

**LEED**

**DURATITE**™

**BIOBASED**®  
INSULATION

By  **Rhino Linings**



## **LEED Certification**

The following are suggestions of how BioBased Insulation® or DuraTite® insulation might be incorporated into a project in order to achieve LEED credits. This list is by no means exhaustive. Please consult with the LEED Accredited Professional on your project to determine specifically how our products can be used to gain additional LEED credits.

### **LEED Credit Category – Energy and Atmosphere**

#### **Prerequisite 2 – Minimum Energy Performance**

*Requires the building to comply with ASHRAE/IESNA Standard 90.1-2004 or the local energy code, whichever is more stringent.*

When BioBased Insulation or DuraTite insulation are installed in a structure, the insulating and air sealing properties of the foam will provide an envelope that will facilitate the design of an efficient system.

#### **Credit 1 – Optimize Energy Performance**

*Requires a reduction in design energy cost compared to the energy cost budget.*

When BioBased Insulation or DuraTite insulation are installed in your structure, they provides the building with a sealed envelope, allowing the designer to downsize HVAC systems and supply the required ventilation. BioBased Insulation or DuraTite insulation, when used with a whole building concept, can help achieve the 10 possible points.

### **LEED Credit Category – Materials and Resources**

#### **Credit 2 – Construction Waste Management**

*Requires recycling and/or salvaging construction, demolition and land clearing waste.*

BioBased Insulation and DuraTite insulation contribute a significantly lower amount of waste materials by weight, tremendously helping the project reach the 50% to 75% target for diverting waste from the landfill.

#### **Credit 5.1-5.2 – Regional Materials**

*Requires use of building materials and products that are manufactured regionally within a radius of 500 miles of the project site.*

BioBased Insulation and DuraTite insulation products are manufactured in Carrollton, Texas; Houston, Texas and Chattanooga, Tennessee.

#### **Credit 6 – Rapidly Renewable Materials**

*Requires use of rapidly renewable products and materials (made from plants harvested within a ten-year cycle or shorter) for 2.5% of the total value of all building materials and products used in the project.*

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BioBased Insulation® and DuraTite® insulation products integrate annually renewable vegetable oils, so they contribute to the rapidly renewable credit. Depending on the size, cost, and amount of the project insulated, these products can contribute a portion of the required 2.5% of rapidly renewable products and materials.

## **LEED Credit Category – Indoor Environmental Quality**

### **Credit 4.1 – Low Emitting Materials: Adhesives & Sealants**

*Reduce the concentration of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.*

BioBased Insulation products utilize water as the blowing agent, and DuraTite 2.0 insulation uses Enovate® a Zero Ozone Depletion Potential and low Global Warming Potential blowing agent. Enovate® is not considered a VOC in the US. All products meet the LEED maximum VOC content requirement of less than 50 g/L

### **Credit 6.2 Controlling of Systems – Thermal Comfort**

#### **Credit 7.1 – Thermal Comfort**

*Requires a thermally comfortable environment that supports the productivity and well being of building occupants.*

BioBased Insulation and DuraTite insulation can help a building comply with ASHRAE Standard 55-2004 by insulating and air sealing the building, which allows for controlled ventilation strategies that enhance uniform temperatures, humidity control and pollutant reduction. Without the sealing qualities of spray foam insulation, thermal comfort control and ventilation for individual occupants would be very difficult to achieve.

## **LEED Credit Category – Innovation & Design Process**

### **Credit 1 – Innovation in Design**

*Provides design teams and projects with an opportunity to be awarded points for exceptional performance above the requirements set by the LEED Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by the LEED Green Building Rating System.*

The superior performance characteristics of BioBased Insulation and DuraTite insulation and their installation flexibility contribute to this credit in two ways. First, these products allow easy installation in areas that do not allow simple installation of conventional insulation products. Second, these products are guaranteed to perform to the stated specifications for the life of the structure.

The above are suggestions only. It is recommended that a complete review of the LEED Green Building Rating System be made prior to applying for the listed prerequisites and credits. The LEED System can be reviewed at [www.usgbc.org](http://www.usgbc.org).



## BioBased Insulation® and DuraTite™ Insulation LEED Reporting Form

Project Name: \_\_\_\_\_

Contractor: \_\_\_\_\_

Specification Section: \_\_\_\_\_ Submittal Number: \_\_\_\_\_

	Product Name	Manufacturer	Total Material Cost [\$]	Recycled Content		Location of Manufacturer <sup>3</sup>	Distance to Manufacture Location <sup>4</sup> [mi.]	Rapidly Renewable <sup>5</sup>	VOC Content <sup>6</sup> [g/L]
				Post-Consumer <sup>1</sup> %	Pre-Consumer <sup>2</sup> %				
1	BioBased 501w®	Rhino Linings		0	0	Carrollton, TX		3%	22
2	DuraTite™ 2.0	Rhino Linings			3%	Carrollton, TX		3%	<0.00000002

### NOTES & DEFINITIONS

1. Post-Consumer Recycled Content: portion of material or product which derives from discarded consumer waste that has been recovered for use as a raw material (e.g., plastic bottles, newspaper)
2. Pre-Consumer Recycled Content: Portion of material or product which derives from recovered industrial materials that are diverted from municipal solid waste for use in a different mfg. process, prior to use by a consumer (e.g., fly-ash in concrete or synthetic gypsum board, both of which are by-products of coal-burning power plants). Note that spills and scraps from the original mfg. process that are combined with other constituents after a minimal amount of reprocessing for use in further production of the same product do not qualify.
3. Manufacture Location: Final assembly of components into the building product that is furnished and installed by trades (e.g., if the hardware comes from Dallas, TX, the lumber from KEENE, NH and the joist is assembled in Kent, WA; then the location of final assembly is Kent, WA). Distance is measured as a direct line between the two points (as the Crow flies).
4. Extraction location: Location of origin for virgin or recovered resources from which the product's components are made (i.e., before processing or manufacturing). Distance is measured as a direct line between the two points (as the crow flies)
5. Rapidly Renewable: Materials and products made from raw materials that are harvested within a 10-year cycle (e.g., bamboo, cork, linoleum, fast-growing poplar, strawboard, wool carpet).
6. VOC: Volatile organic compound which vaporizes into a gas at normal room temperatures and is emitted during the use, application, curing, or drying of an adhesive, sealant, paint or coating product (excludes methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds). VOC must be in grams/liter (less water) for proper LEED documentation.
7. For additional product information see [www.rhinolinings.com/insulation](http://www.rhinolinings.com/insulation)

### CONTRACTOR CERTIFICATION:

I, \_\_\_\_\_ a duly authorized representative of \_\_\_\_\_ hereby certify that the material information contained herein is an accurate representation of the material qualifications to be provided by us, as components of the final building construction.

SIGNATURE OF AUTHORIZED REPRESENTATIVE: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_