Thickness	.25 inches	10mm
Width (less flap)	39 inches	39 inches
Width (with flap)	43 inches	43 inches
Length	61.5 feet	40 feet
Coverage Area	200 square feet	130 square feet

THE TOXIC MOLD PROBLEM

What the Experts Say

- The 2006 Ontario Building Code (OBC) refers to the need for a drainage space in Section 9.27 Cladding and Appendix A 9.27.2. Also see Appendix A9.27.31 "Sheathing Membrane" for a more specific description of the "drainage space" or "capillary break". Similar references are included in the recent NBC and provincial codes.

- Building Science experts involved in analyzing failed walls have recognized the need to provide for drying by creating a capillary break.

- The CCMC listings for sheathing membranes includes the statement "Breathable House Wraps perform better if there is an air space between them and the cladding." These CCMC listings include the requirement for a 10mm space.

- Ontario Association of Architects, OAA Rain Penetration Control Guide. This guide discusses many wall cladding systems that are considered rain screens. The report recommends continuous drying of the wall system.

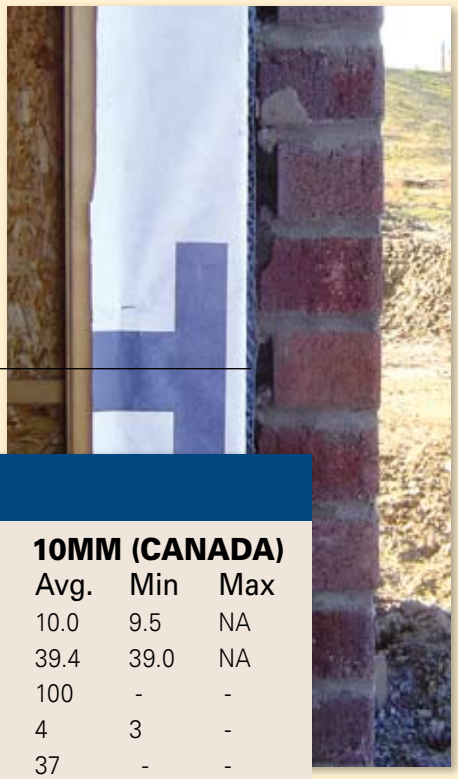
mortairvent®

Mortar Deflection and Ventilation System

THE MORTAIRVENT® SOLUTION

The goal for trapped moisture is to drain not remain. With this thought in mind it is important to use RainScreen technology when dealing with stucco, manufactured stone, brick and EIFS systems. By installing the Mortairvent® two-ply system, a ventilation cavity is created between the house wrap and the exterior cladding. The blue polymer mesh creates an airspace/ capillary break, while the gray filter fabric acts as a mortar deflection as seen in figure #1. This combination of drainage and ventilation will not allow moisture to remain between the sheathing and exterior wall system.

Figure #1 *It is very important that a rainscreen come with a fabric adhered to the polypropylene to act as a mortar deflection. The absence of this fabric will cause the rainscreen to become clogged with mortar, making the polypropylene material almost useless.*



PRODUCT SPECIFICATIONS

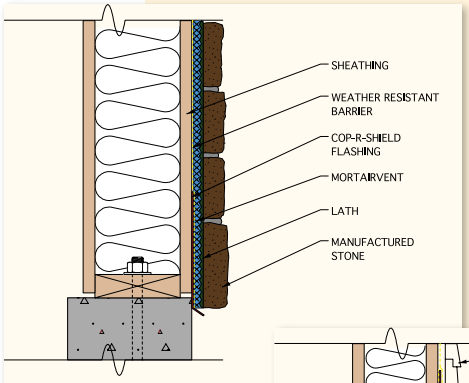
		6MM (US)			10MM (CANADA)		
	ASTM	Avg.	Min	Max	Avg.	Min	Max
Core Weight (oz/sqy)	D-5261	7.0	6.6	NA	10.0	9.5	NA
Core Width (in)	D-3775	39.4	39.0	NA	39.4	39.0	NA
Fabric Weight (gr/sqm)	D-5261	100	-	-	100	-	-
Fabric Overlap (in)		4	3	-	4	3	-
Fabric Tensile MD (lbs/in)	D-6818	37	-	-	37	-	-
Fabric Tensile XMD (lbs/in)	D-6818	31	-	-	31	-	-
Fabric Thickness	D-6525	0.02			0.02		
Composite Thickness (in)	D-6525	0.27	0.26	.28	043	0.40	.47
Roll Length (ft)		NA	61.5	-	NA	40.3	-
Roll Area (sqf)		NA	200	-	NA	130	-
Compression Strength		To be established			To be established		
Free Volume(%)	Calculated	-	96		-	96	
Core Thickness (in)	Calculated	.25			.41		

Available to meet Canadian 10mm Rainscreen code requirements.

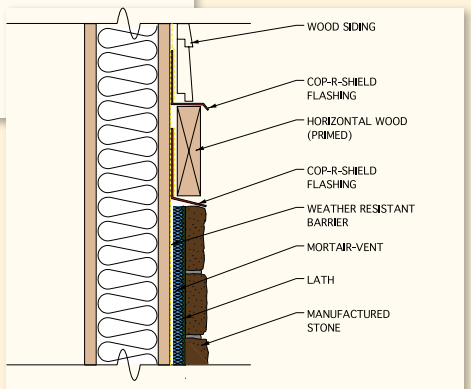
INSTALLATION INSTRUCTIONS FOR MANUFACTURED STONE

Step 1
Apply a weather resistant barrier over the wall sheathing.

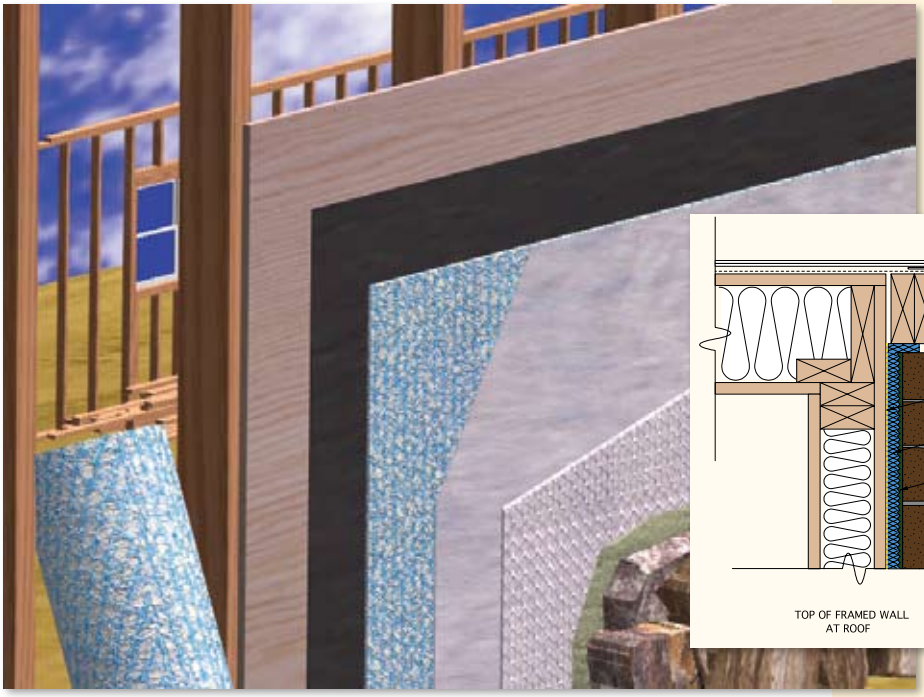
Step 2
Install Mortairvent® after windows and doors have been properly installed and flashed using Advanced Wind-O-Wrap. Start at the base of the wall and unroll Mortairvent® from left to right with the flap down and the matrix side against the weather resistant barrier. On the bottom course only, fold the flap around the matrix and tuck it against the weather resistant barrier. This will ensure that insects cannot enter the air channel. Nail or staple every three square feet.



SHEATHING AND WOOD STUD FOUNDATION WALL



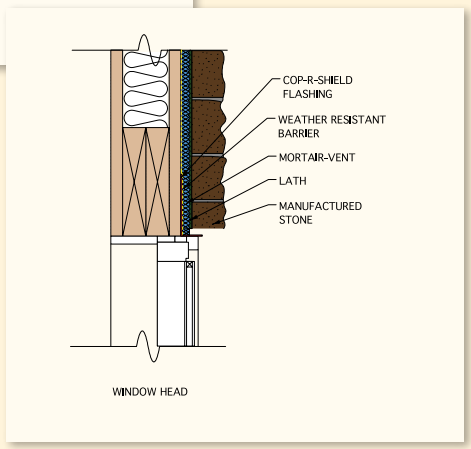
SHEATHING WOOD STUDS HORIZONTAL BASE FLASHING



TOP OF FRAMED WALL AT ROOF

Step 3
Unroll the next course in the same manner as the previous course. Butt the edges of the new roll to the existing one in place without overlapping. Pull the flap over the previous (shingle style) and staple.

Step 4
Apply metal lathe and cladding over Mortairvent® per manufacturers' installation instructions.



WINDOW HEAD

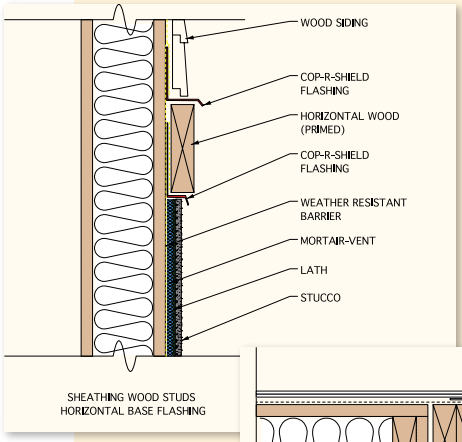
INSTALLATION INSTRUCTIONS FOR STUCCO APPLICATIONS

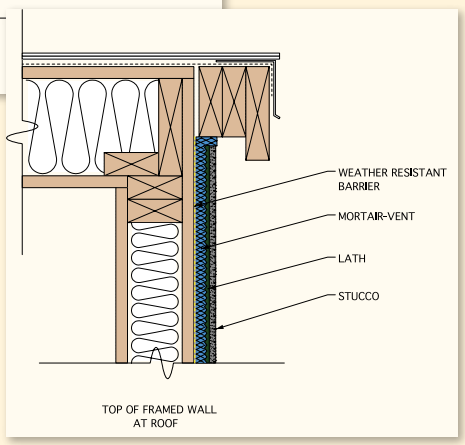
Step 1

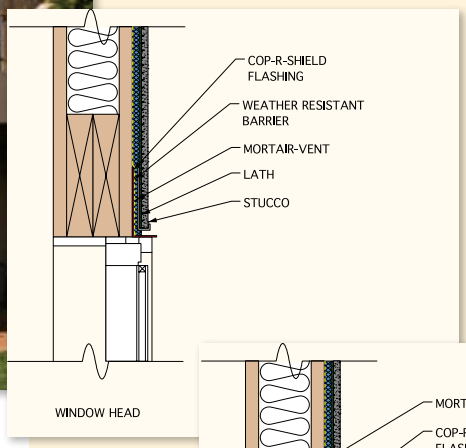
Apply a weather resistant barrier over the wall sheathing. Note: Some regions may require two weather resistant barriers for stucco applications. Check local codes for more information.

Step 2

Install Mortairvent® after windows and doors have been properly installed and flashed using Advanced Wind-O-Wrap. Start at the base of the wall and unroll Mortairvent® from left to right with the flap down and the matrix side against the weather resistant barrier. On the bottom course only, fold the flap around the matrix and tuck it against the water resistive barrier. This will ensure that insects cannot enter the air channel. Nail or staple every three square feet.







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Unroll the next course in the same manner as the previous course. Butt the edges of the new roll to the existing one in place without overlapping. Pull the flap over the previous (shingle style) and staple.

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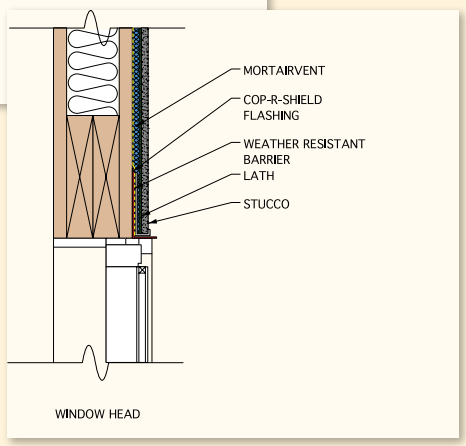


HIGH PROFILE PROJECTS THAT USED THE MORTAR BREAK® SYSTEM

Gilette Stadium (New England Patriots)

Great American Ballpark (Cincinnati Reds)

M&T Stadium (Baltimore Ravens)

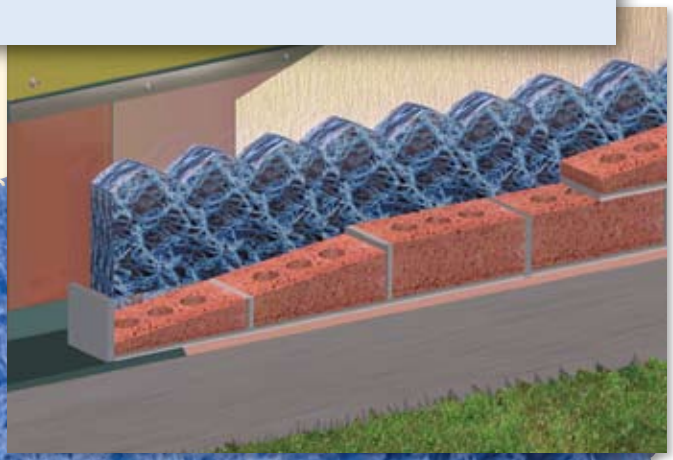
Boston College

Indiana University

Texas A&M

Cornell University

And many more...



MORTAR BREAK® & MORTAR BREAK II®

Over 13 years ago, Advanced Building Products saw the need for a less labor intensive way to keep head joints free from mortar droppings. With this thought in mind, we introduced the Mortar Break® system. Since its inception, Mortar Break® has been the cost efficient way to keep head joints free from mortar droppings, while saving significant labor costs during the installation phase. A few years ago the Mortar Break® line was completely re-engineered and is now made from recycled materials. This unique and proven effective mortar deflection device qualifies for L.E.E.D. rating system credits.

BASIC USE:

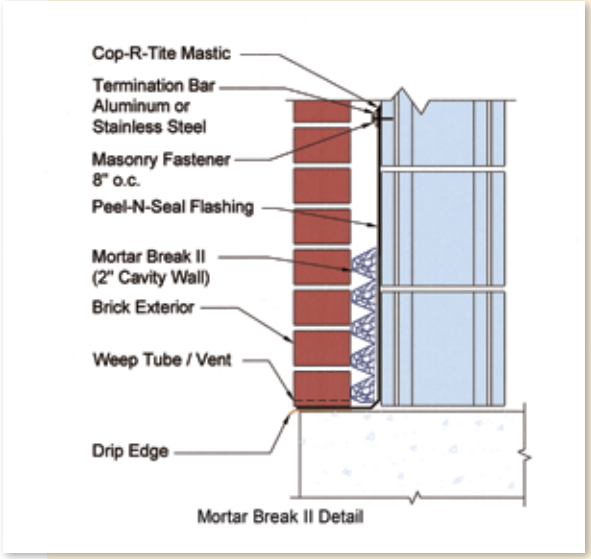
- For use at all flashing locations.
- The polymer core geomatrix dimpled design allows mortar to break up on multiple levels, allowing moisture to seep down through any mortar droppings and out the cell vents placed in the head joints.
- Mortar Break®, used with properly installed flashing and weep systems along with good mortar applying techniques, will ensure the performance of a well designed masonry wall.

BENEFITS:

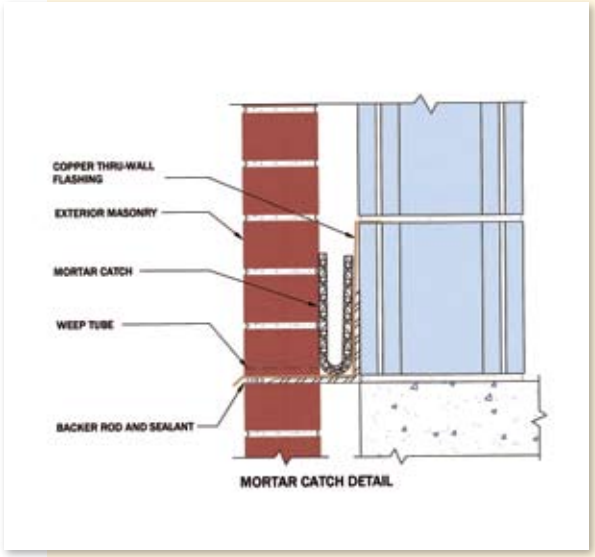
- Breaks up and deflects mortar droppings away from weep holes.
- Allows moisture in the cavity to flow down through the geomatrix design and out through Mortar Maze Cell Vents.
- Easy and economical to install (up to 50% labor savings over conventional methods).
- Narrower dimpled design does not allow mortar droppings to bridge the cavity.

U.S. GREEN BUILDING COUNCIL MEMBER

Above picture is a wall failure due to excessive mortar build up in a cavity wall.



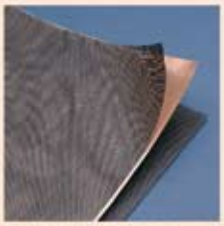
Mortar Break II Detail



MORTAR CATCH DETAIL

	Mortar Break®	Mortar Break II®	Mortar Catch
Thickness	.80"	1.5"	.40"
Roll Dimensions	10" x 50' 13" x 50' 16" x 50'	10" x 35'	10" x 100' 20" x 100'
Rolls Per Box	4 3 2	4	4 2
Recommended Cavity	1" Cavity	2" Cavity	Over 2"

Advanced Building Products also offers a complete line of Masonry Flashing and Accessories, including:


COPPER FABRIC FLASHING


COP-R-KRAFT DUPLEX


COPPER SEALTITE 2000

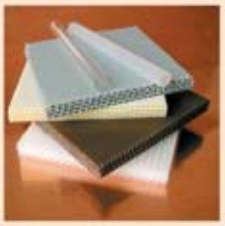

COP-R-CORNER

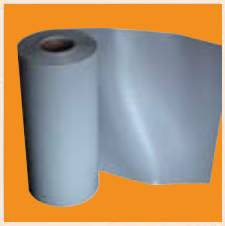

PEEL-N-SEAL


COP-R-KRAFT


COP-R-SHIELD


GROUT CATCH


MORTAR MAZE CELL VENTS


GRAY SEAL

In our many years of servicing the masonry construction industry, Advanced Building Products has earned a reputation for innovative solutions of exceptional quality.

To learn more about any of our outstanding products, visit www.advancedflashing.com

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