



ULTRA AIR BARRIER wall system



Synergy at Work Performance That Exceeds the Sum of Its Parts



The Ultra Air Barrier Wall System from Dow is synergy at work. Using STYROFOAM™ Brand CAVITYMATE™ Ultra Insulation and GREAT STUFF PRO™ Gaps & Cracks Insulating Foam Sealant* together in the Ultra Air Barrier Wall System provides designers a simple solution for exceptional long-term thermal insulating performance and excellent air/vapor barrier capability in brick and block walls. With industry-proven products combined to deliver an enhanced system value, Ultra Air Barrier Wall System offers the inherent benefits of both AND meets model energy code requirements in one convenient package.

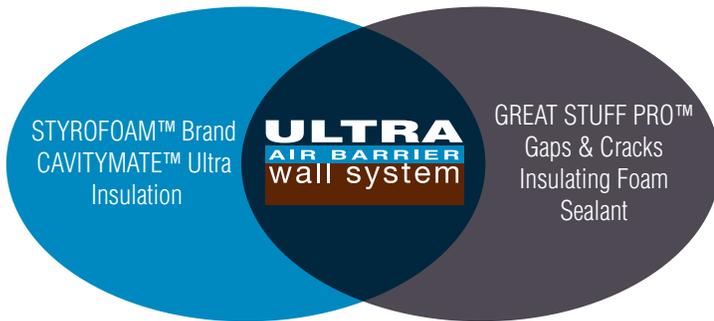
Exceeding the sum of its parts: STYROFOAM™ Brand CAVITYMATE™ Ultra Insulation and GREAT STUFF PRO™ Gaps & Cracks Insulating Foam Sealant – two great products from Dow combine to maximize benefits in the Ultra Air Barrier Wall System.



1+1=3 with the Ultra Air Barrier Wall System

Model energy codes – ASHRAE 90.1 “Energy Standard for Buildings Except Low-Rise Residential Buildings” and/or the International Energy Conservation Code (IECC) – recognize the need for both continuous insulation (ci) and air sealing. In fact, continuous insulation is required in the majority of climate zones and recent code changes now make air sealing mandatory. Designers are challenged to come up with approaches that not only meet these requirements, but can be easily and economically delivered in the field.

The Ultra Air Barrier Wall System delivers the solution: combining the proven insulating power of STYROFOAM™ Brand CAVITYMATE™ Ultra Insulation and the exceptional sealing capabilities of GREAT STUFF PRO™ Gaps & Cracks Insulating Foam Sealant.* The design community has trusted these two products for years to provide reliable performance. Now, used together, designers and contractors get the best of both – a proven, easy-to-install and economical system that delivers a continuous blanket of thermal insulating performance AND an air/vapor barrier in brick and block cavity walls with fewer installation steps than standard construction methods.



Ultra Wall System at a Glance

- One solution for continuous insulation and an air barrier
- Delivers exceptional long-term thermal performance: R-5.6 per inch
- Meets code requirements for continuous insulation AND air barriers
- Meets ASTM E2357 air leakage testing
- Approved air barrier assembly by the Air Barrier Association of American (ABAA)
- Outperforms other systems in high moisture cavity wall environments
- Compatible with a range of Dow complementary products
- Sustainable long-term performance
- Contributes to LEED® points
- Simple to detail for easy, yet high-quality, field installation
- Industry-familiar products with proven performance and installer confidence

A Systematic Approach

STYROFOAM™ Brand CAVITYMATE™ Ultra Insulation	GREAT STUFF PRO™ Gaps & Cracks Insulating Foam Sealant
<ul style="list-style-type: none"> • High R-value of 5.6 per inch¹, the highest of all polystyrene foam insulation products • Long-term performance; resists moisture over time and comes with 50-year thermal warranty² • Consistent thickness; delivers stated thermal performance and optimizes cavity air space effectiveness • Available in thicknesses up to 3" to deliver R-16.8 • Sustainable: Cradle to Cradle® certification • Easy to detail (e.g., uses common building practices, tools and equipment) • Versatile; use in load-bearing and non-load-bearing walls and in block-backed cavity wall applications 	<ul style="list-style-type: none"> • Ideal for gaps and joints up to 3" by expanding to form airtight and water-resistant seal that repels and deflects water • Bonds effectively to STYROFOAM™ Brand CAVITYMATE™ Ultra Insulation, masonry, metal, glass, wood and most plastics • Quick cure time (tack-free in 10-20 minutes, trim within 30 minutes)³ • Closed-cell foam forms a water-resistant outer skin when cured • Foam elasticity allows for movement/shifting within a system from winter to summer • PRO Series Foam Dispensing Guns maximize yield and installation consistency, and allow up to 30-day restartability • Cost-effective: 24-oz can equivalent to up to 22 quart tubes of caulk; 30-oz can equivalent to up to 33 quart tubes of caulk⁴

¹Aged R-value at 75°F mean temperature. R means resistance to heat flow. The higher the R-value, the greater the insulating power.

²In the United States, a 50-year thermal limited warranty is available on STYROFOAM™ Brand Insulation products 1.5" and greater. Warranties are available as described at www.dbswarranties.com.

³Actual cure time will depend on temperature, relative humidity and size of foam bead Brand.

⁴Based on estimated yield under ideal conditions using gun foam, 3/8" bead.

Ultra Air Barrier Wall System – Making Life Easier

The Ultra Air Barrier Wall System has the designer in mind. Using well-recognized and familiar products, you can start detailing and specifying this system quickly and economically. The Ultra Air Barrier Wall System delivers predictable and reliable thermal and air/vapor barrier management using a system design that simplifies construction and is easy to install.

The system's main component, STYROFOAM™ Brand CAVITYMATE™ Ultra Insulation, is specifically designed for use in wet cavity wall environments. Using patented carbon black materials, the foam's closed-cell structure delivers long-term thermal performance, durability and moisture resistance. Available in thicknesses up to 3" to meet the required R-value and in special 15-3/4" widths with square edges on all four sides, the insulation easily fits between brick ties to wrap the entire wall in continuous insulation and optimize cavity air space effectiveness. Manufactured by Dow to provide consistent and reliable performance in design and use, STYROFOAM™ Brand CAVITYMATE™ Ultra Insulation provides long-term thermal performance and optimizes cavity air space effectiveness. Designers have increased confidence that what they expect from the design of their cavity wall performance will be effectively delivered after installation.

GREAT STUFF PRO™ Gaps & Cracks Insulating Foam Sealant works in tandem with the insulation to provide the air barrier and make installation a winner. Used between the board joints, around penetrations and for holding the insulation in place on the underlying block wall, the minimal-expanding, single-component polyurethane foam is also easy to use in the field. It forms an airtight and water-resistant bond to most substrates. Its closed-cell properties provide water resistance when cured, while its cured elasticity allows for movement and shifting within the wall system design without compromise to its performance year round. To help ensure installation consistency, contractors can use the PRO Series Foam Dispensing Gun for easy, one-hand application and pinpoint flow control.

The Ultra Air Barrier Wall System works seamlessly with other proven brands from Dow's extensive portfolio of building solutions – brands from a company trusted for quality and reliability. For example, WEATHERMATE™ Straight Flashing can be used at the foundation and windows of the wall for improved moisture resistance. WEATHERMATE™ Straight Flashing helps protect the wall assembly from moisture entry at windows and doors, while delivering outstanding adhesion and maximum quality and performance over a wide temperature range.



STYROFOAM™ Brand CAVITYMATE™ Ultra Insulation Boards are secured between wall ties with GREAT STUFF PRO™ Gaps & Cracks Insulating Foam Sealant, which also acts as an air/vapor barrier between board edges.

1+1=3: Continuous Insulation + Air Barrier = One Convenient Solution

The Ultra Air Barrier Wall System delivers the confidence that your design will meet model energy codes and other green building requirements for both continuous insulation (ci) and air barriers. The value of continuous insulation in minimizing thermal bridging and helping improve thermal performance of the wall assembly is now widely recognized. Required in the majority of climate zones, it is quickly becoming a standard building practice, especially as codes move to higher energy-efficient values for the building envelope.

Techniques and strategies to address air sealing are still evolving. However, the Ultra Air Barrier Wall System makes compliance easy. For example, one prescriptive option is to ensure that all individual air barrier materials have a maximum air permeance no greater than 0.004 cfm/ft², with caulked or sealed joints, penetrations, etc. Another option requires that the assembly of materials limits air leakage to no greater than 0.004 cfm/ft². The Ultra Air Barrier Wall System has been tested using ASTM E2357 "Standard Test Method for Determining Air Leakage of Air Barrier Assemblies" and the results successfully passed all current prescriptive requirements for assembly air barrier requirements. The system is also approved by the Air Barrier Association of America (ABAA) as an air barrier assembly.

1+1=3: Designer + Dow = Confidence

Let Dow Building Solutions help you. Since introducing the STYROFOAM™ brand in 1946, Dow has been a recognized leader in foam insulation and other complementary products and accessories, such as GREAT STUFF PRO™ Gaps & Cracks Insulating Foam Sealant and WEATHERMATE™ Straight Flashing.

Dow has the supportive tools – such as specifications, CAD details and installation procedures – that help make the system process easier. Check them out at www.ultrawallsystem.com.



1+1=3: The Ultra Air Barrier Wall System Value Exceeds the Sum of Its Parts

Let the combination of STYROFOAM™ Brand CAVITYMATE™ Ultra Insulation and GREAT STUFF PRO™ Gaps & Cracks Insulating Foam Sealant, as well as other Dow products, work for you and deliver a winner. The Ultra Air Barrier Wall System delivers an easy-to-install, cost-effective solution to meet code requirements for continuous insulation and air barriers in one simple solution.

1+1=3: when STYROFOAM™ Brand CAVITYMATE™ Ultra Insulation + GREAT STUFF PRO™ Gaps & Cracks Insulating Foam = the Ultra Air Barrier Wall System.



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STYROFOAM™ Brand Extruded Polystyrene Foam Insulation

CAUTION: This product is combustible and shall only be used as specified by the local building code with respect to flame spread classification and to the use of a suitable thermal barrier. For more information, consult Material Safety Data Sheet (MSDS), call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-989-636-4400.

WARNING: Rigid foam insulation does not constitute a working walkable surface or qualify as a fall protection product.

Dow Polyurethane Foam Insulation and Sealants

CAUTION: When cured, these products are combustible and will burn if exposed to open flame or sparks from high-energy sources. Do not expose to temperatures above 240°F. For more information, consult MSDS, call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-989-636-4400.

GREAT STUFF PRO™ Insulating Foam Sealants contain isocyanate and a flammable blowing agent. Read the label and MSDS carefully before use. Eliminate all sources of ignition before use. Wear long sleeves, gloves, and safety glasses or goggles. Provide adequate ventilation or wear proper respiratory protection. Contents under pressure.

GREAT STUFF PRO™ Gun Cleaner is flammable and contains acetone and propane. Read the label and MSDS carefully before use. Eliminate all sources of ignition before use. Wear gloves, and goggles or safety glasses. Provide adequate ventilation or wear proper respiratory protection. Contents under pressure.

Building and/or construction practices unrelated to building materials could greatly affect moisture and the potential for mold formation. No material supplier including Dow can give assurance that mold will not develop in any specific system.



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