

# JM CORBOND III<sup>®</sup> SPRAY FOAM

BUILD BETTER. BUILD FASTER. BUILD BARRIERS

COMMERCIAL APPLICATION

Control air flow with JM Corbond III closed-cell spray foam insulation and offer energy savings of up to 40 percent.





## **HOW CAN AIR BARRIERS IMPROVE YOUR BUILDINGS?** OFFER LOWER ENERGY BILLS AND RAISE OVERALL VALUE OF THE BUILDING

An effective air barrier is the number-one factor in building an energy-efficient structure. Just by creating a building envelope that reduces uncontrolled air leakage, the U.S. Department of Energy estimates that up to 40 percent of all heating and cooling costs can be saved.\*

When the right materials and strategies are used, heat and cold are kept out while properly conditioned air is retained. According to a study by the National Institute of Standards and Technology, these air-barrier systems can reduce leakage by up to 83 percent.\*\* This translates to a decrease in electricity consumption of more than 25 percent and gas usage by up to 40 percent. It also means an increase in the overall value of the structure†

### **DEVELOP ENERGY-SAVING TECHNIQUES FOR TOMORROW WHILE PROFITING FROM EFFICIENCY STANDARDS TODAY**

As research continues to demonstrate how air barriers result in energy savings, standards and ultimately regulations are also changing. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) created a standard requiring continuous air barriers on building exteriors (90.1). In addition, the International Energy Conservation Code (IECC) and an increasing number of states now mandate the use of air barriers in commercial buildings††

By embracing these energy-saving trends, you increase the value of your builds today while positioning yourself to be an industry leader when those same efficiency standards are mandated tomorrow.

\*EPA: Air Sealing, Building Envelope Improvement, Dec 2000.

\*\*Investigation of the Impact of Commercial Building Envelope Airtightness on HVAC Energy Use.

†NAHB Research Center for the Society of Plastics Industry/Polyurethane Foam Contractors Division.

††IECC 2009, Section 502.4.3 Sealing the Building Envelope (commercial)

## GUARANTEE A RANGE OF RESULTS WITH A SINGLE PRODUCT

Aside from energy efficiency, an effective air barrier leads to many benefits. By restricting unwanted airflow, you can also:

- Reduce mold growth
- Stop premature building deterioration
- Prevent condensation, ice damming and unwanted moisture flow
- Eliminate poor indoor air quality\*

## AIR BARRIERS MADE EASY: JM CORBOND III CLOSED-CELL SPF INSULATION

JM Corbond III insulation is a closed-cell, medium-density spray foam insulation that provides an innovative alternative to traditional insulation products. When applied to the exterior of a structure, it creates an air-barrier system that delivers excellent energy efficiency, and its high yield per pass and wide temperature-application range make the installation process more effective and versatile than other spray foam insulation products.

JM Corbond III SPF will also help keep your projects on schedule by allowing you to simplify the building envelope with a single solution. Instead of needing separate resources for air barriers, moisture control and thermal insulation, JM Corbond III SPF gives you the option of using one versatile product. This reduces the number of trades required in the construction process, which saves you time and money.

### LOOK FOR LAVENDER®

The ultimate insulation solution, JM Corbond III SPF is a premium product for creating thermal insulation and air isolation. It will not shrink or settle, and it will last for the life of the structure.

When red isocyanate is added to blue polymeric resin, JM Corbond III SPF's unique Lavender color is formed, representing JM's commitment to uncompromised quality standards and energy-efficient construction.

### THE BENEFITS OF JM CORBOND III SPRAY FOAM INSULATION

- With an R-value of more than R-6 for every inch, JM Corbond III SPF's performance and durability allows you to realize increased profits by offering long-term energy savings over the life of the structure.
- JM Corbond III SPF provides a high R-value per inch while strengthening the substrates to which it is applied.
- JM Corbond III SPF has one of the highest yields of any closed-cell spray foam insulation on the market, resulting in decreased investments in time and labor.
- JM Corbond III SPF gives you the ability to access the hard-to-reach places that other, more traditional insulation products cannot provide, which also saves you time and money.

\*Assumes ASHRAE 90.1 ventilation standard is met.

- As a closed-cell spray foam insulation, JM Corbond III SPF is an excellent moisture barrier. Closed-cell foam is the only insulation approved by FEMA for use in flood zones.\*
- In addition to providing a superior air barrier, JM Corbond III SPF prevents air leakage that leads to mold growth, premature building deterioration, condensation, ice damming and poor indoor air quality.
- Whether it's 10 degrees below zero or 110 degrees in the shade, JM Corbond III SPF creates thermal and moisture barriers that increase comfort and energy efficiency. At the same time, JM Corbond III SPF helps seal the building envelope and protects against condensation and leakage, eliminates infiltration and intrusion, increases the longevity of the building and helps support the framing structure.\*\*

## THE ADVANTAGES OF APPLYING JM CORBOND III SPF AS A CONTINUOUS EXTERIOR INSULATION

Applying JM Corbond III SPF to building exteriors allows you to meet ASHRAE 90.1 standards with an insulation approved by the Air Barrier Association of America (ABAA). At the same time, you will eliminate the most time-consuming steps of installation.

ASHRAE requirements mandate that all buildings have continuous insulation sheathings on their exteriors to prevent thermal bridging, and JM Corbond III SPF provides these compliant air and moisture barriers without the need for priming and taping of penetrations and sheathing board joints. Eliminating this need for materials and preparation saves you time and money, all while meeting the ASHRAE 90.1 requirements.

## THE ADVANTAGES OF JM CORBOND III SPF AS CAVITY INSULATION

When applied in cavities of exterior walls, JM Corbond III SPF increases comfort and provides thermal performance over the life of the building. As with all applications of JM Corbond III SPF, it will not deteriorate.

JM Corbond III SPF also adds structural strength. According to research by the National Association of Home Builders, walls made of OSB, plywood, light gauge metal, vinyl siding or gypsum board can add 75 percent to 200 percent racking strength when filled with closed-cell spray foam insulation. This increases the durability of the building and decreases wall movement from wind, vibration and occupant activity.†

***Air-barrier systems can reduce leakage by up to 83 percent.***

***This translates to a decrease in electricity consumption of more than 25 percent and gas usage by up to 40 percent.***

\*NFIP Technical Bulletin 2-08, Flood-Resistant Material Requirements for Building Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program, Table 2.

\*\*[www.sprayfoam.org](http://www.sprayfoam.org).

†NAHB Research Center, 1992 Racking Performance Tests.



## THE SPRAY FOAM WITH ALL THE CREDENTIALS

Johns Manville conducted a series of tests (ASTM E2357) using JM Corbond III SPF at a well-respected third-party laboratory. Without any surface preparation, JM Corbond III SPF was applied as an exterior air barrier over the entire wall assembly, including wallboard seams, electrical conduit penetrations, PVC penetrations, duct penetrations and brick ties. Results showed air leakage rates that were well below ABAA benchmarks.

A second series of tests challenged the same assembly to multiple pressure and temperature cycles to simulate environmental aging and seasonal changes. The results were the same. Air-leakage rates continued to pass all ABAA criteria, making JM Corbond III SPF the only air-barrier product on the market with such an extensive level of data-based performance credentials.\* In addition to meeting air-barrier standards, JM Corbond III SPF also passed air-permeance testing as exhibited in ASTM E283 and ASTM E2178.

The data speaks for itself. With JM Corbond III SPF, you get an ABAA-evaluated-and-listed material and air-barrier assembly without the need for exterior-wall preparation that consumes valuable time and resources.

\*EXOVA Reports 11-0002-M0002 and 11-06-M0359. Refer to Technical Bulletin IST11-007R for more information.



## **THE JM ADVANTAGE**

### **BEYOND JM CORBOND III: A SPRAY FOAM SOLUTION FOR EVERY SITUATION**

Johns Manville's spray foam insulation will work to suit your individual needs, not the other way around. No matter the climate or level of performance required, JM has a spray foam insulation solution that will improve energy efficiency, performance and comfort of the structure.

#### **JM CORBOND MCS™ SPF**

JM Corbond MCS is a premium SPF insulation that is fast, easy and adaptable. Like JM Corbond III SPF, it is closed-cell, Lavender in color and offers climate isolation between indoor and outdoor environments. Differences between JM Corbond MCS SPF and JM Corbond III SPF include installation temperature and lift thickness per pass.

#### **JM CLOSED-CELL SPRAY FOAM (JM ccSPF)**

JM ccSPF is naturally yellow and creates a seamless sheath of thermal protection that can be installed as cavity or exterior insulation without shrinking or settling. Like other JM closed-cell products, JM ccSPF offers excellent sprayability and competitive yield.

## JM OPEN CELL SPRAY FOAM (JM ocSPF)

JM ocSPF is a low-density, nonstructural insulation that offers a high yield while still providing important air isolation, great thermal results and exceptional acoustical performance. It is an economical alternative to our versatile closed-cell solutions on interior wall and perimeter wall applications. Like our closed-cell products, JM ocSPF is the result of combining aromatic diisocyanate with a polyol blend. It is a water-blown system that does not use a refrigerant in the process, and JM ocSPF is formulated using polyols, fire retardants and catalysts.

## JOHNS MANVILLE: A HISTORY OF INNOVATION

Johns Manville is the only manufacturer of both polyurethane spray foam and fiber glass insulation. This allows Johns Manville to offer a complete hybrid insulation solution that includes both spray foam and fiber glass products, so you can be certain that our team of experts will direct you to the best insulation option to suit your particular needs.

In our 150-year history at the forefront of insulation production, we are not just the only manufacturer with a complete hybrid solution, but we also led the way as the first to offer a full line of certified Formaldehyde-free™ fiber glass building insulation.

Contact your local Johns Manville representative today and find the easiest way to achieve energy efficiency in your builds through our SPF and hybrid insulation solutions.

## JM: A HISTORY OF INNOVATION

- JM is the only manufacturer to make both spray foam and fiber glass insulation.
- JM was the first to make a complete line of certified Formaldehyde-free™ fiber glass insulation.
- JM has 150 years of industry experience that you can count as your own.



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**Johns Manville**  
**Insulation Systems**  
717 17th Street (80202)  
P.O. Box 5108  
Denver, CO 80217-5108  
(800) 654-3103  
**specJM.com**

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