& FRAMECRETE AAC PANELS LEED CERTIFICATION

FRAMECRETE
AUTOCLAVED AERATED CONCRETE

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¿What is LEED certification?

Leadership in Energy and Environmental Design (LEED) is a system developed by the US Green Building Council to evaluate a building's environmental performance and stimulate market transformation towards a sustainable design.

The system is based in prerrequisites and credits, allowing projects to gain points for the implementation of environmentally preferible actions during the design and construction, to ensure efficiency during its use. LEED was launched as an effort to accelerate the development and implementation of sustainable building practices involved throughout building's life cycle.

The certification is divided into the following impact categories:

Integrative Process**I** SustainableSites **I** WaterEfficiency
Energy & Atmosphere**I** Materials& Resources**I** IndoorEnvironmentalQuality
Innovationin Design**I** Regional Priority

For a building to obtain LEED certification, all prerequisites must be met, as well as enough credits to gain the minimum amount of points to achieve the objective certification level.

Certified
40-49

Silver
50-59

Gold
60-79

Platinum
80+

Framecrete AAC Panels

Framecrete AAC Panels can help projects that seek to implement environmentally preferible practices achieve LEED points by contributing towards the requirements of some credits and prerequisites.

The following prerequisites and credits will benefit from Litecon AAC product specification.

Prerequisite/Credit LEEDfor New Construction and Major Renovations	Points v4/v4.1
ENERGY & ATMOSPHERE	
EApMinimum Energy Performance	-
EAcOptimize Energy Performance	1-18
MATERIALS& RESOURCES	
MRcBuilding ProductDisclosure and Optimization-Sourcing of Raw Materials Option 2. Leadership Extraction Practices	1
MRcBuilding ProductDisclosure and Optimization-Material Ingredients Option 1. Material Ingredient Reporting	1
INDOORENVIRONMENTAL QUALITY	
IEQcLow-Emitting Materials	1
IEQc Acoustic Performance	1

FRAMECRETE CLADDING

PANEL

FRAMECRETE FIREWALL

PANEL

FRAMECRETE

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EAp MinimumEnergy Performance/ EAc Optimized Energy Performance

Prerequisite Intent

To reduce the environmental and economic harms of excessive energy use by achieving a minimum level of energy efficiency for the building and its systems.

Credit Intent

To achieve increasing levels of energy performance beyond the prerequisite standard to reduce environmental and economic harms associated with excessive energy use.

Requirements

To comply with the prerequisite and achieve points in the credit, the project must demonstrate overall energy use reduction, following ASHRAE 90.1-2010 standard. Most projects must develop an energy simulation model to compare Base Case and Project Case results. This model must include the building's envelope, lighting, HVAC and water heating systems, as well as motors and process energy. Building envelope plays a key role towards energy efficiency, since it is responsible for limiting heat exchange between the building and its surroundings.

Litecon Documentation

PARAMETER	VALUE	
Nominal Density	30	lb/ft3
Real Density	33	lb/ft3
Thermal Conductivity	0.84	BTU in/h ft2°F
R Value, Cladding Panel (2")	2.3	h ft2°F/BTU
R Value, Firewall Panel (3")	3.6	h ft2°F/BTU

MRc Building Product Disclosure and Optimization- Sourcing of Raw Materials

Credit Intent

To encourage the use of products and materials for wihch life cycle information is available and that have environmentally, economically, and socially preferible life cycle impacts. To reward project teams for selecting products verified to have been extracted or sourced in a responsible manner.

Requirements

Option 2. Leadership Extraction Practices

To achieve 1 point on this Option, the Project must install products that meet with at least one of the folllowing criteria for at least 25% of the total materials cost: extended producer responsibility, bio-based materials, wood products, materials reuse, recycled content, or a USGBC approved program. Pre-consumer recycled content is rated at ½ its cost.

If any of these products is considered a regional material (extracted, manufactured, and purchased within 100mi from the Project), it is valued at 200% of its contributing cost.

Litecon Documentation

Litecon Cladding Panels and Firewall Panels have a 55.95% pre-consumer recycled content, which qualifies as a 27.98% for credit documentation.

Litecon panels are manufactured in the state of Hidalgo in Mexico.

MRc Building Product Disclosure and Optimization- Material Ingredients

Credit Intent

To encourage the use of products and materials for which life cycle information is available and that have environmentally, economically, and socially preferible life cycle impacts. To reward project teams for selecting products for which the chemical ingredients in the product are inventoried using an accepted methodology and for selecting products verified to minimize the use and generation of harmful substances. To reward raw material manufacturers who produce products verified to have improved life-cycle impacts.

Requirements

Option 1. Material Ingredient Reporting

To achieve 1 point, projects must use at least 20 different products from at least five different manufacturers that publish the chemical inventory of their products to at least 0.1%. These may include manufacturer inventory, Health Product Declarations, Cradle to Cradle certification, or a USGBC approved program.

Litecon Documentation

Litecon Cladding Panel and Firewall Panel have Health Product Declaration published by HPD Collaborative, thus contributing to credit compliance.

liteconusa.com/HPD

EQc Low-Emitting Materials

Credit Intent

To reduce concentrations of chemical contaminants that can damage air quality, human health, productivity, and the environment.

Requirements

Projects may earn 1 to 3 points by using products that comply with VOC and General Emissions Evaluation limits in the following categories: interior paints and coatings, interior adhesives and sealants, flooring, composite wood, ceilings, walls, termal, and acoustic insulations, and furniture. Products considered Inherently Nonemitting Sources are excempt from testing.

Inherently Nonemitting Sources

Productsthatare inherentlynon emittingsourcesofVOCS (Stone, ceramic, poder-coatedmetals, platedoranodizedmetal, glass, concrete, claybrick, and unfinishedoruntreatedsolidwood flooring) are consideredfullycompliantwithoutanyVOC emissions testingiftheydo notincludeintegral organic-basedsurface coatings, binders, orsealants.

Litecon Documentation

Litecon Cladding Panel and Firewall Panel are considered in the “Ceilings, Walls, Thermal, and Acoustic Insulation” category for LEED v4, and “Wall Panels” for LEED v4.1. Being Autoclaved Aerated Concrete panels without any coatings, binders, or sealants, these products are considered Inherently Nonemitting Sources.

EQc Acoustic Performance

Credit Intent

To provide workspaces and classrooms that promote occupants' well-being, productivity, and communications through effective acoustic design.

Requirements

To achieve 1 point, projects must demonstrate maximum HVAC background noise, reverberation time, and minimum Sound Transmission Class (STC) between spaces, depending on the adjacency combinations. These may vary from to 45 (standard office - standard office) to 60 (residence, hotel room – retail; mechanical equipment room – occupied area).

Framecrete Documentation

Framecrete has developed STC testing for different Cladding Panel wall systems.

THICKNESS	WALL SYSTEM DESCRIPTION	STC
2"	Cladding Panel fixed to framework with Sonolockperimeter seal	23
6 ½"	Cladding Panel fixed to framework with Sonolockperimeter seal + 4" glass fiber insulation + ½" gypsum panel + Sonolockperimeter seal	50
10 ¼"	½" gypsum panel + Sonolockperimeter seal+ 1 ½" cal. 22 aluminum frame + 2" glass fiber insulation + 2" Cladding Panel + 5mm air gap + 1 ½" cal. 22 aluminum frame + ½" gypsum panel + Sonolockperimeter seal	50
10 ¼"	½" gypsum panel + 1 ½" cal. 22 aluminum frame + 2" glass fiber insulation + 2" Cladding Panel with Sonolockperimeter seal + + 5mm air gap + 1 ½" cal. 22 aluminum frame + ½" gypsum panel	49