

COMPANY

Johns Manville, a Berkshire Hathaway company, was founded in 1858. Our ownership by Berkshire Hathaway, one of the most admired companies in the world and one of the most financially secure, allows JM to invest for the future. This enables JM to continue delivering the broadest range of insulation products in the industry and offering innovative solutions that meet your needs.

DESCRIPTION

JM Open Cell 450 (OC-450) Spray Polyurethane Foam insulation is a two-component, low-density, E84 Class A rated, nonstructural insulation system designed for interior commercial, residential and industrial applications. JM OC-450 is 100% water blown. JM OC-450 offers a high yield, exceptional performance and sprayability making it an ideal choice for high-performing energy efficient buildings.

RECOMMENDED USES

- Walls • Unvented Attics • Ceilings • Floors • Vented Attics • Crawl Spaces

INSTALLER ADVANTAGES

- Exceptional Sprayability • Exceptional High Yield • Low Application Odor

PHYSICAL PROPERTIES*

Property	Test Method	Value
R-value at 1"	ASTM C518 (aged)	3.6 (°F•ft ² •h/BTU)
Core Density	ASTM D1622	0.45 pcf
Open-cell Content	ASTM D6226	> 97%
Tensile Strength	ASTM D1623	5.0 psi
Dimensional Stability	ASTM D2126	< 15%
Air Permeance at 75 Pa (@ 3.5")	ASTM E283	< 0.02 (L/s)/m
Emissions: School Classroom, Private Office Family Residence	CA Specification 01350	Pass

FLAMMABILITY CHARACTERISTICS**

Property	Test Method	Value
Surface Burning at 4"	ASTM E84	Class A
Flame Spread Index	ASTM E84	Flame Spread Index < 10
Smoke Developed Index	ASTM E84	Smoke Developed Index < 250
Commercial Fire Resistance	NFPA 285	Assembly Passed
No-Burn Thermal Barrier	UL 1715	Assembly Passed
No-Burn Ignition Barrier	NFPA 286 Appendix X	Assembly Passed

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

** 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.

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 (975 lbs per set)



PERFORMANCE ADVANTAGES

- Improves Energy Efficiency
- Provides an Effective Air Barrier
- Exceptional Adhesion

APPROVALS / COMPLIANCES

- 2021, 2018, 2015, 2012, 2009 International Building Code (IBC) Types I, II, III, IV, V Construction
- 2018, 2015, 2012, 2009 International Residential Code (IRC)
- 2018, 2015, 2012, 2009 International Energy Conservation Code (IECC)
- ICC-ES AC377 Acceptance Criteria for Spray-Applied Foam Plastic Insulation
- California Department of Public Health VOC Emission Testing Compliance
- Intertek Code Compliant Research Report CCRR-0461
- IRC Section 316.6, Ignition barrier not required in unvented and unoccupied attics per CCRR-1079 section 5.4.2.3

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	50° - 80°F (10° - 29°C)
Drum Preheat Temperature	70° - 90°F (21° - 32°C)
Surface Temperature	45° - 120°F (7° - 49°C)
Proportioner Temperature	115° - 140°F (46° - 60°C)
Hose Temperature	115° - 140°F (46° - 60°C)
Maximum Agitator Working Pressure	100 psi
Maximum Agitator Speed	500 rpm
Proportioner Pressure (Dynamic)	1000 - 1500 psi
Viscosity at 77°F	280 cps "B"

The initial settings are a guideline and ambient and substrate temperatures may require settings outside of the suggested window.

STORAGE AND SHELF LIFE

JM Open Cell 450 SPF Side A and Side B should be stored between 40 - 85°F. Side B has a 6-month shelf life, and Side A has a 12 month shelf life when properly stored.

MIXING / RECIRCULATION

JM Open Cell 450 should be thoroughly mixed and recirculated for 30 minutes prior to spraying each day. Continuous mixing is required; however, the mixer speed should be reduced during spray. It is recommended to use a single blade positioned at the bottom of the drum to avoid air entrapment during mixing.

DRUM TEMPERATURE

Material will perform better when its temperature is between 80° - 90°F. Drums may be placed into a heated room for two days before use to acclimate. Alternatively, material may be preheated by recirculating during the 20 - 25 minute mixing stage of setup; set the machine heaters at 135°F and then pump material through the proportioner and back to the drums via circulation lines or a re-circulation manifold. Caution must be exercised to avoid cross-contamination. See "JM Corbond SPF Change-Over Procedure" for more information.

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 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 Open Cell 450 may be applied in passes of uniform thickness from a minimum of 1". Open-cell spray foam is different from closed-cell spray foam; the finished product does not retain heat so there is no need to limit pass thickness. The greatest limiting factor in pass thickness with open cell is that if the applicator attempts to spray back into the rising foam, the foam will blow out of the cavity. Given the right conditions, a pass thickness of as much as 12" may be possible. Cooling time between passes is not necessary, but waiting 30-60 seconds between passes will improve adhesion.

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.