



The JM SPF



CORBOND III™

Questions?



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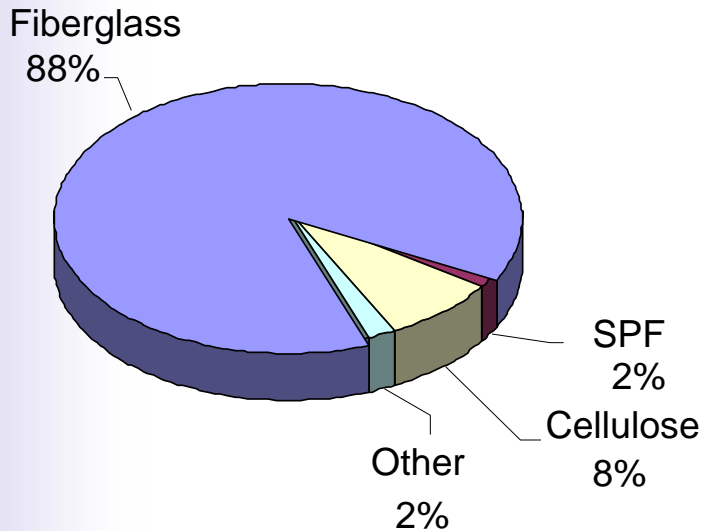
Agenda

- Industry Update
- SPF Product 101
- JM SPF Product Overview
- Estimating and Pricing
- Resources
 - Parts and Accessories
 - Marketing Collateral
- Field Technical Services Group
- Specifier Services
- Key Contacts

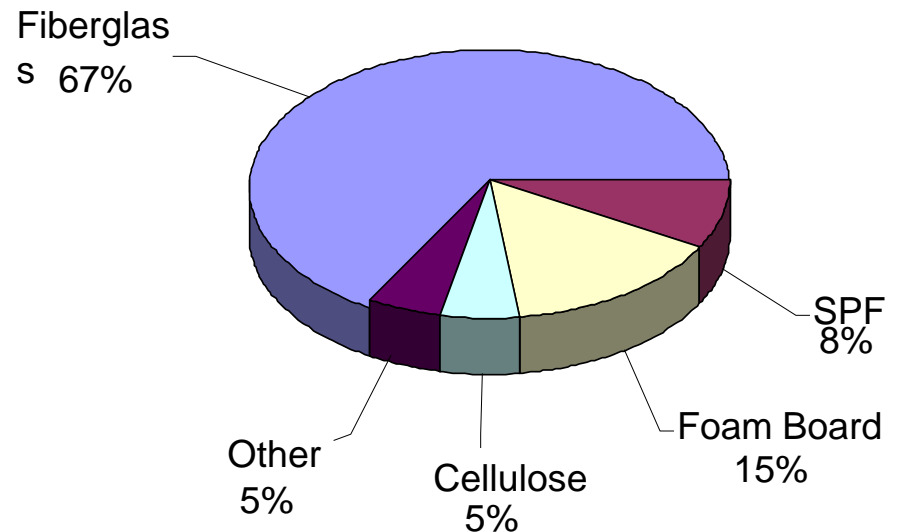
SPF Industry Overview

- SPF industry continues to grow despite industry downturn
 - 4x market share growth since 2004
- Code changes have helped SPF
 - Acceptance of unvented attics, rim joist etc.
 - ASHRAE 90.1 will help SPF continue to grow
 - ABAA influence

2004 Insulation Market Share



2010 Insulation Market Share

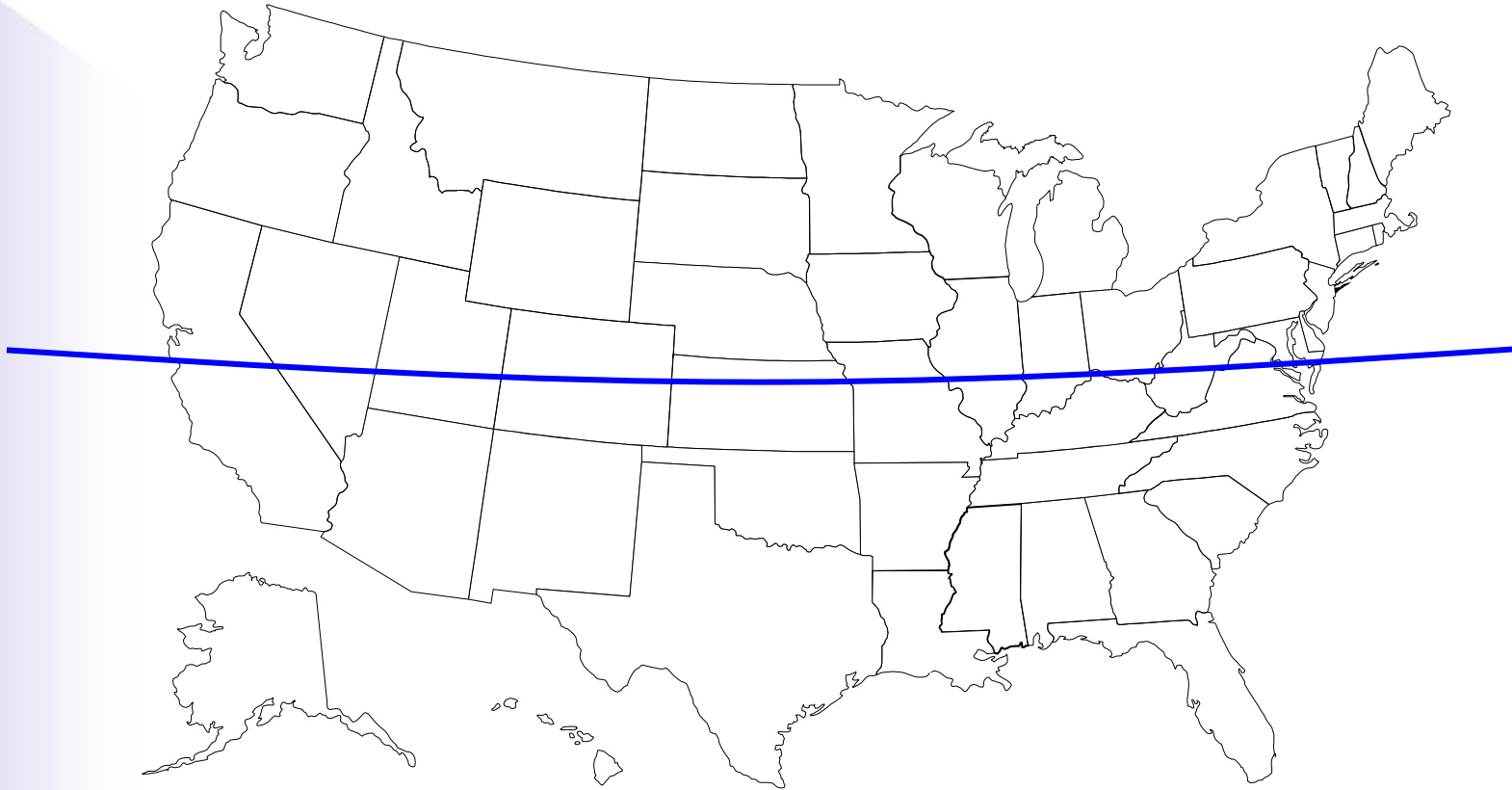


Market Opportunity

- SPF industry has averaged 10% CAGR since 2008 despite housing starts
 - 18% YOY Growth in 2013
- Code changes and market awareness benefit SPF
 - Unvented attics (residential)
 - ASHRAE 90.1
 - Air barriers

Product break out

Closed Cell



Open Cell

Sell Customers what they want!



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Safety

- CPI Safety Training
 - Web based
 - <http://www.spraypolyurethane.org/>
- Industry Guidance Documents
 - Model Respirator Program
 - Ventilation Guidance
 - Disposal of Containers
- www.whysprayfoam.org



SPF Product 101



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Storage Temperatures

- Proper Storage temperature is between 60°F and 75°F
 - B Component
 - Above 75° can result in excess vapor pressure and may cause bulging of the drum. It will also reduce shelf-life. Opening the drum when extremely warm can be dangerous and will result in loss of blowing agent.
 - Below 60° prevents the applicator from taking the drum directly out of storage and using it. Well below 60° for prolonged periods of time may result in separation or stratification.
 - A Component
 - Storage below 40° may result in a crystal like phenomenon known as seeding – though it doesn't always occur at 40°, it can.

Types of PU Foam

- **Spray Foam**

- Low Density
 - Open-cell, half-lb.
- Medium Density
 - Closed-cell, two-lb.
- High Density / Roofing
 - Closed-cell, three-lb.



courtesy Graco



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Materials

- Component A
 - ISO - reacts with moisture
 - Red or amber liquid

- Component B
 - Resin or Polyol blend
 - Clear to amber liquid
but may be dyed



Viscosity

- Viscosity makes it difficult to get a good mix of A and B
 - Lower temperature = thicker material
 - Higher temperature = thinner material

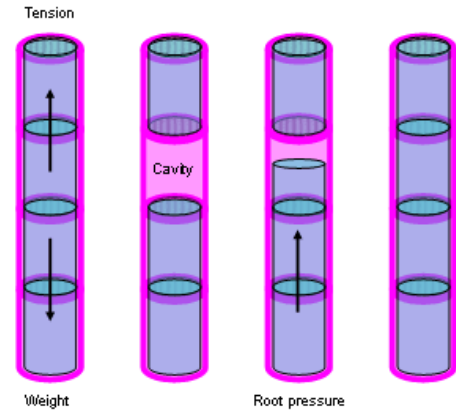


- Mechanical heat controls the viscosities of the material

Cold (Hot) Drum Temperature – In Use

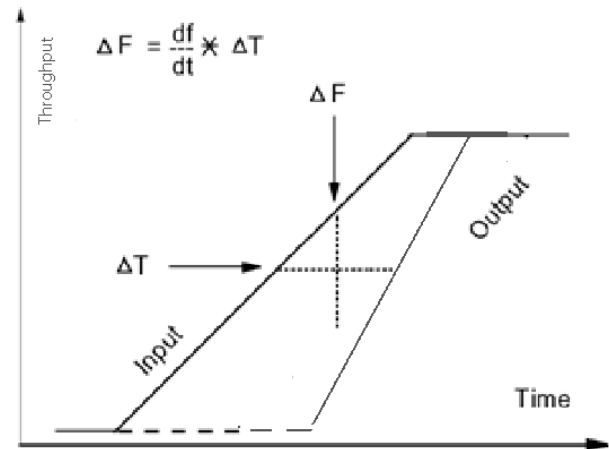
■ Cavitation

- Cavitation occurs when you fail to deliver material to the pressure pump at a rate equal to that at which the pressure pump needs to fill



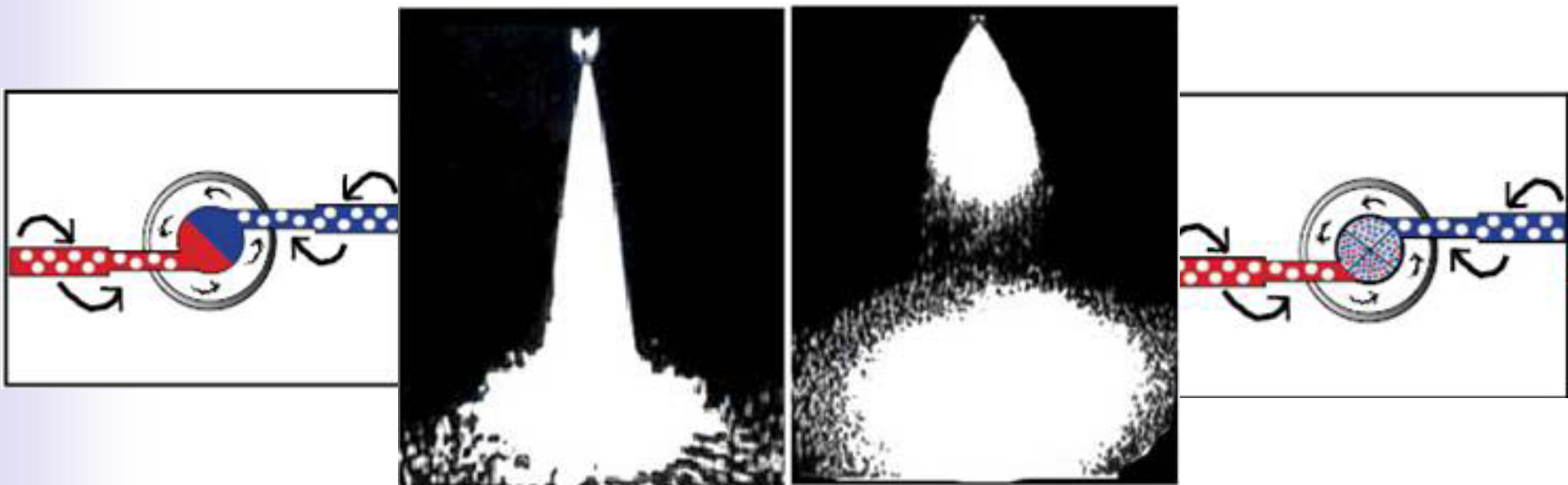
■ Delta T

- Your machine is only capable of raising the temperature of the material out of the drum by 40°-60°
 - If you plan to spray at 120° the drum will need to be as warm as 80° and no cooler than 60°



Mix Temperatures

- Correct temperature settings will greatly affect the spray pattern
- The applicator is responsible for monitoring the spray pattern
 - Systems using dye will aid in monitoring proper mix



Mix Temperatures

- JM Corbond III SPF (example)
 - 105°F to 115°F for A
 - 110°F to 125°F for B
 - Material in drum must be within 40° to 60° of set point
- Use these temperatures as a starting point
- Temperature will differ depending on your environment on that given day
- Consult JM Tech Rep



Substrate Temperatures

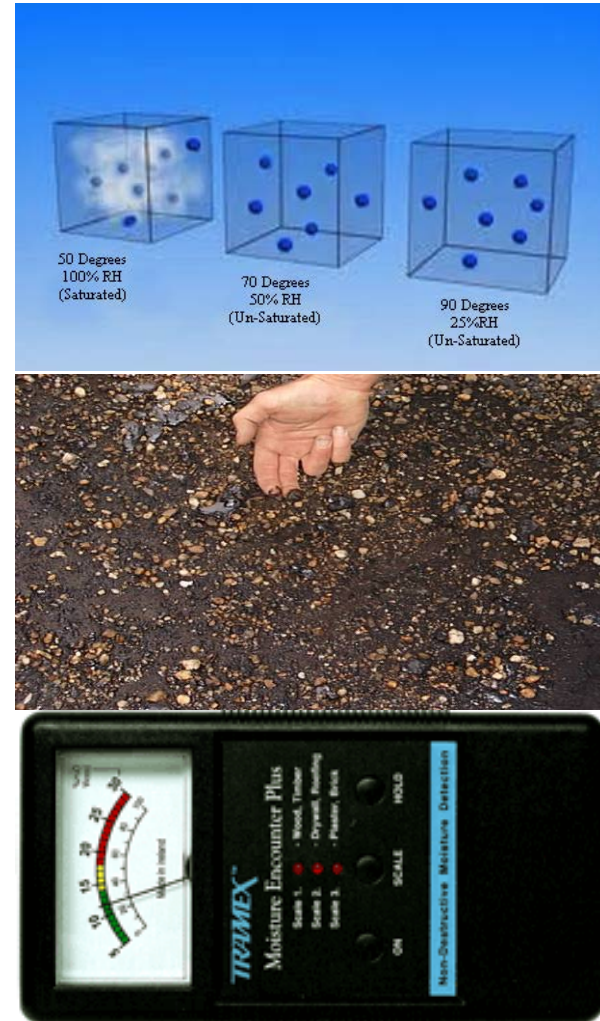
- Extreme Heat
 - May cause pull away in the form of a blister where the material bread loafs off from the substrate
- Extreme Cold
 - May cause thermal popping or cracking at the interface with the substrate
 - Cold substrates can also lead to as much as a 30% reduction in yield
 - Never provide heat to an area using propane
 - ccSPF systems come in winter and summer reactivities to help combat uncontrollable substrate temperatures

Thermal Shock – Heat Sump

- The cooling down of the material after it is sprayed in place – thermal contraction
 - Results in thermal cracking
 - pull away from the stud or substrate
- Don't spray if it's too cold
 - 25°F (approx.); varies +/- 10 degrees depending on dew points

Moisture & Humidity Problems

- Optimal adhesion is lost when:
 - Humidity is greater than 85%
 - Substrates are wet
 - Substrates contain greater than 17% moisture content



Material Handling

- A side material can be mixed with A side material from the same manufacturer
- B side material can be mixed with like B side from the same MFR
 - **NEVER MIX OPEN CELL B AND CLOSED CELL B**
- *When converting from OC to CC or CC to OC consult JM Field Tech for conversion information*

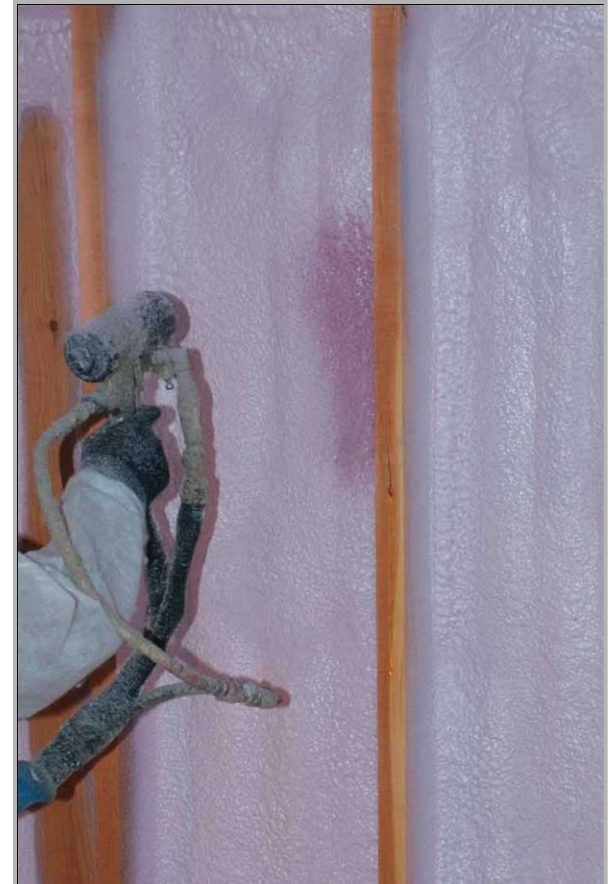
JM SPF Products



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JM Corbond III (Flagship Product)

- Flagship 2.0lb density closed cell SPF
- High Yield 5,000-5,200 board ft/set
- 3" Maximum lift thickness/pass
- Wide application temperature (20°F to 120°F)
 - Winter 20°F-65°F
 - Summer 45°F-90°F
- R-7.0/inch
- Fire rating –
 - Class 1 tested at 4" ASTM E-84
 - NFPA 285 for commercial construction
- Very Sprayer Friendly
- Low odor
- Unique trademarked Lavender® color



JM Corbond III ABAA Certified

- JM Corbond III® is an ABAA approved product
 - Meets CI requirements for 2012 ASHRAE 90.1
- Unique ABAA advantage
 - Passes ASTM 2357 with limited transition membrane

JM

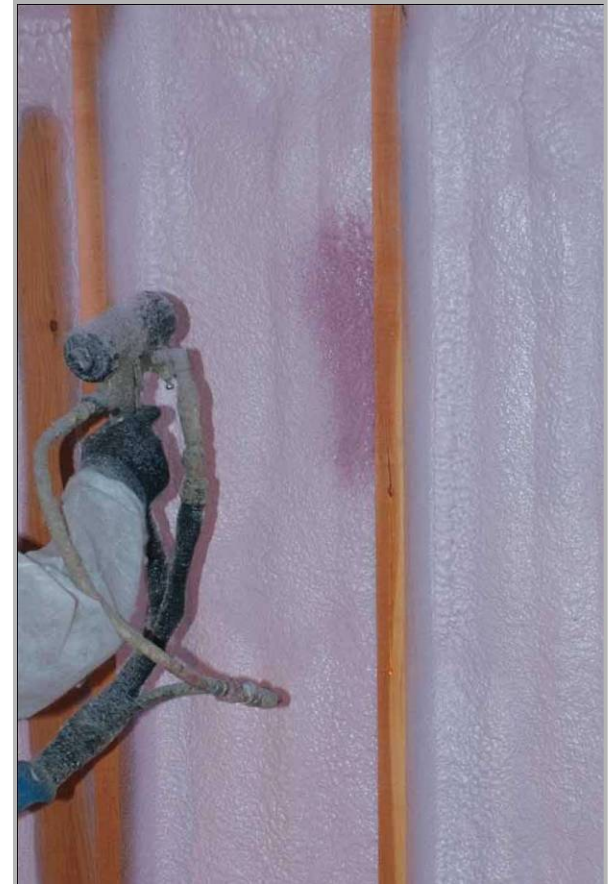


The other guys



JM Corbond MCS (Fighting brand)

- 2.0lb density closed cell SPF
- High Yield 4,300-4,500 board ft/set
- 2" Maximum lift thickness/pass
- Wide application temperature (40°F to 120°F)
- Fire rating –
 - Class 1 tested at 4" ASTM E-84
 - NFPA 285 for commercial construction
- Low odor
- Unique trademarked Lavender® color



JM ocSPF

- 0.5lb density open cell SPF
- High Yield 16,000-17,500 board ft/set
- Low odor
- Wide application temperature (30°F to 120°F)
- Does not require constant mixing
 - Mix for 30 min in the morning, recommended but not required
- Adheres to itself
- Fire rating –
 - Class 1 tested at 4" ASTM E-84
 - NFPA 285 for commercial construction
- Low odor
- ***Requires an ignition barrier coating***



Updates

- New labeling ~90 days
 - *Consistent JM branding*
 - *Included current product stewardship info*
 - *Reoccupancy guidelines*
 - *PPE*
 - *Processing parameters*



Quiz

- Who is the ideal customer for JM Corbond III®?
 - A. Bill's "Low Price Trunk Slamming" Insulation Shop (TN)
 - B. Spencer's "Top Quality" Energy Systems (NY)
 - C. Toni's "Alabama Foamer" Spray Foam Insulation (AL)

- Who is the ideal customer for JM Corbond MCS™
 - A. Zoltan's "Fiber or Die" Insulation
 - B. Bill's "The price conscious Flash and Batt King" Insulation (TN)
 - C. Geoff's "The Crazy VT Foamer" Energy Savers (VT)

- True or False
 - Open cell SPF is never installed in NE?

- Which JM SPF product is ABAA approved?

Estimating example

- 1,000 - 1050 lbs of material in a set
 - 500 - 550 lbs of “A” – 500 lbs of “B”
- Estimated Yield
 - JM Corbond III - 4,800 – 5,200 bd.ft./set
 - JM ocSPF - 14,000 – 17,000 bd.ft./set

Estimating example

- **JM Corbond III** - $\$2,670 \div 4,800 \text{ bd. Ft.} = \$0.56/\text{bd. Ft.}$
 - **2,000 sq. ft. house w/8' ceilings**
 - = Approx. 2,000 sq. ft. of wall space
 - + Approx. 2,100 sq. ft. of interior roof space (4:12 pitch)
 - Walls 2,000 sq. ft. x 2" = 4,000 bd. ft.
 - Ceilings 2,100 sq. ft. x 4" = 8,400 bd. ft.
- 12,400 bd. ft.

Pricing

- 3 key quantifiable factors to consider in pricing
 1. Price/lb
 2. Lbs/set
 - A Side is either 550lbs/drum or 500lbs/drum
 - B side drums vary in weight from 475-500lbs
 3. Yield/set
- Other value traits to consider
 - Maximum lift thickness
 - Spray temperature range
 - Approvals/testing
 - Spray characteristics

Handling Price objections

Example

- Competitor – 4,000 bd. ft. for estimating
 - Average price per pound
 - $\$1.90/\text{lb} \times 1,050 \text{ lbs/set} = \$1,995/\text{set}$
 - $\$1,995 \div 4,000 \text{ bd. ft.} = \$0.498/\text{bd. ft.}$
- Corbond III – 5,000 bd. ft. for estimating
 - Average price per pound
 - $\$2.35/\text{lb} \times 1,000 \text{ lbs/set} = \$2,350/\text{set}$
 - $\$2,350 \div 5,000 \text{ bd. ft.} = \$0.47/\text{bd. ft.}$

Product Comparisons

CLOSED CELL FOAM PRODUCTS

PRODUCTS & BRANDS	Aged R-Value	Lbs /\$ et	Price/lb	Cost/\$ et	Aug. Yield	Cost/board ft	Cost/R
JM Corbond III	6.4	1 000	\$ 2.34	\$ 2,335	51 00	\$ 0.458	\$ 0.071 5
JM Corbond MCS	6.3	1 000	\$ 2.05	\$ 2,050	45 00	\$ 0.456	\$ 0.0723
*Bays eal CC	6.9	1 051	\$ 1.95	\$ 2,049	42 00	\$ 0.488	\$ 0.0707
*BAS F 158	6.7	1 051		\$ -	42 00	\$ -	\$ -
*BAS F 178	6.7	1 051	\$ 1.85	\$ 1,941	40 00	\$ 0.486	\$ 0.0726
*Certainteed CC	6.0	978	\$ 1.85	\$ 1,800	40 00	\$ 0.452	\$ 0.0754
Demilac-Heatlok 5 oy	6.6	1 000			38 00	\$ -	\$ -
*Dow-S tyrofoam 2060	6.1	990		-	40 00	\$ -	\$ -
*Gaco Wes tem-Wallfoam 193	6.2	1 020		-	42 00	\$ -	\$ -
*Lapolla FL2000	6.0	1 000		\$ -	47 00	\$ -	\$ -
Henry/RTC 2045(2.0)	6.5	1 051		\$ -	45 00	\$ -	\$ -
*NCFI1-012	6.4	1 051		\$ -	45 00	\$ -	\$ -

OPEN CELLED FOAM PRODUCTS

PRODUCTS & BRANDS	Aged R-Value	Lbs /\$ et	Price/lb	Cost/\$ et	Aug. Yield	Cost/board ft	Cost/R
JM oc\$ PF/Bays eal OC	3.9	1 028	\$ 1.85	\$ 1,902	17 000	\$ 0.111 9	\$ 0.0287
BAS F-Enerlite	3.9	1 050		\$ -	14 000	\$ -	\$ -
BioBas ed 501 w	3.8	1 032		\$ -	14 000	\$ -	\$ -
*Certainteed OC	3.6	978		\$ -	14 000	\$ -	\$ -
*Demilac	3.81	1 000	\$ 1.72	\$ 1,720	15 000	\$ 0.1147	\$ 0.0301
*Gaco Wes tem-GacoGreen	4.21			\$ -	15 000	\$ -	\$ -
*Icynene	3.6			\$ -	15 000	\$ -	\$ -
Lapolla FL500	3.6			\$ -	15 000	\$ -	\$ -
*NCFI12-002	3.5			\$ -	14 500	\$ -	\$ -
Urethane 5 oy (.5)	3.7			\$ -	17 000	\$ -	\$ -

Parts and Accessories

- Graco SPF parts

- Proportioners
- Spray Guns
- Hoses
- Chambers

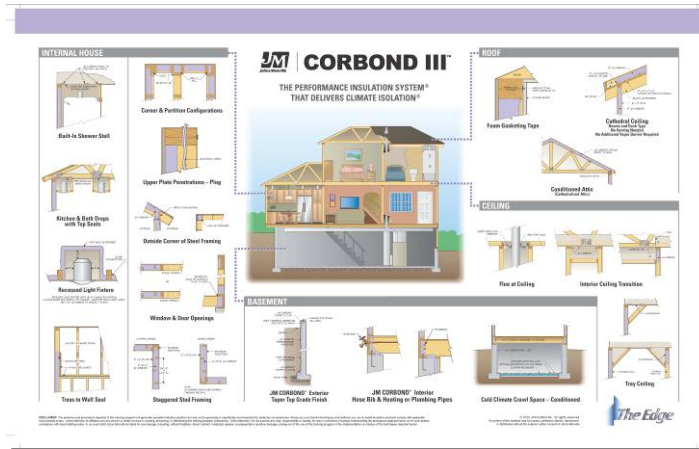


- JM IB (JM Ignition Barrier) Insumescent coating
- JM IC (JM Ignition Coating)
- JM TC (Thermal Coating) 15 Min Thermal barrier equivalent

- Let Loose
 - SPF release agent
- Sticknot
 - Gun cleaner

Promotional Material

- Residential and Commercial Product Selector Guides
- Homeowner brochure- BID 0114
- Contractor brochure – BID 0111
- Mobile equipment brochure- BID 0126
- Open cell vs closed cell- BID 0125
- Fat Head wall graphic-
- Commercial SPF- HIGH 1242



JM CORBOND III

Discover the advantages of JM Corbond III® closed-cell spray foam insulation.

- ✦ Significantly reduces utility costs
- ✦ Delivers whole house comfort
- ✦ No shrinking, no settling
- ✦ Quieter spaces
- ✦ Improves HVAC function
- ✦ Resists mold and mildew

WALLS THAT WORK

Better Living from the Inside Out.®

Field Technical Services

- Expanded rolls of SPF tech reps
 - Include SPF
 - Spider
 - FGFI and Blowing Wool
 - Determine product Fit-For-Use
- Available to support contractors
 - Hands on in the field help
- Contact TM to schedule Tech Service visit
 - Reasonable lead time

Specifier Services

- Available to converts specifications to JM
 - Primary Focused on SPF, Poly Iso and MW
 - Proactive in select markets
 - Available to any JM customer
- Focused on high growth products
- Technical Services available for product questions
 - Codes, approvals and testing information
 - 303-978-5280

Specifier Services

- Customer
 - Name of the architectural firm
 - Name of project
 - What are the current approved products

- JM
 - Substitution request letter
 - Product information to switch the spec

Specification Tools

- Substitution request letter(s)
- 3 Part Specifications
- Technical bulletins
 - ABAA Advantage
 - Hybrid Systems
- Technical Documents
 - Tech Data Sheets
 - ES reports



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