The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is a voluntary, consensus-based national standard for developing high performance, sustainable buildings. Members of the U.S. Green Building Council representing all segments of the building industry developed LEED and continue to contribute to its evolution.

Material and Resources

MR Credit 6.0 – Rapidly Renewable Materials

LEED NC & LEED CI Intent: Reduce the use and depletion of finite raw materials and long-cycle renewable materials by replacing them with rapidly renewable materials.

LEED NC Requirement: Use rapidly renewable building materials and products (made from plants that are typically 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, based on cost.

LEED CI Requirement: Use rapidly-renewable construction and Division 12 (Furniture and Furnishings) materials and products, made from plants that are typically harvested within a 10-year or shorter cycle, for 5% of the total value of all materials and products used in the project.

Armstrong Ceiling Systems Contribution:

Armstrong WoodWorks Bamboo Ceilings can contribute to the rapidly renewable calculation. Since this product is an assembly, take the rapidly renewable value of only the bamboo veneer to combine with other interior furnishings and finishes to achieve credit. Contact TechLine for a sample assembly calculation.

Indoor Environmental Quality

EQ Credit 4.1 to 4.5 – Low-emitting Materials

LEED Intent: Reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.

LEED Requirement: All of the adhesives and sealants used in the building must meet the requirements of the South Coast Air Quality Management District (SCAQMD) Rule #1168. Interior paints and coating applied on-site must meet the limitations and restrictions concerning chemical components set by several standards. Carpets must meet the Green Label Plus testing and product requirements. These credits pertain to adhesives & sealants, paints, carpets and composite wood.

Armstrong Ceiling Systems Contribution:

Armstrong Mineral Fiber Ceilings and Suspension Systems meet the State of Washington, and California Section 01350 requirements for low emissions. For additional information, refer to "The Basics of Formaldehyde & Interior Spaces" CS-3550, visit armstrong.com/ceilings/green or contact TechLine for specific product information.

Low emitting products can be used as a possible innovation credit.

EQ CREDIT 4.4 – Low-Emitting Materials

LEED NC – Composite Wood & Agrifiber Products

LEED CI – Composite Wood & Laminate Adhesives

LEED Requirement: Composite wood and agrifiber products, including core materials, must contain no-added urea-formaldehyde resins. Laminate adhesives used to fabricate on-site and shop-applied assemblies containing these laminate adhesives must contain no added urea formaldehyde.

Armstrong Wall Systems Contribution:

Unlike most composite wood or traditional millwork products used in interiors, Armstrong WoodWorks® Ekos™ Wall Systems meet these requirements. In addition, these products meet and exceed the State of Washington and California Section 01350 requirements for low emissions with no detectable formaldehyde emissions. For additional information, refer to "Formaldehyde Emissions & Interior Spaces – What You Need To Know About Choosing Wood Wall Systems" CS-3839.

Indoor Environmental Quality

EQ Credit 8.1, 8.2 – Daylight and Views

LEED Intent: Provide the 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.

LEED Requirement: Achieve a minimum glazing factor of 2% in a minimum of 75% of all regularly occupied areas or achieve at least 25 footcandles. AND Provide daylight redirection and/or glare control devices to ensure daylight effectiveness.

Armstrong Ceiling Systems Contribution:

Armstrong High Light Reflectance ceilings can aid in extending daylighting into the space. A typical acoustical ceiling reflects just 75% of the light striking the surface, while a high light reflectance ceiling is engineered to reflect up to 90% of the light striking the surface. Recent independent studies have shown a 10-15% daylighting effectiveness increase. A separate study concluded that the High Light Reflectance ceiling could achieve the LEED credit with up to 12% less glazing than a ceiling with a reflection of 75%, when submitting for credit using daylight simulation results. For additional information, refer to "Energy Savings and Environmental Benefits of High Light Reflectance Ceilings" CS-3808.

Innovation and Design Process

Acoustic Performance

An Innovation Credit for Acoustics can be applied for demonstrating that the acoustical performance improvements of a building clearly enhance the indoor environment in ways consistent with the preservation of human health and maximization of occupant productivity. Credits based on acoustics will be evaluated on a case-by-case basis. Contact your Armstrong representative for details on solutions to achieve a balanced acoustical design.

LEED® for Schools

EQ Credit 4 - Low Emitting Materials Option 6 - Ceilings and Wall Systems

LEED Requirement: All acoustical ceiling systems and wall coverings must meet CA Dept. of Health Services Standard Practice for the Testing of VOC Emissions.

Armstrong Ceiling and Wall Systems Contribution:

Many Armstrong mineral fiber ceiling and wall systems will meet the Low Emitting Materials requirement for Ceiling and Wall Systems. Products are listed in our selector on page 234.

EQ Credit 9 – Enhanced Acoustical Performance for Schools

LEED Requirement: Minimum Acoustical Performance is required. Design classrooms and other core learning spaces to meet the Reverberation Time (RT) requirements of ANSI Standard S12.60-2002 (Annexes B-D (40 dBA.; 35 dBA). Also design classrooms and other core learning spaces to meet the Sound Transmission Class (STC) requirements of at least 35.

EQ Prerequisite 3 – Minimum Acoustical Performance is required. Design classrooms and other core learning spaces to meet the Reverberation Time (RT) requirements of ANSI Standard S12.60-2002 (Annexes B-D 45 dBA). Also design classrooms and other core learning spaces to meet the Sound Transmission Class (STC) requirements of at least 35.

Armstrong Ceiling and Wall Systems Contribution:

Many Armstrong Ceilings and Wall Systems meet these acoustical requirements. Visit armstrong.com/schools for product information for Classroom Acoustics and a reverberation tool to aid in product selection.