Energy Efficient
Soy-Based
Foam Insulation

- Environmentaly friendly
- Energy efficient
- Designed for comfort
- The healthy option
- Completely airtight
- Completely durable material

- Biobased is a first of a kind spray foam insulation that combines cutting edge technology with the rapidly renewable resource of soybean polyol to provide a revolutionary, environmentally friendly insulation. Expanding to 100 times its original size and completely filling every void in the wall and roof, Biobased spray foam provides a sealed thermal and airtight building envelope to create a healthy, comfortable and energy efficient indoor environment...

Build **Healthy**, Build **Smart**...

econstruction
products ltd

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Product Specification - Biobased 501

A. Product
Biobased 501 is an 8kgm^3(0.5lb/ft^3) soy-based spray foam polyurethane open celled insulation.

B. Description
Biobased 501 spray foam insulation is a two-part soy-based product installed by certified dealers using custom designed application equipment. When installed, Biobased 501 expands 100 times its original size to completely fill all voids in walls and roof. It helps provide a sealed thermal and airtight building envelope, eliminating heat loss and creating a comfortable healthier indoor environment.

C. Environment – Sustainability
Biobased insulation is an environmentally friendly product using rapidly renewable resource of soy-based technology to replace petroleum in its products. For every kilo of soy Polyol that replaces one kilo of petroleum found in many insulation products 5.5 kilos of CO^2 is removed from the atmosphere.

D. Energy Efficiency
Due to the airtight barrier created by Biobased insulation less energy is employed to either heat or cool your building, saving up to 50% on monthly costs. It keeps conditioned air inside and unconditioned air out.

E. Durability
Unlike conventional insulation Biobased insulation will not sag or settle over time. It does not shrink or decline and comes with a lifetime warranty. It is the perfect insulation to protect against hot summers, freezing winters and rising fuel costs. It has no food source for rodents, insects or any other animal.

F. Application
Biobased 501 is applied by spraying liquid chemical components onto open walls, ceilings and floor surfaces; or into walls and open cavities. Surface preparation is generally not necessary. 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 only takes seconds to cure. Once cured all excess material can be trimmed off to provide a surface that is ready for drywall or other finishes. This product is ideal for Timber Frame and Steel Frame construction. In preparation for spraying all exposed windows, doors and surfaces sensitive to foam should be appropriately covered.

G. Storage
For both A and B components – store between 16°C to 32°C. The shipping weight of each set is 468kg.

H. Warranty
Biobased Systems warrants that Biobased 501 spray foam insulation when installed according to Biobased Systems certified installation instructions and by a Biobased Insulation certified dealer will perform as indicated in the current product specification sheet. Biobased insulation offers a limited lifetime warranty*. *Please refer to terms and conditions of warranty

I. Technical Data
Thermal Insulation
Biobased 501 provides excellent thermal performance and is effective in reducing the U-value (thermal transmittance) of the roof and walls of the dwelling or building. For the purpose of U-value calculations the Thermal Conductivity (λ value) of the product may be taken as 0.036W/mK

Air Tightness
Biobased 501 is an excellent air barrier material and when used with other necessary building materials will create the superior airtight building.

Sound
Biobased 501 is very effective as a sound barrier against unwanted exterior airborne sounds. It has twice the sound resistance in normal frequency ranges over rigid closed cell products.

Properties in Relation to Fire
When tested the product achieved a Class 1 spread of flame rating. Biobased 501 must be separated from living areas by a minimum of a 15min fire barrier.

Air Permeability
Biobased 501 allows for a very controlled diffusion of moisture vapour through the structure.
Units of measure.....litres/second/meter^2
Test at 82mm (3.25") & 75Pa pressure.....0080
Test at 140mm (5.25") & 75Pa pressure.....0049
Test standard (ASTM E283)

Resistance to the Growth of Fungi
Biobased 501 helps to manage moisture which prevents condensation and mould growth.
Test result .....Pass- no growth of fungi
Test Method.....ASTM C1338

Ventilation
Biobased 501 provides a continuous thermal and air barrier and can be considered as a 'well-sealed system' in accordance with BS5250:2002. We recommend fresh air is introduced to the building by means of proper designed Passive or mechanical ventilation systems.

Certification
The product has been independently tested by accredited laboratories in the US and conforms to all necessary ASTM test requirements.

European certification – Applied for certification in March 07, results pending.

Biobased Systems warrants that physical properties of Biobased 501 meet or exceed the numbers listed in the technical data, and that they have been verified through testing by independent laboratories. Further testing and product development is ongoing. The above data should only be used as a guide since the actual foam properties are influenced by the efficiency of the gun, component temperature, foam thicknesses and ambient conditions. Final determination of suitability is the responsibility of the user.



www.econstructionproducts.ie
info@econstructionproducts.ie
t: +353 (1) 2987155 f: +353 (1) 2987047