



An Airtight Case

For GREAT STUFF™ Pro
Window & Door Insulating
Foam Sealant

Air infiltration is a big waste of energy. And with heating and cooling costs skyrocketing, it can be a big drain on a homeowner's heating and cooling budget. Installing energy-efficient windows and doors can greatly reduce this infiltration, but another area is often overlooked – around the window and door framework. Uninsulated or under-insulated framework significantly contributes to the home's total energy loss and customer dissatisfaction.

Close the Gap

Stop the loss by closing the gap between framework and rough openings with GREAT STUFF™ Pro Window & Door insulating foam sealant.

The proprietary low pressure-build* formulation of GREAT STUFF Pro Window & Door insulating foam sealant differentiates it from other polyurethane foams. Closing the gap with GREAT STUFF Pro Window & Door not only ensures a reduction in energy costs, it also helps:

- Enhance comfort
- Reduce condensation and water intrusion
- Seal air leakage
- Equalize pressure in the rough opening to the outside conditions
- Keep pests out
- Control intrusion of dust and exterior allergy irritants
- Reduce penetration of outdoor noise pollution

Increase the quality of your window and door installations with GREAT STUFF Pro Window & Door insulating foam sealant.



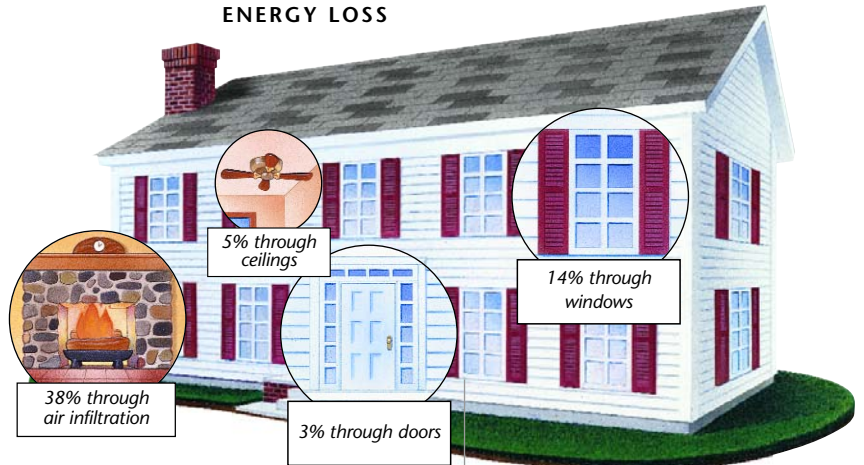


The Professional Choice

With GREAT STUFF™ Pro Window & Door insulating foam sealant, you will achieve a better window or door installation. GREAT STUFF Pro Window & Door prevents drafts, repels water and more, resulting in a higher-quality installation, improved home comfort and greater customer satisfaction.

- Exclusive, low pressure-build formulation at 0.08 psi (gun foam) per AAMA 812-04
- Minimal expansion

COMMON SOURCES OF ENERGY LOSS



- Proven not to distort or bow window or door frame when installed properly
- Remains pliable after installation
- Greater R-value than caulk
- Maximizes energy efficiency

*Air-sealing window and door frames with GREAT STUFF™ Pro Window & Door will help reduce the 38% of heat loss from air infiltration in a typical home – increasing the comfort and energy efficiency for years to come.***



Unlike fiberglass insulation, GREAT STUFF™ Pro Window & Door resists water intrusion and compresses easily as the frame expands and contracts, while still maintaining an adhesive bond.



Compressing fiberglass causes it to lose its insulating value. Stuffing fiberglass into the narrow, hard-to-fill gaps surrounding a window or door frame provides limited insulating value but a poor air seal.



IT PAYS TO COMPARISON SHOP

Fiberglass	GREAT STUFF™ Pro Window & Door
“Stuffed” into gap where it can settle and absorb moisture	Precisely sprayed into gap, creating bond to seal out air and reduce water intrusion
Does not expand	Expands to fill gap without distorting frame
Holds moisture	Repels/deflects water
Time-consuming to install	Installs in minutes
Provides some insulative value	Provides effective, long-term insulative value and provides an air barrier
Conforms to ASTM standards	Conforms to ASTM and AAMA standards

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**Estimated values from energy calculations

Proven Performance

GREAT STUFF™ Pro Window & Door insulating foam sealant has been proven to enhance the performance of windows and doors.

INDUSTRY RECOGNITION, TEST METHODS AND RESULTS

ASTM E2112 (Annex A)	Standard Practice for Installation of Exterior Windows, Doors and Skylights. [Conforms]
AAMA 812-04 (American Architectural Manufacturers Association)	Evaluated in accordance with the requirements in ASTM E2112 (Annex A), using Standard Practice for Assessment of Single Component Aerosol Expanding Foams for Sealing Rough Openings of Fenestration Installations. [Conforms to standard at 0.08 psi pressure-build (gun foam)]
ATI (Architectural Testing Inc.) (Air leakage and water penetration testing)	Report No. 54915.04-201-44. Evaluated in accordance with: <ul style="list-style-type: none"> • ASTM E283 Rate of Air Leakage Test [Air leakage <0.01 cfm/ft² at 6.24 psf pressure (or 50 mph wind speed) in 1 cm-wide gap] • ASTM E331 (Gap testing) Water Penetration Test of Exterior Windows [No water leakage at 12 psf negative pressure] • ASTM E547 Cyclic Method for Water Penetration Testing of Windows @ High and Low Air & High Water Test Pressure [No water leakage at 12 psf negative pressure]
ORNL (Oak Ridge National Laboratory)	ORNL/TM-2003/286. Document: Retrofit Best Practices Guide: <i>How to Save Energy When You Fix Up the Outside of Your Not-So-New House.</i> http://www.ornl.gov/sci/roofs+walls/facts/retrofitbestpractices/homeownerguide15b1.pdf (page 7)
CCMC (Canadian Construction Materials Centre) 13074-R (Durability evaluation)	Evaluated in compliance with the National Building Code of Canada (NBC) to measure air leakage before and after repeated water, thermal and high pressure cycling. [Conforms]

The U.S. Patent and Trademark Office recently awarded Patent Number 6,894,083 to Dow's exclusive formulation of a one-component, low pressure-build polyurethane foam.



1
The fully cured foam samples were inserted halfway into a beaker filled with purple dyed water.



2
Samples remained submerged for 24 hours.



3
Samples were removed and allowed to dry for seven additional days in a vertical position.



4
Samples were cut along a vertical cross section to assess the amount of absorption, wicking, moisture retention and foam shrinkage.

TEST 1: LATEX VS. POLYURETHANE FOAM Moisture Absorption Experiment

Aerosol foam was applied into separate 1-1/2" x 12" aluminum channels ... one filled with latex foam (white) and the other with GREAT STUFF™ Pro Window & Door

polyurethane insulating foam sealant (yellow). The foam samples were then allowed to cure for seven days.

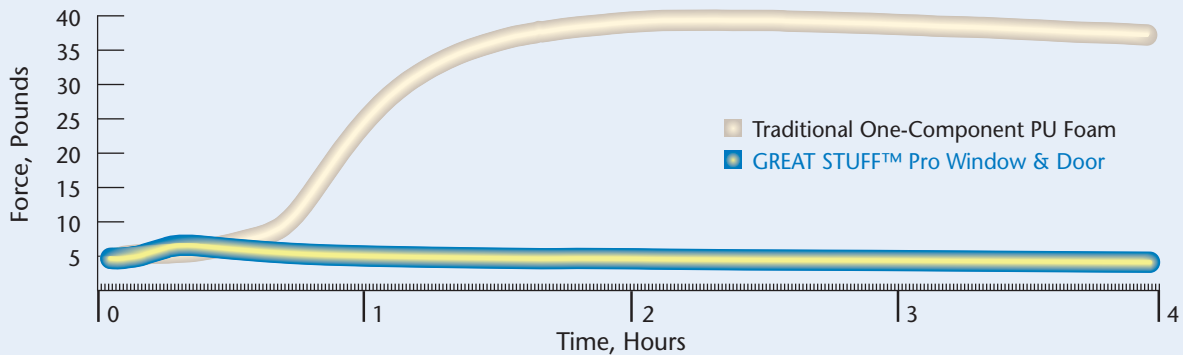
The GREAT STUFF Pro Window & Door yellow sample exhibited no signs of water absorption or foam disintegration. Although the exterior was clearly stained by the dye, the interior remained unaffected.

No sponging or wicking was observed. GREAT STUFF Pro Window & Door continued to hold its original shape and remained fully bonded to the aluminum channel. The cross-cut section clearly demonstrates the water resistance of GREAT STUFF Pro Window & Door foam. (See 4 above.)

TEST 2: HIGH PRESSURE-BUILD VS. LOW PRESSURE-BUILD POLYURETHANE FOAM

The low pressure-build properties of GREAT STUFF™ Pro Window & Door ensure a “no bow” installation, when installed properly.

FOAMING PRESSURE OVER TIME



Source: Dow Internal Tests as presented to AAMA 2002. Analytical Data Request ADR 00-022 and ADR 02-001.

The foaming pressure of GREAT STUFF™ Pro Window & Door insulating foam sealant (gun foam) measures very low pressure-build values during the curing cycle compared to other foam sealants. The gun foam conforms to the American Architectural Manufacturers Association Standard 812-04 at an

extremely low pressure-build value of 0.08 psi as tested by an independent test laboratory. Such extremely low pressure-build will not distort or bow window or door jambs. Other foam sealants can produce pressure-build during cure more than 100 times higher, resulting in side, top and bottom jamb distortion.

TEST 3: FIBERGLASS VS. POLYURETHANE FOAM

Compared to fiberglass insulation, GREAT STUFF™ Pro Window & Door provides more efficient, long-term air sealing.

Stuffed into gaps, compressed fiberglass insulation loses its insulating value. It is also susceptible to moisture that penetrates gaps in the form of water vapor or liquid water from rain, snow and condensation. Over time, that moisture can lead to mold growth.

In contrast, GREAT STUFF Pro Window & Door insulating foam sealant fills any size gap



Fiberglass, when wet and compressed, loses a significant portion of its insulative value and over time could serve as a catalyst for mold, mildew and other unwanted bacteria.

with a water-resistant seal. It expands to take the shape of cracks and voids, forming a permanent, airtight and water-resistant bond to vinyl, wood

and metal surfaces. Once cured, it remains soft and flexible, permitting natural expansion and contraction of surrounding surfaces.



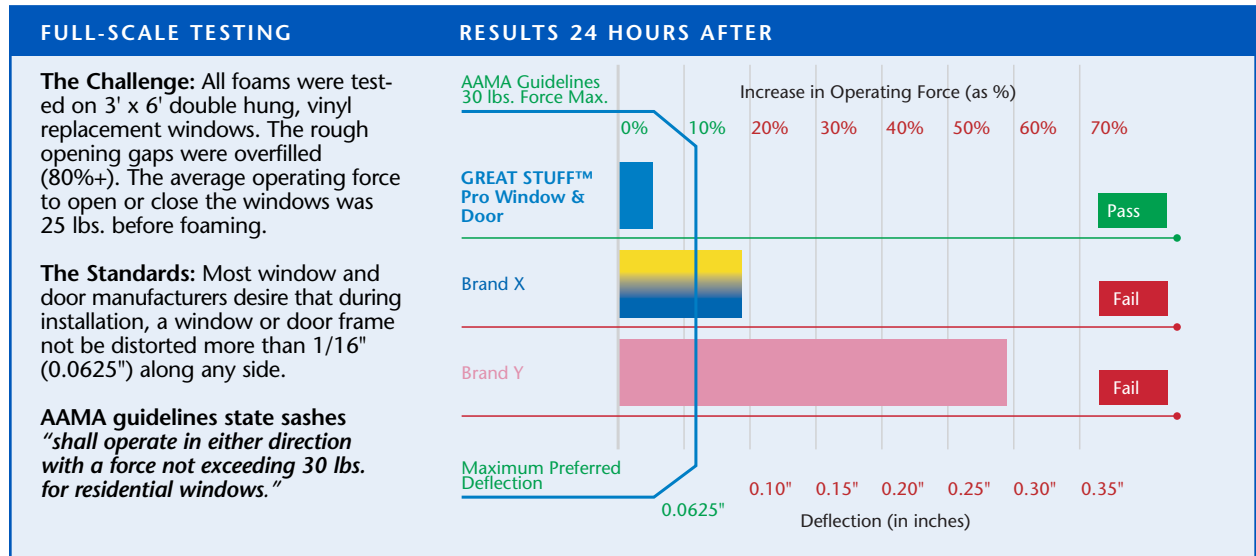
The lemon yellow color of GREAT STUFF™ Pro Window & Door insulating foam sealant distinguishes it within Dow's product line as a low pressure-build weather-tight fenestration solution.

Great Products

GREAT STUFF™ Pro Window & Door is proven more effective than other gap-sealing alternatives. The exclusive

formulation remains pliable, so it won't bow window and door frames, when installed properly. In full-scale testing, GREAT STUFF Pro Window & Door easily met window and

door manufacturers' strict limitations for window jamb distortion, while more conventional foam sealants exceeded the recommended units.



GREAT STUFF™ Pro Window & Door is available in 20 oz gun- and straw-applied versions for quick, easy and accurate application. Dow provides applicator guns with a variety of features, including:

- Barbed or smooth dispenser gun tip allows attachment of straw for hard-to-reach areas
- Replaceable gun tip
- Flow control knob for adjustment of bead size
- No post-dispensing foam drip (reduces waste)
- Gun foam can be restarted
- PRO 14 and PRO 15 guns are stainless steel with nonstick internal parts that help prolong the life of the gun

Great on Benefits

For a better fenestration installation, rely on GREAT STUFF™ Pro Window & Door insulating foam sealant.

- Air-seals the gap between a window or door frame and its rough opening
- Proven not to bend or bow framework
- Bonds to vinyl, metal and wood
- Repels and deflects water
- Quick cure time
- 20 oz can equivalent to 13 quart tubes of caulk
- Cost-effective, filling the rough opening of up to six average-sized windows
- Meets ASTM E2112 standards





Leave it to the Pro

Improving a home's energy efficiency is the top upgrade chosen by homeowners. For nearly 60 years, Dow has been a recognized and trusted leading manufacturer of building envelope solutions that contribute to the reduction of a home's energy loss, including:

- STYROFOAM™ extruded polystyrene and polyisocyanurate insulations
- STYROFOAM™ WEATHERMATE™ and STYROFOAM™ WEATHERMATE™ Plus housewraps
- WEATHERMATE™ Sill Pan
- WEATHERMATE™ Straight Flashing and WEATHERMATE™ Flexible Flashing
- WEATHERMATE™ Construction Tape

Homeowners and professionals alike prefer these quality products from Dow, which are backed by extensive global resources, brand recognition, and technical and sales support. For a professional, airtight and water-resistant seal, use durable, high-performance products from Dow.

**Contact Dow for more information on how to close the gap on energy loss.
1-866-583-BLUE (2583) • www.insulateyourhome.com**

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COMBUSTIBLE: Protect from high heat sources. Local building codes may require a protective or thermal barrier. 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 products contain chemicals that require the use of gloves, glasses and adequate ventilation or respiratory protection. Please read the warnings and instructions on the can and the Material Safety Data Sheet carefully before using.

Building and/or construction practices unrelated to insulation 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.

Consult the warning label and instructions on the can before use.

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