

DESCRIPTION

JM Corbond® IV closed-cell spray polyurethane foam (SPF) is a next generation HFO blown, two-component, Class 1 rated, medium-density, SPF insulation system. JM Corbond IV is designed to insulate commercial, residential, and industrial buildings. The HFO technology allows JM Corbond IV 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
- Excellent Adhesion

PHYSICAL PROPERTIES*

| Property | Test Method | Value |
|---|-------------------------------|---|
| R-Value per inch | ASTM C518 (aged) | 7.0 (°F•ft²•h/BTU) |
| R-Value at 2" | | 14 (°F•ft²•h/BTU) |
| R-Value at 3" | | 21 (°F•ft²•h/BTU) |
| R-Value at 3.5" | | 25 (°F•ft²•h/BTU) |
| Core Density | ASTM D1622 | 2.0 lb/ft³ |
| Compressive Strength (1") | ASTM D1621 | 36 psi |
| Closed-cell Content | ASTM D6226 | > 90% |
| Water Absorption | ASTM D2842 | 0.88% |
| Water Vapor Permeance | ASTM E96 | 0.61 perm at 1.5", 1.1 perm at 1" |
| Air Infiltration | ASTM E283 | 0.001 L/s/m² @ 75 Pa 0.001 L/s/m² @ 300 Pa |
| Air Permeance at 75 Pa (3.75") | ASTM E2178 | 0.00055 (L/s)/m |
| Dimensional Stability (158°F at 97% RH) | ASTM D2126 | 12% Change in Volume |
| Recycled Content of Side B | | 11% (pre- and post-consumer) |
| Fungus | ASTM C1338 | No Growth |
| Sound Transmission Coefficient | ASTM E2179 | 36** (STC) |
| Service Temperature Maximum | | 180°F (82°C) |
| Emissions | GREENGUARD GOLD GREENGUARD | Pass Pass |

FLAMMABILITY CHARACTERISTICS***

| Property | Test Method | Value |
|--|------------------|--|
| Surface Burning at 4" | ASTM E84 | Class 1 |
| Flame Spread Index | | Flame Spread Index < 25 |
| Smoke Developed Index | | Smoke Developed Index < 450 |
| Commercial Fire Resistance | NFPA 285 | Assembly Passed |
| TPR2 Thermal Barrier | NFPA 286 | Assembly Passed |
| DC 315 Thermal Barrier | | |
| Attics & Crawl Space Walls & Roof Uncoated Thickness | AC377 Appendix X | Roof 7.5" max thickness Wall 5.5" max thickness |

* These items are provided as general information only. They are approximate values and are not part of the product specifications.

** Residential exterior wall with 16" o.c. 2x4 wood studs, 2.76" Corbond IV SPF, 15/32" exterior OSB sheathing, and 1/2" gypsum board.

*** Numerical flame spread and all other data presented are not intended to reflect the hazards presented by this or any other material in actual fire situations.

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>.



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)
- IAPMO ES #0146
- ASTM C1029, Standard Specification for Spray-Applied Rigid Cellular Polyurethane Thermal Insulation
- AC377 Appendix X approval for application in unoccupied attics and crawl spaces without a prescriptive ignition barrier or coating
- GREENGUARD and GREENGUARD GOLD VOC Emission Testing Compliance
- Meets ICC-ES AC377 Acceptance Criteria for Spray-Applied Foam Plastic Insulation
- JM Corbond IV has zero Ozone Depletion Potential (ODP) and less than 2 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 for non-SPF trade workers: 12 hours
- Re-entry time for building occupants: 24 hours

PACKAGING

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



SUGGESTED PROCESSING PARAMETERS

| | |
|-------------------------------------|--|
| Drum Storage Temperature | 50° – 80°F (10°C – 27°C) |
| Drum Temperature During Application | 65° – 80°F (18°C – 27°C) |
| Proportioner Preheat Temperature | Side A 110°F – 130°F (43°C – 54°C) Side B 115°F – 135°F (46°C – 57°C) |
| Hose Temperature | 110° – 135°F (43°C – 57°C) |
| Surface Temperature (Summer) | 45° – 120°F (7°C – 49°C) |
| Surface Temperature (Winter) | 25° – 75°F (-4°C – 24°C) |

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 140°F be exceeded without first contacting a JM technical representative.

DRUM TEMPERATURE

Material will perform better when its temperature is between 65° – 80°F. Drums may be placed into a heated room for two days before use to acclimate.

MIXING / RECIRCULATION

Mixing or recirculating JM Corbond IV will lead to loss of blowing agent. JM Corbond IV 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 IV may be applied in a single pass from a minimum of 0.5" to a maximum of 4".

Multiple immediate passes, with no wait time, may also be applied as follows:

| R-Value | R-35 | R-42 | R-49 |
|------------------------------|-----------|-----------|---------------------------|
| Number of Immediate Passes | 2 | 3 | 4 |
| Thickness per Pass (in) | 2.5 / 2.5 | 2 / 2 / 2 | 1.75 / 1.75 / 1.75 / 1.75 |
| Maximum Total Thickness (in) | 5.0 | 6.0 | 7.0 |

For application thicknesses above 7", wait 30 minutes between passes (e.g. for a 8" total thickness, install two 4" lifts waiting 30 minutes between the passes).

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. Never mix different formulations together.

STORAGE AND SHELF LIFE

JM Corbond IV SPF Side A and Side B should be stored between 50 – 75°F. Side A has a 12 month shelf life, and Side B has a 6 month shelf life when properly stored.