

Product Compatibility Evaluation – LEED® - NC USGBC

GA Product Evaluation No. **09-004-V01**

Date of Evaluation: **December 2009**

Product Name: **TUF-BAR™**
 Manufacture Name: **BP Composites Ltd**

Product Type: **Fibrous Reinforcing**
 Master Format Code: **03 24 00**

Product Description:

TUF-BAR™ is a glass fibre reinforced polymer rebar that is light, strong, corrosion resistant, acts as a thermal and electrical insulator, and is ideal for a project with non-magnetic requirements. Please visit www.bpcomposites.com for further information.

Product Evaluation:

The information on the form is applicable internationally. The product data has been evaluated and verified as of the date on this form by an independent green product data verifier; 'Green Alberta'.

Energy & Atmosphere

Credit No.	Credit Name	Credit Requirements	Product Compliance
Prerequisite 2 & Credit 1	Minimum & Optimize Energy Performance	Design building to be energy efficient and model design against ASHRAE/IESNA 90.1-2004/2007. Achieve 2pts or 14% energy efficiency for a new building or 7% for a renovation. (10% and 5% respectively for LEED 2009)	Product is thermally non-conductive and therefore does not act as a thermal bridge.

Materials & Resources

Credit No.	Credit Name	Credit Requirements	Product Compliance
2.1 & 2.2	Construction Waste Management: 50% and 75%	Divert 50% to 75% project construction waste from landfill	Product is 100% recyclable. Product can be crushed along with concrete, does not have to be separated.
4.1 & 4.2	Recycled Content: 10% and 20% (post consumer + ½ post industrial)	10% to 20% recycled content as a project average (by weight) of all div.2-10 project materials.	Product contains 2% post-industrial recycled content.
5.1 & 5.2	Regional Materials 10% and 20%	Materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% (based on cost) of the total materials value. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value.	100% of the product is manufactured in Edmonton, Alberta, Canada. 79% of the materials are sourced from a manufacturer in Leduc, Alberta, Canada. <i>*Depending on the project site this product may meet the requirements.</i> <i>**The Leduc manufacturer sources their materials from various locations in the United States. Exact amounts and locations to be obtained from manufacturer.</i>

Note - The use of this product can contribute to the process of achieving points in the categories listed above however specifying this product does not guarantee point achievement or LEED® certification of a project.

Disclaimer:
 The information provided on this sheet is believed to be accurate as of the date noted. However, Green Alberta (GA) makes no warranty either expressed or implied, concerning the accuracy or completeness of this information. Any information that changes after the evaluation date is the responsibility of the manufacturer / supplier to inform GA and request an updated LEED® Compatibility Chart.

Page 1 of 2



W: www.greenalberta.ca

E: info@greenalberta.ca

P: 1.780.466.7616

TF: 1.866.430.7616



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Innovation & Design Process

Credit No.	Credit Name	Credit Requirements	Product Compliance
Credit 1 through 1.4 (LEED 2009 allows 5 pts)	Innovation in Design	To provide design teams and projects the opportunity to achieve 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.	TUF-BAR™ has many innovative properties and applications. Please refer to list below for innovative ideas to include on your next LEED® project.
Innovation 1	GHG Reduction – During transport	Compared to conventional rebar, less GHG's are emitted during transport of TUF-BAR™ because it is lightweight (4x lighter than conventional re-bar) and easily transported in high volumes. If a project team were to specify a significant % of products used on a project based on GHG's emitted during transport, this product would meet the requirements of the innovation.	
Innovation 2	Conserving Resources	TUF-BAR™ does not corrode or oxidize in water applications and therefore the building code requires approximately half the concrete cover of conventional re-bar depending on the application. If a project team were to specify a significant % of materials and finishes based on using the least amount of material and or finishes, this product would meet the requirements of the innovation in certain applications.	
Innovation 3	Reducing Toxins in potable water	TUF-BAR™ does not leach toxins or corrode when installed in a water application. If a project team were to specify a significant % of their potable water piping and storage tanks based on having low or NO toxins released into potable water, this product would meet the requirements of the innovation.	
Innovation 4	Durable Building	Similar to the Durable Building Credit in the Canadian version of the LEED rating system. If a project team were to develop and implement a durable building plan that includes choosing durable materials and components which reduce the need for new materials and the environmental costs of resource extraction, production processes and waste disposal. Product facilitates durable building because it does not oxidize or cause concrete to crack. Testing shows that the product maintains structural integrity for over 100 years extending the life of concrete and thus saving resources. <i>*Testing available from manufacturer upon request.</i>	

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Page 2 of 2



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