

Frequently Asked Questions About LEED

What is LEED?

LEED is the Green Building Rating System developed by the U.S. Green Building Council (USGBC). LEED stands for Leadership in Energy and Environmental Design.

What is the purpose of LEED?

LEED was developed to encourage building design and construction practices to decrease energy consumption and reduce the impact of buildings on the environment and occupants.

How does LEED work?

LEED utilizes a point based system. Points are awarded for incorporating design features and building products that meet high energy and environmental standards. The points are divided among five categories. A building can become LEED certified once a minimum level of points are obtained. Roofing systems and materials can help gain points in three of those categories: Sustainable Site; Energy and Atmosphere; and Materials and Resources.

What is SRI?

The Solar Reflective Index is a measure of the constructed surface's ability to reflect solar heat, as shown by a small temperature rise. It is defined so that a standard black (reflectance 0.05, emittance 0.90) is 0 and a standard white (reflectance 0.80, emittance 0.90) is 100. SRI combines reflectance and emittance into one number.

Why is solar reflectivity important?

It's important because, when the sun's rays are reflected, less heat is transferred into the building, requiring less energy for cooling.

What are the LEED requirements for roofing?

Option 1

Use roofing materials having a Solar Reflective Index (SRI) equal to or greater than the values in the table below for a minimum of 75% of the roof surface.

Option 2

Install a vegetated roof for at least 50% of the roof area.

Option 3

Install high albedo and vegetated roof surfaces that, in combination, meet the following criteria:
(Area of SRI Roof/0.75) + (Area of vegetated roof/0.5) = Total Roof Area

Required SRI Values

Roof Type	Slope	SRI
Low-Sloped Roof	≤ 2:12	78
Steep-Sloped Roof	≥ 2:12	29

What is emissivity and why is it important?

Infrared emissivity (or emittance) is a measure of the ability of a surface to shed some of its heat (in the form of infrared radiation) away from the surface (i.e., roofing membrane). High infrared emissivity helps keep surfaces cool. Metallic surfaces have a low infrared emissivity. This property can make a significant difference in controlling the "urban heat island effect."

What is the "urban heat island effect"?

Heat islands occur where many buildings and paved surfaces in close proximity are designed with dark materials that absorb heat from the sun. Studies have shown an urban area can become 2° to 8°F warmer than the surrounding countryside.

What city, county, state or federal agencies are requiring LEED certification?

Any building project can submit for LEED certification. An increasing number of cities, counties and states across the nation are adopting LEED certification for certain projects. In addition, branches of the federal government (including the Department of Defense, General Services and the EPA) are also encouraging LEED certification for their projects. Please visit www.usgbc.org for the most current information.

What types of building projects can apply for LEED certification?

LEED has standards for new commercial construction, major renovation projects, existing buildings, commercial interiors (CI), core and shell projects (CS), homes (H) and neighborhood developments (ND). LEED programs most pertinent to roofing are new construction (NC) and existing buildings (EB).

What qualifies as "innovative design"?

Designs that demonstrate exceptional environmental or energy performance above the current LEED requirements, or identify a new area for measure can be awarded up to 4 LEED points. All innovation design credits must undergo a review process.

What roofing products already qualify for LEED standards?

JM PVC with Elvaloy® and JM TPO white roofing membranes, GlasKap® CR white mineral surfaced, white acrylic coated cap sheet, and BUR and modified bitumen systems with JM's white TopGard® coatings can all meet the standards.

What energy savings may be achieved with compliance to LEED?

Cool roof products can decrease the amount of heat transferred into a building and reduce peak cooling demand, resulting in lower air conditioning bills. As always, actual savings will depend on the whole building design (i.e., windows, insulation, etc.).

Are there any other benefits to applying for LEED certification?

Not only do you receive recognition for quality buildings and environmental stewardship, but you gain the ability to compete in a growing market among corporations, universities and government agencies that have discovered green buildings provide better work environments and cost less to operate. You gain further marketing exposure through the web site of the U.S. Green Building Council (USGBC), the organization that developed the LEED system and administers the certification program. In addition, you can qualify for state and local government incentives in states where they are offered.

What is the benefit of Platinum versus the basic LEED certified building?

Higher level certifications require additional points resulting in the incorporation of more energy efficient and environmentally sound designs. The higher the level, the more energy efficient the building, resulting in higher energy savings over the life of the building.