



# Architectural Technical Data Sheet

## BioBased® 1701s Insulation

### DESCRIPTION

*BioBased® 1701s Insulation* is a water blown, two part, closed cell, bio-based spray applied, polyurethane foam having a nominal density of 1.7 p.c.f.

When spray applied, *BioBased® 1701s Insulation* expands 30:1, filling voids, crevices, and building cavities, and can reduce energy consumption needed for climate control by reducing infiltration. Once installed, *BioBased® 1701s Insulation* offers increased thermal resistance, and can assist in reducing the risk of moisture accumulation within the building envelope.

### INSTALLATION

*BioBased® 1701s Insulation* must be installed by certified dealers who have successfully completed a BioBased® Insulation approved training program or BioBased® Insulation approved field certification training which covers proper application techniques, environmental health and safety, building science, and building code standards. BioBased® Insulation does not recommend nor endorse open combustion appliances located in attic or crawl spaces.

*BioBased® 1701s Insulation* must be separated from occupied spaces by ½” gypsum or equivalent 15 minute thermal barrier.

### RECOMMENDED USES

*BioBased® 1701s Insulation* can be used in residential, commercial and industrial applications.

### GREENGUARD Certification Program®

*BioBased® 1701s Insulation* is a 3<sup>rd</sup> party certified product that meets the stringent low emission level requirements of the GREENGUARD Certification Program®, and has passed the GREENGUARD Certification Program for Children & Schools. View listing at [WWW.GREENGUARD.ORG](http://WWW.GREENGUARD.ORG)



	Indoor Air Quality Criteria	Product Measurement after 7 days	Product IAQ Compliance
TVOC	≤ 0.5 mg/m <sup>3</sup>	<0.003 mg/m <sup>3</sup>	YES
Formaldehyde	≤ 0.5 ppm	<0.002 ppm	YES
Total Aldehydes	≤ 0.1 ppm	0.002 ppm	YES
Individual VOC's	All ≤ 1/10 TLV	none	YES

#### Notice

The technical data contained herein is true and accurate to the best of the BioBased® Insulation's knowledge, information and belief on the date of publication. The technical data is subject to change, however, and the user should contact BioBased® Insulation prior to use or application to verify that the technical data is current. In addition, the technical data is provided for your guidance only. Because many factors can affect the processing or application of the product and/or its use, it is the user's responsibility to first test the product to determine its suitability for the user's intended use. The sale and use of this product is subject to all of the terms and conditions set forth in the BioBased® Insulation sales order, including the LIMITED WARRANTY, DISCLAIMER OF WARRANTY AND RELEASE, and EXCLUSION OF CONSEQUENTIAL AND OTHER DAMAGES. This technical data does not create an express warranty of any kind. The only warranty applicable to this product is the written, limited express warranty contained in the BioBased® Insulation sales order, which is extended to the purchaser only.

### EVALUATION CRITERIA

For proper use of this material, refer to **BioBased® Insulation Certified Dealer Training Manual** and the following building codes and guides:

- IBC, International Building Code, Chapter 26
- IRC, International Residential Code, Section R314
- API publication Ax-230: Fire & Safety Guidelines for Use of Rigid Polyurethane and Polyisocyanurate Foam Insulation in Building Construction.

Physical Properties	Value	ASTM Test Method
Closed Cell Content	> 90 %	D 2856
Core Density (nominal)	1.7 lbs/ft <sup>3</sup>	D 1622
Tensile Strength	19 p.s.i.	D 1623
Compressive Strength	23 p.s.i.	D 1621
Criteria for fungi resistance	Pass	C 1338
Surface Burn Characteristics*	1.625"	
Flame Spread	< 25	E 84-04
Smoke Development Index	< 450	E 84-04
Dimensional Stability		
82°C, Ambient Humidity	Less than 1%	D 2126-04
23°C, 50% Relative Humidity	Less than 1%	D 2126-04
-20°C, Ambient Humidity	Less than 1%	D 2126-04
Water Vapor Permeability†:		
1" Thick Foam	2.06 perms	E 96
2.5" Thick Foam	0.73 perms	E 96
Water Absorption	0.2%	D 2842-01

\* This numerical flame spread and all other data presented is not intended to reflect the hazards presented by this or any other material under actual fire conditions.

† ASHRAE defines a Class II vapor retarder as having less than 1 perm. *BioBased® 1701s Insulation*, when installed at 2.5", qualifies under this definition as a Class II vapor retarder.

<b>NFPA - 286 with 15 minute Thermal barrier</b>
Wall: 2"x8" studs, 7" foam Ceiling: 2"x10" studs, 9" foam
<b>PASS</b>

<b>Thermal Resistance, Initial R-values</b>	
50% relative humidity	
Test Method C - 518 - 02	
Shown in °F·h·ft <sup>2</sup> /BTU	
1" nominal	R - 5.9
2" nominal	R - 12
2.5" nominal	R - 15
3" nominal	R - 18
3.5" nominal	R - 19
5" nominal	R - 28
7" nominal	R - 39
8" nominal	R - 44
9" nominal	R - 50

### TECHNICAL SUPPORT

#### BioBased® Insulation, LLC

1315 North 13th Street  
Rogers, AR 72756

Phone: (800) 803-5189  
(479) 246-9523

Fax: (479) 636-5810

Email: [info@biobased.net](mailto:info@biobased.net)

#### Website:

[WWW.BIOBASED.NET](http://WWW.BIOBASED.NET)

©2008 BioBased® Insulation, LLC  
July 14, 2008