PREMIUM SPRAY PRODUCTS™

FOAMSULATE™ 50 N-IB Spray Polyurethane Foam

TECHNICAL DATA

0.5 pcf Density
IAPMO #394

EQUIPMENT AND APPLICATION PARAMETERS:	
Preheater Temperature "A" & "B" Side	130°-140°F
Hose Temperature "A" & "B" Side	125°-130°F
Mixing Ratio	1 to 1 By Volume Of "A" to "B"
Application Pressures	1100 - 1200 PSI
Substrate Temperature	> 50°F
Ambient Air Temperature	> 40°F
Thickness Per Pass	Recommended 4" Not to Exceed 6"

SURFACE BURNING CHARACTERISTICS	
Flammability	ASTM E-84 Class I At 5-5/8 Inches
Flame Spread < 25 Smoke Development < 450	

CREDENTIALS CHART
Evaluation Summary Report IAPMO #394
ICC AC377 and Appendix X
ASTM Method E84
Maximum Thickness Tested : Wall Cavities = 8 Inches Ceiling Cavities in Attics and Crawlspaces = 10 Inches

IAPMO ES ®

PRODUCT TYPE: Premium Spray Products, Inc. Foamsulate™ 50 N-IB is a two component, one to one by volume spray applied polyurethane foam. To produce Foamsulate™ 50 N-IB requires the use of an "A" component (ISO) and a blended "B" component (RESIN) which contains ZERO Ozone Depleting blowing agents, catalysts, polyols and fire retarding materials.

GENERAL PROPERTIES: Premium Spray Products, Inc. Foamsulate™ 50 N-IB is a low viscosity, 0.5 pcf density open cell insulating material. Foamsulate™ 50 N-IB is designed to provide significant control of air infiltration along with a high R-value per inch. When properly installed by a trained contractor Foamsulate™ 50 N-IB quickly expands to fill the cracks, crevices, gaps and voids that exist in every structure. In addition Foamsulate™ 50 N-IB will conform to the curves, irregular surfaces and spaces to form a superior thermal envelope around your entire structure.

RECOMMENDED USES: Foamsulate™ 50 N-IB is an insulation system designed for use in residential, commercial and industrial applications. Use in lieu of more traditional forms of insulating materials such as fiberglass, cellulose or other loose fill products. Typical area's where spray polyurethane foam is applied are: exterior walls, vented and un-vented attic assemblies, between floors, etc.

THERMAL BARRIER: Current International Residential Code (IRC) and International Building Code (IBC) require that spray polyurethane foam be separated from the building interior by a 15-minute thermal barrier. The most common approved 15 minute thermal barrier is 1/2" thick gypsum board. Consult current IRC and IBC publications for a complete list of approved 15-minute thermal barriers. Explanation of the thermal barrier requirement is available on Premium Spray Products, Inc. IAPMO Report #394 is available online at www.uniform-es.org.

IGNITION BARRIER: Building codes officials will accept a spray polyurethane foam application with and without an ignition barrier under certain conditions. Foamsulate™ 50 N-IB has been approved for use in attics and crawlspaces per ICC-ES AC377, Appendix X. without a prescriptive ignition barrier, under the following conditions:

a. Entry is only to service utilities in the attic or crawl space and no storage is permitted.
b. Attic or crawl space areas cannot be interconnected.
c. Air from the attic or crawl space cannot be circulated to other parts of the building.
d. In accordance with IBC Section 1203.3 or IRC Section R408.1, under-floor (crawl space) ventilation is provided, as applicable.
e. In accordance with IBC Section 1203.2 or IRC Section R806, attic ventilation is provided, as applicable.
f. In accordance with 2012 and 2009 IMC (International Mechanical Code®) Section 701, or 2006 IMC Sections 701 and 703, combustion air is provided.
g. The foam plastic insulation is limited to the maximum thickness and density tested, as described in Section 4.4.2.2, 4.4.2.3 or 4.4.2.4 of IAPMO Report #394.
h. The installed coverage rate or thickness of coatings, if part of the insulation system, shall be equal to or greater than that described in Sections 4.4.2.2 or 4.4.2.3 of IAPMO Report #394.

Explanation of these requirements is available on Premium Spray Products, Inc. IAPMO Report #394 is available online at www.uniform-es.org..

VAPOR BARRIER: Open cell foam insulation is vapor permeable and will allow some diffusion of moisture through the product. Consult local building code requirements for use of a vapor barrier. Consider using a vapor barrier in U.S. climate zones 4 and higher. Consult current IRC and IBC publications for climate zone tables.

EQUIPMENT AND APPLICATION PARAMETERS: The values represented in the Equipment and Application Properties Chart provides initial optimum settings. Actual operating ranges will vary as ambient air; humidity, moisture and substrate temperatures vary. Extreme conditions will affect the yield, adhesion and cured physical properties of the foam. Applicator must make adjustments as conditions vary.

STORAGE: Shelf life is six (6) months from date of manufacture when stored in original unopened containers between the temperatures of 65° to 85°.

PHYSICAL PROPERTIES

R-VALUE (Aged)	3.7 / Inch	ASTM C 518
Core Density	0.5 pscf	ASTM D 1622
Open Cell Content	> 92%	ASTM D 6226
Sound Transmission	39	ASTM E 90
Air Permeability	1" Minimum Thickness	ASTM E 283

FOAMSULATE™ 50 N-IB

Spray Polyurethane Foam
0.5 pcf Density · IAPMO #394
For Professional Use Only

Experience the Premium Difference

General Information

Application Guidelines

Foamsulate™ 50 N-IB is suitable for application to most construction materials including wood, masonry, concrete, and metal. All surfaces to be sprayed with foam should be clean, dry, and free of dew or frost. All metal to which the foam is to be applied must be free of oil, grease, etc.

Condition material in the barrel to a minimum of 75° prior to application. No additional heating is required as long as the minimum temperature is achieved. The resin or "B" side requires agitation (mixing). Mix the "B" side for a minimum of 30 minutes prior to application at a high RPM. After the initial 30 minutes the RPM may be lowered for the application process. The "B" side resin must be continuously mixed during the entire application process.

The recommended pass on vertical applications is four (4) inches with a maximum thickness of six (6) inches per pass. The maximum lift per pass in an overhead application is four (4) inches. Allow ten minutes between each pass to allow for cooling. Multiple layers can be applied to reach the desired thickness and R-value.

Substrate temperature at the time of the Foamsulate™ 50 N-IB application should be between 50° to 120°, the warmer the surface, the better the adhesion. For temperatures outside of this range you must consult the Technical Services department prior to application.

As with all spray polyurethane foam systems, improper application techniques should be avoided. Examples of improper techniques include, but are not limited to, excessive thickness of spray polyurethane foam, off ratio material and spraying into or under rising foam. Potential results of improperly installed spray polyurethane foam include: dangerously high reaction temperatures that may result in fire and offensive odors that may or may not dissipate. Improperly installed foam must be removed and replaced with properly installed spray polyurethane foam. It is the responsibility of the applicator to thoroughly understand all equipment technical information and safe operating procedures that pertain to a spray polyurethane foam application.

When changing the "B" side (resin) to another type of spray polyurethane foam it is very important that the supply hoses and pumps are completely drained. Mixing of dissimilar product types will have an adverse effect on the foam.

Spray polyurethane foam insulation is combustible. High intensity heat sources such as welding or cutting torches must not be used in close proximity to any polyurethane foam.

Large masses of spray polyurethane foam should be removed to an outside safe area, cut into smaller pieces, and allowed to cool before discarding into a trash receptacle.

Equipment and Component Ratios

Polyurethane foam systems should be processed through commercially available spray equipment designed for that purpose. Foamsulate™ 50 N-IB "A" side is connected to the isocyanate pump and the Foamsulate™ 50 N-IB "B" side is connected to the resin pump. The proportioning pump ratio is 1 to 1 by volume. The pre-heater initial setting range should be 130° - 140°. The initial hose temperature range should be 125° - 130°. Equipment must be capable of maintaining temperature settings. Dynamic application pressures should range between 1100 - 1200 PSI.

Finished Foam Protection

The finished surface of the sprayed polyurethane foam should be protected from the adverse effects of direct exposure of ultraviolet light from the sun. This exposure will cause dusting and discoloration. Protective coatings designed for use with polyurethane foams are available from Premium Spray Products, Inc.

Safe Handling and Storage of Liquid Components

When removing bungs from containers use caution, contents may be under pressure. Loosen the small bung first and let any built up gas escape before completely removing. Avoid prolonged breathing of vapors. In case of chemical contact with eyes, flush with water for at least 15 minutes and get medical attention. For further information refer to "MDI-Based Polyurethane Foam Systems: Guidelines for Safe Handling and Disposal" publication AX-119 published by the Alliance For The Polyurethanes Industry, Arlington, VA.

Health and Safety

Due to the reactive nature of these components respiratory protection is mandatory. The vapors and liquid aerosols present during application and for a short period thereafter must be considered – and appropriate protective measures taken – to minimize potential risks from overexposure through inhalation, skin, or eye contact. These protective measures include: adequate ventilation, safety training for installers and other workers, use of appropriate personal protective equipment, and a medical surveillance program. It is imperative that the applicator read and become familiar with all available information on proper use and handling of spray polyurethane foam. Additional information is available at spraypolyurethane.org, polyurethane.org, sprayfoam.com or by contacting the technical services department of Premium Spray Products, Inc.

Storage and Use of Chemicals

Cold chemicals can cause poor mixing, pump cavitations, or other process problems due to higher viscosity at lower temperatures. Storage temperatures should be 65° to 85° for several days before use, and should not exceed 90°. Do not store in direct sunlight. Keep drums tightly closed when not in use and under dry air or nitrogen pressure of 2-3 psi after they have been opened. Shelf life is six (6) months from date of manufacture when stored in original unopened containers at 65° to 85°. Store in a dry and well-ventilated area.

Your Local Authorized Contractor

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