



10A Wolfer Industrial Park
Spring Valley, IL 61362

Phone: (800) 803-5189
Fax: (815) 664-5124

Email: info@biobased.net
Website: www.biobased.net

Product Specification - BioBase 501 Spray Foam

A. Product

BioBase 501 (0.5 lb/ft³ spray foam polyurethane semi-open celled insulation)

B. Manufacturer

The chemical components are manufactured by *Bio Based Chemicals, LLC*; dba *Bio Based Systems*.

C. Product Description

BioBase 501 spray foam insulation is a two-part, soy-based product installed by Certified Dealers using custom designed application equipment. When installed, BioBase 501 expands to completely fill all voids to effectively seal against air infiltration—often the major source of heat/cooling loss. BioBase 501 also provides superior acoustical and thermal performance when compared to other insulation products. While offering superior performance in conventional construction, it is especially effective in steel-framed structures, older homes and metal buildings.

BioBase 501 is applied by spraying liquid chemical components onto open wall, ceiling, and floor surfaces; or into wall and other cavities. When applied, the components quickly expand to make a foam layer of millions of air pockets—covering surfaces and filling cracks and voids. The foam adheres to almost all surfaces, and when cured can be trimmed off to provide a surface that is ready for drywall or other finishing.

D. Technical Data

Note: Bio Based Systems warrants that the physical properties of BioBase 501 meet or exceed the numbers listed in the following technical data, and that they have been verified through testing by independent laboratories. Further testing and product development is ongoing and those results will be listed in the most current specification literature.

FOAM DENSITY - MINIMUM

- Test Standard.....ASTM D1622
- Density (pounds per cubic foot)..... 0.50

THERMAL PERFORMANCE - RESISTIVITY

- Test Standard.....ASTM C518
- Resistivity (R) per inch 3.7

BURN CHARACTERISTICS

- Test Standard.....ASTM E84
- Average Flamespread Index 20
- Average Smoke Developed Index..... 400
- Fuel Contribution 2

OXYGEN INDEX

- Test Standard.....ASTM D2863
- Oxygen Index 23.5%

AIR PERMEABILITY

- Test Standard.....ASTM E283
- Unit of measure liters / second / meter²
- Test at 3.25" and 75 Pa pressure..... .0080
- Test at 5.25" and 75 Pa pressure..... .0049

WATER PERMEABILITY

- Test Standard.....ASTM E96
- Test at 3.5" thickness 16 perms
- Test at 5.5" thickness 10 perms

ACOUSTICAL PROPERTIES - SOUND TRANSMISSION CLASS

- Test Standard.....ASTM E90
- STC Sound Transmission Class 37

ACOUSTICAL PROPERTIES - NOISE REDUCTION COEFFICIENT

- Test Standard.....ASTM C423
- NRC Noise Reduction Coefficient 70



E. Containers

A set of chemicals for *BioBase 501* spray foam insulation consists of the following:

- one (1) 55 gallon drum of 'A' component
- one (1) 55 gallon drum of 'B' component

The shipping weight for each set is 1082 pounds.

Note: There is space in the 'B' component drum to allow 'C' component to be mixed into it.

F. Storage

- 'A' Component — store between 60° and 90°F.
- 'B' Component — store between 60° and 90°F.

G. Installation

BioBase 501 is installed by certified technicians that specialize in the installation of soy-based spray foam. Application of the product can generally occur independent of environmental conditions—it can be installed in hot, humid, or freezing conditions—and surface preparation is generally not necessary. Once *BioBase 501* has been sprayed, curing takes only a few seconds.

H. Installation Specifications

- Pressure 1300 psi ±300 psi
- Temperature..... 75°F ±5°F
- Temperature of block heaters and hose..... 125°F ±20°F

Complete, thorough, and accurate agitation of the components is critical to good foam. Please contact *Bio Based Systems* for a list of approved agitation equipment.

Note: 'C' component is mixed into the 'B' component drum at the time of installation.

Refer to *Bio Based Systems' Soy-Based Spray Foam Installer's Manual* for detailed information on installation specifications and techniques.

I. Warranty

Bio Based Systems warrants that *BioBase 501* spray foam insulation, when installed according to *Bio Based Systems* certified installation instructions and by a *Bio Based Systems* Certified Dealer, will perform as indicated in the current product specification sheet.

J. Technical Support

Bio Based Systems Certified Dealers and *Bio Based Chemicals, LLC* both provide information for technical and regulatory issues. Architectural specifications in CSI three-part format are available upon request.

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