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## Provisional Specification BioBased 1701 Spray Foam

### A. Product

*BioBased 1701* is a nominal 1.7 lb/ft<sup>3</sup> density spray applied polyurethane foam insulation formulated with water as the sole blowing agent. The product is specially designed for void filling, sealing and insulating.

### B. Manufacturer

The resin is blended by *BioBased Systems, LLC*.

### C. Product Description

*BioBased 1701* spray foam insulation is a two-part, soy-based product installed using custom designed application equipment. When installed, *BioBased 1701* expands to completely fill voids and seal cracks. The resulting foam also adds significant R-Value to the final assembly.

*BioBased 1701* is applied by spraying liquid chemical components directly onto wall, ceiling and floor surfaces. When applied, the components quickly expand to create a foam layer covering surfaces, filling cracks and voids. The foam adheres to almost all clean surfaces and when cured can be trimmed as desired.

### D. Foam Physical Properties (ICC Acceptance Criteria)

Typical Properties	Test Method	BioBased 1701 Results
"A" Component:		
Viscosity at 77°F (25°C), cps	ASTM D 4878	225
Specific Gravity at 77°F (25°C)	ASTM D 4669	1.24
"B" Component:		
Viscosity at 77°F (25°C), cps	ASTM D 4878	1800
Specific Gravity at 77°F (25°C)	ASTM D 4669	1.24
Sprayed Foam Density, pcf	ASTM D 1622	1.7 nominal
Open-Cell Content, %	ASTM D 2856	<1%
R-Value per inch	ASTM C 518	
	Initial	5.5
	Aged	TBD*
Thermal Conductivity		>0.10 m <sup>2</sup> ·K/W
Maximum Service Temperature, °F (°C)	ASTM C 411	180°F (82°C)
Surface Burning Characteristics	ASTM E 84	(Preliminary)
	Class Rated	Class 1
	Flame Spread Index	25
	Smoke Developed	<250

\* TBD = To Be Determined



## E. Additional Testing

### AIR PERMEABILITY

- Test Standard ..... ASTM E 283
- Unit of measure ..... liters / second / meter<sup>2</sup>
- Test at 2.50" and 75 Pa pressure..... TBD

### WATER PERMEABILITY

- Test Standard ..... ASTM E 96
- Test at 2.5" thickness ..... TBD

### RESISTANCE TO THE GROWTH OF FUNGI

- Test Standard ..... ASTM C 1338
- Test Result..... TBD

### Compressive Strength

- Test Standard.....ASTM D 1621
- 10% deflection, parallel, psi.....26.9

## F. Containers

A set of chemicals for *BioBased 1701* spray foam insulation consists of the following:

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

## G. Storage

For both 'A' and 'B' components — store between 64°F and 86°F (18°C and 30°C).

## I. Installation Specifications

The shipping weight for each set is 1032 lbs (468 kg).

- Pressure ..... 1100 psi ±200 psi  
(76 bar ±14 bar)
- Drum temperatures ..... 90°F ±5°F  
(27°C ±3°C)
- Temperature of block
- A Side heaters and hose ..... 120°F ±15°F  
(49°C ±8°C)
- B Side heaters and hose ..... 125°F ±15°F  
(49°C ±8°C)

Complete, thorough and accurate recirculation of the components prior to spraying is critical to obtain good foam and high yields. Contact BioBased Systems for a list of approved recirculation equipment.

## J. Warranty

*BioBased 1701* is an experimental product and carries no express warranty at this time. Final determination of suitability is the responsibility of the user.

## K. Technical Support

For technical support, please contact BioBased Systems