# High Density 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. Biobased 1701 is a rigid foam that provides exceptional performance in reducing heat transfer, improving racking strength and creating an airtight and energy efficient building.

## Build Healthy, Build Smart ...











### Product Specification - Biobased 1701

#### A. Product

Biobased 1701 is a nominal 27.2kgm<sup>3</sup> (1.7 lb/ft<sup>3</sup>) density soy-based spray foam polyurethane closed celled insulation formulated with water as the sole blowing agent.

#### B. 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<sup>2</sup> is removed from the atmosphere.

#### C. 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.

#### D. 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.

#### E. Application

Biobased 1701 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. The foam adheres to almost all clean 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. Complete, thorough mixing of the B-side component prior to spraying is critical to obtain optimum foam characteristics.

#### F. Application Caution!

Biobased 1701 should be applied in 15 to 38mm passes. The application procedure is in compliance with the SPFA foam application guidelines. Thin passes of 7mm or less should be avoided as they may result in reduced yield and loss of adhesion. All rigid foam products must not be applied with a thickness exceeding 100mm in a 24 hour period. If the thickness is exceeded the temperature build up within the foam may cause internal charring of the applied foam, seriously affecting the quality and physical properties of the foam. Under certain conditions applications exceeding this maximum recommended thickness may cause spontaneous combustion of the foam.

#### G. Storage

For both A and B components – store between  $18^\circ C$  to  $30^\circ C.$  The shipping weight of each set is 468kg.

#### H. Technical Data

#### Thermal Insulation

Biobased 1701 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 ( $\lambda$  value) of the product may be taken as 0.026W/mK

#### Structural Integrity

When sprayed to the inside of a building Biobased 1701 bonds the structure together enhancing the structural integrity. The NAHB research centre in the US determined that rigid foam insulated panels increase the raking strength of both wood and metal walls by between 70 to 200% depending on the sheathing used.

#### Air Tightness

Biobased 1701 is an excellent air barrier material and when used with other necessary building materials will create a superior airtight building.

#### Properties in Relation to Fire

When tested the product achieved a Class 1 spread of flame rating. Biobased 1701 must be separated from living areas by a minimum of a 15min fire barrier

#### Resistance to the Growth of Fungi

Biobased 1701 is considered an air and moisture barrier. 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.

#### 📘 I. Warranty

The information herein is to assist customers in determining whether our products are suitable for their applications. Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. We warrant good title and that our products will meet our written liquid component specifications. Nothing herein shall constitute any other warranty, express or implied, including any warranty of merchantability of fitness or that the products will be suitable for the purposes intended.

Biobased Systems warrants that physical properties of Biobased 1701 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.







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