Johns Manville
A Berkshire Hathaway Company

JM Corbond III®

CLOSED-CELL SPRAY POLYURETHANE FOAM

DESCRIPTION

JM Corbond III® closed-cell spray polyurethane foam (SPF) is a Type 2, premium, two-component, medium-density, Class 1 rated, insulation system designed for commercial, residential and industrial applications. Its high yield, superior thermal and moisture performance, and exceptional sprayability and adhesion make it an ideal choice for high-performing energy efficient buildings.

RECOMMENDED USES

- Walls (exterior and interior)
- Floors
- Ceilings
- Unvented Attics
- Vented Attics
- Crawl Spaces

PERFORMANCE ADVANTAGES

- Improves Energy Efficiency
- Provides an Effective Air Barrier
- Increases Racking Strength
- Exceptional Adhesion
- Minimizes Sound Transmission

INSTALLER ADVANTAGES

- Superior Sprayability
- High Yield
- Wide Processing Window
- Low Application Odor
- Excellent Adhesion

PHYSICAL PROPERTIES*

Property per CAN/ ULC-S705	Test Method	Value
Thermal Resistance (50 mm specimen)	ASTM C518 (initial)	2.40 m2k/w (13.6 °F•ft2•h/BTU)
	ASTM C518 (conditioned)*	2.31 m2k/w (13.1 °F•ft2•h/BTU)
	CAN/ULC S770 LTTR	2.03 m2k/w (11.5 °F•ft2•h/BTU)
Core Density, Nominal	ASTM D1622	33 kg/m3 (2.1 pcf)
Compressive Strength (1")	ASTM D1621	245 kPa (36 psi)
Tensile Strength (1")	ASTM D1623	313 kPa (45 psi)
Open Cell Content	ASTM D6226	2.1%
Water Absorption	ASTM D2842	0.88%
Water Vapor Permeance (50 mm specimen)	ASTM E96	47 ng/Pa•s•m^2
Air Permeance at 75 Pa	ASTM E2178	0.0009 (L/s•m^2)
Dimensional Stability (-20°C)	ASTM D2126	0.3%
Dimensional Stability (80°C)		1.1%
Dimensional Stability (70°C at 97% RH)		12%
Recycled Content of Side B		11% (pre- and post-consumed)
Time to Occupancy	CAN/ULC-S774	24 hours pass
Fungus	ASTM C1338	No Growth
Sound Transmission Coefficient	ASTM E90 & ASTM E413	36 (STC)***
Maximum Service Temperature		180°F (82°C)
Emissions	GREENGUARD GOLD	Pass
	GREENGUARD	Pass
Surface Burning Characteristics	CAN/ULC-S102	Pass
	CAN/ULC-S127	Pass

** These items are provided as general information only. They are approximate values and are not part of the product specifications.*
*** Conditioned 90 days at 60 ° C*
****Residential exterior wall with 16" o.c. 2x4 wood studs, 2.76" Corbond III SPF, 1/2" interior gypsum board, 15/32" exterior OSB sheathing and fiber cement lap siding*

LONG TERM THERMAL RESISTANCE****

Thickness (mm)	RSI-Value (°K•m2/W)	Thickness (in)	R-Value (°F•ft2•h/BTU)
12.5	0.44	.5	2.5
25	1.0	1.0	5.6
50	2.0	2.0	12
75	3.1	3.0	18
100	4.2	4.0	24

*****The Long Term Thermal Resistance values are the design values used for JM Corbond III® per CAN/ULC-S705.1 section 5.5.8.2*

APPROVALS / COMPLIANCES

- 2018, 2015, 2012, 2009 International Building Code (IBC) Types I - V Construction
- 2018, 2015, 2012, 2009 International Residential Code (IRC)
- 2018, 2015, 2012, 2009 International Energy Conservation Code (IECC)
- CCMC# 13478-L
- ASTM C1029, Standard Specification for Spray-Applied Rigid Cellular Polyurethane Thermal Insulation
- CAN/ULC-S705, Standard for Thermal Insulation - Spray Applied Rigid Polyurethane Foam, Medium Density, Material Specification
- Air Barrier Association of America Evaluated Material ICC-ES AC377 Acceptance Criteria for Spray-Applied Foam Plastic Insulation
- GREENGUARD and GREENGUARD GOLD VOC Emission Testing Compliance
- JM Corbond III has zero Ozone Depletion Potential Help (ODP) and less than 730 Global Warming Potential (GWP)

REOCCUPANCY

- All occupants must vacate the building or the spray area must be cordoned off and remain separated from the occupied space for 24 hours after application
- The application area should be properly ventilated during application and for 24 hours post application
- Re-entry time: 24 hours

PACKAGING

- 55 Gallon Drum (1,000 lbs per set)
- 250 Gallon Tote (5,000 lbs per set)

HEALTH AND SAFETY

For information on Health and Safety, refer to Johns Manville Safety Data Sheets and the Spray Polyurethane Foam Alliance Health and Safety guidance documents at https://spraypolyurethane.org.

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The Installation Guide and the Side A and Side B Safety Data Sheets must be read prior to product application.

SUGGESTED PROCESSING PARAMETERS

Drum Storage Temperature	10° – 24°C (50° – 75°F)
Drum Temperature During Application	18° – 27°C (65° – 80°F)
Proportioner Preheat Temperature	Side A: 35°C – 49°C (95°F – 120°F) Side B: 40°C – 52°C (105°F – 125°F)
Hose Temperature	38° – 52°C (100° – 125°F)
Surface Temperature (Summer)	7°– 49°C (45° – 120°F)
Surface Temperature (Winter)	-7° – 21°C (20° – 70°F)
Viscosity at 24°C	A: 250 cps B: 650 cps

The initial settings are a guideline and ambient and substrate temperatures may require settings outside of the suggested range. Under no circumstances should a temperature of 135°F be exceeded without first contacting a JM technical representative.

STORAGE AND SHELF LIFE

JM Corbond III SPF Side A and Side B should be stored between 10 – 24°C. Side A has a 12 month shelf life, and Side B has a 6 month shelf life when properly stored.

DRUM TEMPERATURE

Material will perform better when its temperature is between 18° – 27°C. Drums may be placed into a heated room for two days before use to acclimate.

MIXING / RECIRCULATION

Mixing or recirculating Corbond III will lead to loss of blowing agent. JM Corbond III should NOT be mixed or recirculated.

HUMIDITY

Care should be taken if the relative humidity is greater than 80%. Excessive humidity will adversely affect system performance and physical properties.

PRESSURE SETTINGS

The finished foam properties are affected by both temperature and pressure settings. The goal of 1100 psi minimum at the gun when the trigger is pulled is an important part of proper mix. To achieve, you must take into account the pressure drop from the machine to the gun. A rough rule of thumb (depending on several parameters) is that the pressure will drop approximately 1 psi per foot of hose. Therefore, set the pressure at the machine so that when the trigger is pulled, the pressure maintained is the target gun pressure plus the pressure drop across the hose length. For example, a machine with 260 feet of hose should have a dynamic spray pressure of 1360 psi.

PASS THICKNESS

JM Corbond III may be applied in a single pass from a minimum of 13 mm (0.5") to a maximum of 89 mm (3.5"). For applications required to meet the National Building Code of Canada*, JM Corbond III may be applied in a single pass from a minimum of 15mm (0.6") to a maximum of 51mm (2"). Multiple immediate passes, with no wait time, may also be applied as follows*:

R-Value (ASTM C518 conditioned)	**R-21**	**R-28**	**R-35**
Number of Immediate Passes	2	2	3
Thickness per Pass (mm)	38 / 38 (1.5" / 1.5")	51 / 51 (2.0" / 2.0")	43 / 43 / 43 (1.7" / 1.7" / 1.7")
Maximum Total Thickness (mm)	75 (3.0")	102 (4.0")	127 (5.0")

Ambient temperature must be at least 4°C (40°F) for multiple immediate pass installation.
For application thicknesses above 5", wait 30 minutes between passes (e.g. for a 6" total thickness, install three 2" lifts waiting 30 minutes between the passes).

*In accordance with CAN-ULC-S705.2

SHUT DOWN

For breaks in application longer than 60 minutes:

1. Park the proportioner according to the manufacturer's instructions.
2. Close the fluid shut off valves on the gun and grease the spray gun according to the manufacturer's instructions when applicable.

PARTIAL DRUM POUR-UP

Residual materials should be properly handled and transferred to a new drum immediately for use within 3 - 5 days. Collecting multiple partially full drums for combining later is not a recommended practice and may result in poor quality foam.

Visit our website at **www.JM.com** or call **800-654-3103** | **Building Insulation Division** 5301 42 Ave., Innisfail, AB T4G 1A2

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