

FunderMax and LEED

Leadership in Energy and Environmental Design

Buildings fundamentally impact people's lives and the health of the planet. In the United States, buildings use one-third of the total energy, two-thirds of the total electricity, one-eighth of the total water, and transform land that provides valuable ecological resources. Since the LEED Green Building Rating System for New Construction (LEED-NC) was first published in 1999, it has been helping professionals across the country to improve the quality of buildings and their impact on the environment.

As the green building sector grows exponentially, more and more building professionals, owners, and operators are seeing the benefits of green building and LEED certification. Green design not only makes a positive impact on public health and the environment, it also reduces operating costs, enhances building and organizational marketability, potentially increases occupant productivity, and helps create a sustainable community. LEED fits into this market by providing rating systems that are voluntary, consensus-based, market-driven, based on accepted energy and environmental principals, and they strike a balance between established practices and emerging concepts.

The LEED rating systems are developed by USGBC (United States Green Building Council) committees, in adherence with USGBC policies and procedures guiding the development and maintenance of rating systems. The LEED Green Building Rating System for Commercial Interiors (LEED-CI) is only possible due to the generous volunteer efforts of many individuals, and was in development for over four years. This rating system was approved by member ballot during October 2004 after considering input from the public during two comment periods (most recently updated Spring 2009).

LEED-CI is one of a growing portfolio of rating system products serving specific market sectors. The LEED-CI Rating System is applicable to tenant improvements of new or existing office space.

In 2007 LEED for Schools was introduced. A review of this rating system has shown where FunderMax and iZone HPL products can assist with achieving the design requirements.

How can using FunderMax HPL (wood grain, plain, or metal décor) Panels help me with a LEED building project ?

Product: FunderMax / iZone HPL (wood grain, plain, or metal décor) installed using iClad System.

Energy & Atmosphere

EA Credit 3 (LEED-CI). Measurement and Verification.

The intent is to provide for the ongoing accountability and optimization of tenant energy and water consumption performance over time.

Measurement and verification to evaluate building performance requires electrical, mechanical, and other operating equipment to be accessible for adjustment, maintenance, and inspection. FunderMax HPL (wood grain, plain, or metal décor) ceilings, mounted using the iClad system, allow easy downward access to equipment located above the ceilings. Panels do not have to be removed from the ceiling for access as the torsion spring system allows them to “hinge” from one edge, and custom panel sizes allow easy and spacious access in desired areas.

The panels and system do not contribute directly to meeting this LEED credit or pre-requisite, but they may make it easier to comply with, and implement the intent of the LEED criteria.

Materials & Resources

MR Credit 1.1 and 1.2 (LEED-CI) (1-4 Points). Building Reuse: Maintain Existing Walls

The intent is to extend the life cycle of existing building stock, conserve resources, retain cultural resources, reduce waste and reduce environmental impacts of new buildings as they relate to materials manufacturing and transport.

For building restoration or upgrades, the iClad solution provides a significant advantage, allowing existing buildings to be re-clad with minimal impact on the environment. This applies to the interior as well as the exterior.

MR Credit 2 (LEED-CI). Construction Waste Management.

Divert 50% and 75% from Landfill.

The intent is to divert construction and demolition debris from disposal in landfills and incineration facilities. Redirect recyclable recovered resources back to the manufacturing process, and reusable materials to appropriate sites.

FunderMax HPL (wood grain, plain, or metal décor) panels are custom manufactured in the factory to fit the individual project, minimizing the need for field adjustments and scrap that would otherwise go to landfill. FunderMax uses a CAD/CAM cutting system for the HPL (wood grain, plain, or metal décor) core material, with computerized nesting to minimize waste and off-cuts. Although not taken into account for this credit, all FunderMax and iZone HPL products are shipped in wooden crates that can potentially be re-cycled.

The panels do not contribute directly to meeting this LEED credit or pre-requisite, but they may make it easier to comply with, and implement the intent of the LEED criteria.

MR Credit 4 (LEED-CI) (1 point). Recycled Content, 10% (post-consumer + ½ pre-consumer), and 20% (post-consumer + ½ pre-consumer).

The intent is to increase demand for building products that have incorporated recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials.

iZone HPL panels can be manufactured using 95% pre-consumer (post industrial) and 5% post consumer inputs. The core material can have up to 45% post consumer recycled content. iZone Panels can be manufactured using 100% pre-consumer core material. Our iClad system is manufactured using 10% post-consumer and 60% pre-consumer aluminum extrusions. These aluminum extrusions can be recycled.

FunderMax HPL panels (wood grain, plain, or metal décor) and iClad grid, can directly contribute to this LEED credit.

MR Credit 5 (LEED-CI) (1 point). Regional Materials, 20% Manufactured Regionally.

The intent is to increase demand for building materials that are extracted and manufactured within the region, thereby supporting the regional economy and reducing the environmental impacts resulting from transportation.

FunderMax HPL (wood grain, plain, or metal décor) panels are manufactured in Austria. iZone panels are manufactured in North America. The iClad grid components are manufactured in Toronto, Canada. The majority of the North Eastern U.S. is within a radius of 500 miles – see map. The cores used for iZone HPL (wood grain, plain, or metal décor) panels are extracted/manufactured within the region (within 500 miles). The aluminum used for the iClad ceiling grid is produced locally from regionally collected recycled aluminum.

FunderMax HPL panels (wood grain, plain, or metal décor) and iClad ceiling grid, can directly contribute to this LEED credit.

MR Credit 6 (LEED-CI) (1 point). Rapidly Renewable Materials.

The intent is to reduce the use and depletion of finite raw materials and long cycle renewable materials, by replacing them with rapidly renewable materials.

FunderMax HPL (wood grain, plain, or metal décor) panels do not use natural products (such as bamboo or wood veneers) to achieve the natural look. As such, the impact on such resources is nil. It may be possible to manufacture iZone HPL panels from rapidly renewable core materials. The panels are custom manufactured and project specific.

This credit may be available for certain projects.

Indoor Environmental Quality

EQ Prerequisite 3 (LEED for Schools). Minimum Acoustical Performance Required.

The intent is to provide classrooms that are quiet, and in which teachers can speak to the class without straining their voices and students can effectively communicate with each other and the teacher.

FunderMax HPL (wood grain, plain, or metal décor) panels can provide excellent acoustic absorption, and can greatly assist the project in achieving design RT levels for classrooms.

FunderMax HPL panels (wood grain, plain, or metal décor) and Panels can directly contribute to this LEED credit.

IEQ Credit 3.1 (LEED-CI). Construction IAQ Management Plan - During Construction.

The intent is to prevent indoor air quality (IAQ) problems resulting from construction or renovation and promote the comfort and well-being of construction workers and building occupants.

FunderMax HPL (wood grain, plain, or metal décor) panels are custom manufactured in the factory to fit the individual project. This minimizes any contribution to indoor air contamination, as on-site cutting and finishing should not be required.

The panels do not contribute directly to meeting this LEED credit, but they may make it easier to comply with, and implement the intent of the LEED criteria.

IEQ Credit 3.2 (LEED-CI). Construction IAQ Management Plan - Before Occupancy.

The intent is to reduce indoor air quality problems resulting from construction or renovation and promote and well-being of workers and occupants.

FunderMax Panels can be manufactured using core materials with no added formaldehyde ("formaldehyde free"). This will help with reducing the formaldehyde concentration on the list of contaminants.

FunderMax HPL panels do not contribute directly to meeting this LEED credit, but they may make it easier to comply with, and implement the intent of the LEED criteria.

IEQ Credit 4.1 (LEED-CI). Low Emitting Materials - Adhesives and Sealants.

The intent is to reduce the quantity of indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and well-being of installers and occupants.

FunderMax HPL (wood grain, plain, or metal décor) panels are custom manufactured and finished in the factory to fit the individual project. This minimizes any contribution to indoor air contamination, as on-site cutting and finishing will be minimized. FunderMax also ships pre-finished, eliminating on-site finishing. No finishes are required.

FunderMax HPL panels do not contribute directly to meeting this LEED credit, but they may make it easier to comply with, and implement the intent of the LEED criteria.

IEQ Credit 4.2 (LEED-CI) (2 points). Low Emitting Materials – Adhesives and Sealants; Paints and Coatings.

The intent is to reduce the quantity of indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and well-being of installers and occupants.

FunderMax HPL (wood grain, plain, or metal décor) panels are custom manufactured and finished in the factory to fit the individual project. This minimizes any contribution to indoor air contamination, as on-site cutting and finishing should not be required. The panels are installed with mechanical fasteners. There are no paints or sealants or coatings of any sort applied on site, either as part of the installation procedure or in short- or long-term maintenance.

FunderMax HPL panels do not contribute directly to meeting this LEED credit, but they may make it easier to comply with, and implement the intent of the LEED criteria.

IEQ Credit 4.4 (LEED-CI) Low Emitting Materials - Composite Wood and Agrifiber Products.

The intent is to reduce the quantity of indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and well-being of installers and occupants.

FunderMax Panels are manufactured using core materials with no added urea-formaldehyde resins. A water based lacquer finish is available. FunderMax HPL panels are also highly resistant to bacterial cultures, moulds, and fungi adding a significant factor to air quality control.

FunderMax HPL panels can directly contribute to this LEED credit.

IEQ Credit 7.1 (LEED-CI) (1 point) Thermal Comfort - Design.

The intent is to provide a comfortable thermal environment that promotes occupant productivity and well-being.

FunderMax HPL (wood grain, plain, or metal décor) panels provide acoustic absorption and thermal insulation. The amount of thermal insulation provided is dependent upon the panel thickness specified/supplied.

The panels do not contribute directly to meeting this LEED credit, but they may make it easier to comply with, and implement the intent of the LEED criteria.

Innovation & Design Process

ID Credit 1 (LEED-CI) Innovation in Design.

The intent is 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.

FunderMax HPL (wood grain, plain, or metal décor) panels provide an innovative method to achieve acoustic absorption or reflection, and thermal insulation, in a HPL (wood grain, plain, or metal décor) product. FunderMax Panels provide an innovative method of achieving acoustic absorption or reflection in a HPL (wood grain, plain, or metal décor) product.

FunderMax HPL (wood grain, plain, or metal décor) panels are custom manufactured to the innovative shape and design, created by the architect/designer. FunderMax HPL (wood grain, plain, or metal décor) wall panels and Solo planks, provide good product durability, which will assist when making life-cycle cost calculations.

ID Credit 1 (LEED-CI) Durable Building

The intent is to minimize materials use and construction waste over a building's life resulting from premature failure of the building and its constituent components and assemblies.

FunderMax and iZone HPL panels, and the iClad substructure components have a 10-year manufacturer's warranty but the product is known to last for decades without significant fading and without deterioration in quality and appearance.

FunderMax HPL panels can directly contribute to this LEED credit.

It is very important to remember that FunderMax and iZone HPL panels cannot provide any direct LEED points for a project – they can only contribute toward the overall specific credit that is being calculated.

For further information, please contact Dunleavy Cordun Associates Inc. at 416-789-1999, or 905-648-1881.