



# BrightShelf<sup>®</sup> & LEED<sup>®</sup>

(Leadership in Energy and Environmental Design)

## LEED STATEMENT

H&H Enterprises, Inc. is committed to sustainable design in our products; however, it doesn't stop there for us. We strive to continually use and manage our natural resources responsibly, conserve energy in our daily operations, and to minimize material waste in the production of our products.

Every step of the product development was designed around making the BrightShelf<sup>®</sup> the most sustainable light shelf ever made. BrightShelf<sup>®</sup> is a product that embraces the triple bottom line aspect of sustainable design. These are economic viability, environmental stewardship, and social responsibility or awareness.

BrightShelf<sup>®</sup> is made almost entirely from aluminum, with some minor steel and stainless steel components. On average the total recycled content of domestically produced, flat rolled products for the Building & Construction market was approx 85%, with 60% of that content coming from post consumer sources. Not only does aluminum used in the BrightShelf<sup>®</sup> contain a high amount of recycled content, at the end of its long, useful life in your building, BrightShelf<sup>®</sup> can be 100% recycled. Aluminum components can be repeatedly recycled back into similar products with no loss of quality, and also aluminum products provide the most valuable component for most municipal recycling efforts. Using aluminum with this high amount of recycled content is a huge energy saving benefit, as aluminum made from recycled content requires only 5% of the energy required to produce the same aluminum from bauxite ore. Additionally, using recycled aluminum instead of raw materials reduces air pollution generation such as CO<sub>2</sub>, SO<sub>x</sub>, and NO<sub>x</sub> by 95% and water pollution by 97%.

The manufacture of the BrightShelf<sup>®</sup> is designed around sustainable practices. 100% of aluminum scrap is recycled, but the best way to use materials is, of course, source reduction. It is better to stop waste up front than to have waste from cuts. This not only costs money and energy to cut and recycle back into new materials, but also adds to the overall cost of the product. The top and bottom sheet of the BrightShelf<sup>®</sup> are cut to length from coil stock, eliminating almost all waste from this aspect of the shelf from ever entering the product stream. Additionally the extrusions are ordered in longer lengths in multiples that consist of approx 5'-0" lengths, this length is the most common size ordered, thus eliminating the most waste possible from the extrusion cutting process. Scraps from extrusions are minimized to lengths less than 12" long in the majority of cuts. The end caps and clips are CNC cut from flat plate in an optimized nested pattern generating less than 5% waste from the entire sheet being cut. All materials considered waste are then recycled to eventually become new aluminum products. Zero materials from the BrightShelf's<sup>®</sup> manufacturing waste are sent to landfills.

We are dedicated to assisting our customers in meeting the goals of sustainable design and also to adhere to the goals of LEED certification. LEED (Leadership in Energy and Environmental Design) is a rating system for certifying high-performance buildings and sustainable design. There are multiple ways of earning LEED certification where BrightShelf<sup>®</sup> can help towards earning LEED credits:

- LEED for New Construction and Major Renovations<sup>™</sup>
- LEED for Core & Shell<sup>™</sup>
- LEED for Commercial Interiors<sup>™</sup>
- LEED for Existing Buildings: Operations & Maintenance<sup>™</sup>
- LEED for Schools<sup>™</sup>
- LEED for Retail: New Construction<sup>™</sup>
- LEED for Retail: Commercial Interior

Whether your goal is LEED Certified, Silver, Gold, or Platinum, we know BrightShelf® can help you earn credits in a multitude of ways. Below are some specific credit examples:

Category	Description & Intent	BrightShelf® Contribution	Potential Credits
Energy and Atmosphere (EA)	<b>Energy &amp; Atmosphere Credit 1. Optimizing Energy Performance</b> - Achieve increasing levels of energy performance above the prerequisite standard to reduce environmental impact associated with excessive energy use.	BrightShelf® injects natural daylight into the building space, and when installed with lighting controls, can reduce, or in some cases, eliminate the need for electric lighting during daylight hours. BrightShelf® also enables a drastic reduction in the necessary daylighting window square footage, reducing heating and cooling loads thereby reducing the energy required to counteract these loads.	1 to 19
Materials & Resources (MR)	<b>Materials &amp; Resources Credit 4 Recycled Content</b> Increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials	BrightShelf® is fabricated primarily out of Aluminum Extrusions and Aluminum plate or sheet products. Overall BrightShelf's® average total recycled content based on weight is approx <b>36%</b> . (Using the total sum post consumer + ½ pre-consumer formula) Note that BrightShelf® is considered an assembly, therefore recycled content is calculated by weight, not value as other materials are subject to.	2
Materials & Resources (MR)	<b>Materials &amp; Resources Credit 5 Regional Materials: Extracted Processed &amp; Manufactured Regionally</b> – Increase demand for building products that are extracted and manufactured within the region, thereby supporting the regional economy and reducing the environmental impact resulting from transportation.	BrightShelf® is manufactured primarily in Thornton, CO 80241 and 100% of all extruded components are manufactured in the United States. However, raw materials required to produce aluminum are mined principally in locations remote to the US, including Australia, China, and Brazil. Because our vendors cannot identify the precise geographic location of extraction and processing of these materials, we are unable to contribute to the points in this category	0
Indoor Environmental Air Quality (IEQ)	<b>Indoor Environmental Quality Credit 8.1 Daylight and Views -Daylight</b> – Provide for the building occupants with a connection between indoor spaces and the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.	BrightShelf® primary purpose is in this category. By introducing natural daylight deep into the building space, occupants feel a connection to the outdoors. For LEED NC & CS daylight 75% of occupied spaces for 1 point. For LEED Schools, daylight 75% of Classroom & Core Learning Spaces for 1 credit, 90% for 2 credits. Earn an additional credit for daylighting 75% of other regularly occupied spaces, for a total of 3 potential credits for Schools.	1 to 3
Indoor Environmental Air Quality (IEQ)	<b>Indoor Environmental Quality Credit 8.2 Daylight and Views - Views</b> – Provide for the building occupants with a connection between indoor spaces and the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.	BrightShelf's® unique design permits installations closer to the ceiling space. This enables more of the view portion of the window system to remain and count towards the views credit. Typically view has to be unobstructed between 2'-6" and 7'-6" AFF.	2
Indoor Environmental Air Quality (IEQ)	<b>Indoor Environmental Quality Credit 3.1 Construction IAQ Management Plan</b> – Reduce indoor air quality problems resulting from the construction/ renovation process to help sustain the comfort and well-being of construction workers and occupants.	BrightShelf® is shipped in fully assembled sections directly to the jobsite. This means no on site fabrication is required, which aids in indoor air quality of the construction crews and building occupants	1

<p>Indoor Environmental Air Quality (IEQ)</p>	<p><b>Indoor Environmental Quality Credit 4.2 Low-emitting Materials</b> – Reduce the quantity of indoor air contaminants that are odorous, irritating, and/or harmful to the comfort and well being of installers and occupants.</p>	<p>BrightShelf<sup>®</sup> is painted or anodized prior to arrival on site and requires no field painting. This contributes to the prevention of contaminants in the indoor air, thus contributing to the well being and comfort of construction crews and building occupants. During the factory painting process, our paint vendor has zero VOC emissions released into the environment. VOC's are captured in a filter and incinerated to prevent escape. The filter system is treated to render VOC's inactive and thus a non-hazardous landfill material.</p>	<p>1</p>
<p>Indoor Environmental Air Quality (IEQ)</p>	<p><b>Indoor Environmental Quality Credit 7.1 Thermal Comfort Design</b> – Provide a comfortable thermal environment that supports the productivity and well-being of the building occupants.</p>	<p>BrightShelf<sup>®</sup> reduces the necessary daylighting square footage of the glass envelope, thus reducing thermal heat gain and cooling loads upon the building HVAC systems vs. conventional light shelf systems. BrightShelf<sup>®</sup> utilizes a highly reflective lighting sheet to redirect daylight, reducing the amount of heat absorbed by the light shelf. This promotes a reduction of excessive heat of the light shelf itself and the air around it. BrightShelf<sup>®</sup> also acts as a sunshade for the daylighting portion of the window, thereby decreasing heat gain caused from the incident sunshine.</p>	<p>1</p>

Products are not reviewed or certified under LEED. LEED credit requirements cover the performance of materials in aggregate, not the performance of individual products or brands. For more information on LEED, visit [www.usgbc.org/contact](http://www.usgbc.org/contact)

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