



## DOES COLD WEATHER RESTRICT YOUR ABILITY TO APPLY INSULATION?

### **HOW JOHNS MANVILLE CORBOND III® SPRAY FOAM HELPED A VERMONT CONTRACTOR MEET SENSITIVE TIMELINES AND PERFORMANCE REQUIREMENTS IN THE DEAD OF WINTER.**

On Jay Peak, in the heart of Vermont ski country, the average winter temperature is below freezing. So, in December 2010, when All Seasons Urethane Foam was awarded the largest commercial spray foam contract in their history, owner Joe Foss needed to work through the winter to meet deadlines and performance expectations.

How did he continue working when the temperature was below freezing? How did he coordinate his schedule with other contractors on the job to maintain overall project timelines? How did he ensure consistent thermal performance without control of the entire building envelope?

## RAISED JAY: THE EXPANSION OF NEW ENGLAND'S BEST SKI RESORT

Jay Peak has the distinction of receiving more snowfall than any other mountain in eastern North America. Just a few miles from the Canadian border in Vermont's Green Mountains, it was named New England's best ski resort in 2010 by *Yankee* magazine.

Today, improvements to the resort community are taking place at a rapid pace. A major piece of that expansion is the renovation of a hotel and conference center that includes more than 120 rooms, a spa, conference center, an ice-skating facility and a water park, making Jay Peak Resort a year-round destination.

In December 2010, All Seasons Urethane Foam won the contract to insulate Jay Peak Resort's newest project. Joe Foss was awarded the job because of his careful examination of the architect's drawings, his reputation of being timely and his ability to consistently provide quality results.

"My business is all word-of-mouth and repeat customers. They know the quality I provide is consistent. I don't rush projects. I slow down to get the job done right. And I focus on the details," Foss said.

## JAY PEAK RESORT'S NEW HOTEL AND CONFERENCE CENTER BY THE NUMBERS

- 193,000 square feet
- 120 rooms— Contracted date of December 2010
- Project deadline of October 2011
- Average high temperature of 27 degrees Fahrenheit on New Year's Day\*
- Average low temperature of 5 degrees Fahrenheit on New Year's Day\*
- Desired thermal resistance of R-13 for interior wall cavities

# CHALLENGES & SOLUTIONS TO SPRAY FOAM APPLICATION AT JAY PEAK RESORT

## WINTER: OVERCOME COLD WEATHER WITH A WIDER TEMPERATURE APPLICATION RANGE

Most cold-weather spray foam insulations have temperature limits of 40 to 45 degrees Fahrenheit. At Jay Peak, the average high on January 1 is only 27 degrees.\* Finding a spray foam insulation that could be applied in lower temperatures and had a maximum lift thickness greater than 3 inches per pass was essential for All Seasons Urethane Foam to meet project deadlines.

"Most cold weather foams have limitations," Foss said. "Application in winter is an issue for the northern 25 percent of the country and I needed to be able to install more than 2 inches in a single pass."

## THE JM SOLUTION

Because it has one of the widest application range of any spray foam, JM Corbond III SPF allows installation in temperatures as low as 25 degrees Fahrenheit. This helped All Seasons Urethane Foam work more days during the harsh New England winter. Had he used a different spray foam insulation manufacturer, Foss could have easily missed the deadlines for his phase of the project.

"Did Corbond III make the job faster and easier? Absolutely," Foss said. "We would not have been able to spray the first two zones in the middle of winter if we hadn't used it."



\*Weather Underground

### **DEADLINES: SAVE TIME WITH FAST AND EFFICIENT APPLICATION**

In addition to temperature range and lift thickness, another major factor to fast and efficient spray foam application is yield. Using more product than needed, as well as the time it takes to apply it, leads to the erosion of timelines and bottom lines.

### **THE JM SOLUTION**

According to Foss, JM Corbond III SPF yields 10 percent or more product and results in more foam per pound of liquid than the competition. When compared to other spray foam insulations, it helped All Seasons Urethane Foam complete the Jay Peak Resort project faster, more efficiently and on time.

### **ACCESSIBILITY: USE INSULATION THAT FITS THE DESIGN OF THE BUILD, NOT THE OTHER WAY AROUND**

One of the challenges with renovations at Jay Peak Resort was the nonstandard structure of the building. Instead of framing walls between structural steel, the interior wall cavities were constructed outside the steel skeleton. This made it more difficult to apply insulation because of accessibility issues.

### **THE JM SOLUTION**

One reason All Seasons Urethane Foam received the Jay Peak Resort contract was their careful examination of the building's design. Foss knew that placing wall cavities outside the steel skeleton would result in hard-to-reach application areas. His solution was to use JM Corbond III SPF because of the accessibility it provides, adding extra passes to the areas in question to ensure desired thermal resistance.



## JM Corbond III SPF Performance Advantages

- **Greater Temperature Thresholds:** JM Corbond III SPF has one of the widest application ranges of any spray foam product, including a low temperature benchmark of 25 degrees Fahrenheit.
- **Wide-Ranging Properties:** JM Corbond III SPF offers excellent thermal performance (R-19 at 3 inches or R-38 at 6 inches), as well as advanced air isolation, exceptional moisture control and resistance to mold and mildew.
- **More Economical Due to Higher Productivity:** JM Corbond III SPF permits contractors to install more board feet per day, every day, because of its consistently high-quality formulation and ability to spray foam up to 3 inches thick in a single pass. In addition, it has the highest yield of any closed-cell foam building insulation and can be sprayed over a wide temperature range.
- **High Quality:** Look for JM Corbond III SPF's unique Lavender® color, which represents JM's commitment to uncompromised quality and performance.

### **DISORGANIZATION: GUARANTEE RESULTS IN A LARGE, MULTIFACETED PROJECT**

The renovation of the new hotel and conference center at Jay Peak Resort was the largest and most sprawling project All Seasons Urethane Foam had ever received. There were 12 different contractors working on the building, making the construction process disorganized and hard to manage. Foss knew that his deadlines had to be met, regardless of whether other contractors met theirs.

In addition, Foss only had control over spray foam application for cavities of exterior walls, not the exterior sheathing. Because exterior sheathing plays a major role in sealing building envelopes and ensuring desired R-values, Foss had to make sure the quality of his spray foam insulation and its application was of the highest standards. He could not rely on the contractors in charge of installing 1½-inch extruded polystyrene (EPS) foam board on the exterior of the building.

### **THE JM SOLUTION**

The use of JM Corbond III SPF helped All Seasons Urethane Foam guarantee that spray foam installation would never hold up the construction schedule as a whole. Because of its efficient application at lower temperature ranges and the 3-inch lift thickness, Foss delivered finished results on time and on schedule.

Through the application of 2¼-inch passes of JM Corbond III SPF on cavities of exterior walls, he also ensured thermal resistance greater than the desired value of R-13. Though other contractors created an exterior sheathing of R-7.5 with EPS board, he could not count on their proficiency when delivering his own component to the entire building envelope.

### **CONSISTENCY: INCREASE VALUE WITH RELIABILITY**

Despite the stiff competition, All Seasons Urethane Foam won the job for the Jay Peak Resort because of their reputation for quality, consistency and because they use a premium spray foam insulation (when compared to the competition). The product's high-yield, cold-weather application and efficiency allow Foss to receive overall gains on projects. All these factors, combined with his reputation for providing results that are high quality, consistent and timely, create a winning combination.

To successfully market his business based on these factors, he needs a product that is predictable and dependable. These characteristics are even more important in the winter months during New England's harshest conditions.

### **THE JM SOLUTION**

JM Corbond III SPF is consistent, predictable and dependable. Even when applied at sub-freezing temperatures, each barrel contains the same properties as the one before.

"There are less issues with consistency of material compared to competitors," Foss said. "With JM Corbond III, there is a high degree of quality control and predictability."

### **VERSATILITY: PROVIDE A WIDE RANGE OF BENEFICIAL PROPERTIES**

In addition to providing thermal resistance, All Seasons Urethane Foam was also hired to develop effective air and vapor barriers at the Hotel Jay & Conference Center. In order to efficiently seal the building envelope, a single solution to meet these criteria was needed to save valuable time and resources.

### **THE JM SOLUTION**

JM Corbond III SPF provides superior moisture performance and is air impermeable. It resists mold growth and meets all current vapor barrier codes. When tested in accordance with ASTM E96, it had a vapor permeance of 0.61 perms at a thickness of 1½ inches. When tested in accordance with ASTM E283, it was air impermeable when installed at a thickness of 1½ inches or more.



## THE FUTURE OF SPRAY FOAM

### **TODAY'S TECHNIQUES ARE SHAPING TOMORROW'S STANDARDS**

The importance of energy conservation and efficiency is moving to the forefront of both consumer opinion and governmental regulation. According to Foss, spray foam insulation's market share has slowly increased over the past decade as a result of this trend, and he doesn't see any signs of it slowing. In fact, All Seasons Urethane Foam received a steady increase in demand for spray foam jobs despite the current economic climate.

"Still, to this day, people consider spray foam to be 'new stuff,'" Foss said. "Though in Vermont, there's a growing awareness of better insulation processes, energy conservation and energy retrofit homes that is driven by homeowners and fuel prices."

Foss believes that embracing these energy-saving practices will increase marketability and value today. They will also lead to strategic positioning for tomorrow when those same efficiency standards are mandated.

### **LEARN THE SCIENCE OF SPRAY FOAM FROM THE BEST SERVICE AND TRAINING TEAM IN THE INDUSTRY**

"Larger manufacturers tell you they give a lot of factory support, but once you sign as a distributor, the best you'll get is eight hours at first, and then they are gone forever," Foss said. "With JM Corbond III, there is always someone to spend as much time as needed, to help sort out the problem. And in the spray foam industry, problems are regular."

According to Foss, having this unrivaled level of service is paramount to the timely completion of any project, especially if it's one as large and complex as Jay Peak Resort. JM also understands the importance of proper training. To guarantee high-quality installs, contractors must complete a comprehensive, 32-hour training program. With this superior line of service and training, an answer to any question is just a phone call away.

"I talk to the same guys every time," Foss said.

## About All Seasons Urethane Foam

Joe Foss has been in the spray foam insulation industry since 2001, when he completed the JM Corbond III SPF training program. He founded All Seasons Urethane Foam when he realized the increasing demand for spray foam insulation. Because he uses JM Corbond III SPF, he is able to complete new jobs throughout New England's brutal winters, an advantage reflected in the name of his company. All Seasons Urethane Foam currently owns four spray rigs and employs nine people.



## IN CONCLUSION: THE SPRAY FOAM FOR ALL SEASONS

When All Seasons Urethane Foam received the Jay Peak Resort project in the middle of winter, they needed a spray foam that would work in all seasons. Despite various challenges, they completed the job on time and met all performance expectations. According to owner Joe Foss, much of their success is attributed to the use of JM Corbond III SPF.

“A lot of brands look the same on the label, but it’s about the workability of the product,” Foss said. “A quality spray foam should give you the ability to do a good job and not have issues down the road. It should give you the ability to spray in cold weather. It should be consistent. And there should be support by people in the company itself who actually know about the product.”

For more information on JM Corbond III SPF or to inquire about purchasing, visit [specJM.com](http://specJM.com).

## ABOUT JOHNS MANVILLE

In their 150-year history, Johns Manville has been at the forefront of insulation production. They were the first manufacturer to have a complete line of certified Formaldehyde-free™ fiber glass building insulation, and because they are dedicated to providing a one-stop hybrid solution, they are the only manufacturer to make both spray foam and fiber glass insulation products.

With a dedication to quality and a reputation for being the best to work with, JM’s best-in-class insulation solutions are the logical choice for energy-efficient construction.

- *JM was the first to make a complete line of Formaldehyde-free™ fiber glass building insulation.*
- *JM is the only manufacturer to manufacture both spray foam and fiber glass insulation.*
- *JM has 150 years of industry experience.*

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