

DESCRIPTION

JM Corbond® IV HFO Canada closed-cell spray polyurethane foam (SPF) is a next generation HFO blown, two-component, medium-density, SPF insulation system. JM Corbond IV HFO Canada is designed to insulate commercial, residential, and industrial buildings. The HFO technology allows JM Corbond IV HFO Canada to be produced with a low Global Warming Potential (GWP) and with an Ozone Depletion Potential (ODP) of zero. 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

INSTALLER ADVANTAGES

- Superior Sprayability
- High Yield
- Wide Processing Window
- Less Installation Time

PHYSICAL PROPERTIES*

Property per CAN/ULC-S705.1-18	Test Method	Value
Thermal Resistance (50 mm specimen)	CAN/ULC S770 LTR	1.88 m ² ·k/w (10.7 °F·ft ² ·h/BTU)
Core Density, Nominal	ASTM D1622	35.2 kg/m ³ (2.20 pcf)
Compressive Strength	ASTM D1621	186 kPa (27.0 psi)
Tensile Strength	ASTM D1623	273 kPa (39.6 psi)
Open Cell Content	ASTM D6226	3.5%
Water Absorption	ASTM D2842	0.49%
Water Vapor Permeance (50 mm specimen)	ASTM E96	34 ng/Pa·s·m ²
Air Permeance at 75 Pa	ASTM E2178	0.0007 (L/s·m ²)
Dimensional Stability (-20°C)	ASTM D2126	+0.1%
Dimensional Stability (80°C)		+1.9%
Dimensional Stability (70°C at 97% RH)		+10.9%
Recycled Content of Side B		8.5% (pre- and post-consumer)
Fungus	ASTM C1338	No Growth
Maximum Service Temperature		180°F (82°C)
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

LONG TERM THERMAL RESISTANCE***

Thickness (mm)	RSI-Value (°K·m ² /W)	Thickness (in)	R-Value (°F·ft ² ·h/BTU)
50	1.88	2.0	10.7
75	2.89	3.0	16.4
100	3.96	4.0	22.5

***The Long Term Thermal Resistance values are the design values used for JM Corbond IV HFO Canada per CAN/ULC-S705.1-18 section 5.5.6.2



APPROVALS / COMPLIANCES

- Intertek Spec ID: 81615
- 2021, 2018, 2015, 2012, 2009 International Building Code (IBC) Types I - V Construction
- 2021, 2018, 2015, 2012, 2009 International Residential Code (IRC)
- 2021, 2018, 2015, 2012, 2009 International Energy Conservation Code (IECC)
- ASTM C1029 and Type II, 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
- ICC-ES AC377 Acceptance Criteria for Spray-Applied Foam Plastic Insulation
- JM Corbond IV HFO Canada has zero Ozone Depletion Potential (ODP) and less than 1 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 25 hours after application
- The application area should be properly ventilated during application and for 25 hours post application
- Re-entry time: 25 hours

PACKAGING

- 55 Gallon Drum (1,000 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>.

ENERGY AND ENVIRONMENT



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: 43°C – 54°C (110°F – 130°F) Side B: 46°C – 57°C (115°F – 135°F)
Hose Temperature	43° – 57°C (110° – 135°F)
Surface Temperature (Summer)	7° – 49°C (45° – 120°F)
Surface Temperature (Winter)	-7° – 24°C (20° – 75°F)

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 60°C (140°F) be exceeded without first contacting a JM technical representative.

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 JM Corbond IV HFO Canada will lead to loss of blowing agent. JM Corbond IV HFO Canada 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

For applications required to meet the National Building Code of Canada*, JM Corbond IV HFO Canada may be applied in a single pass from a minimum of 15mm (0.6") to a maximum of 50mm (2"). For applications outside of the National Building Code of Canada* JM Corbond IV HFO Canada may be applied in a single pass from a minimum of 13mm (0.5") to a maximum of 102mm (4").

Number of Immediate Passes	2	3	4
Thickness per Pass	2.0" / 2.0"	2.0" / 2.0" / 2.0"	1.7" / 1.7" / 1.7" / 1.7"
Maximum Total Thickness	4.0"	6.0"	7.0"

For application thicknesses above 7", wait 30 minutes between passes (e.g. for a 8" total thickness, install four 2" lifts waiting 30 minutes after the third pass).

*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.