

Understanding LEED v4 BD+C Homes & Mid-Rise, Green Construction and Barrier Protection Systems

Deciphering and qualifying a project for USGBC’s LEED v4 credits can be a daunting task. This document intends to explain how the various barrier technologies represented by Stego® Industries can help fit into the residential LEED equation. The goal is to help educate designers about how these technologies measure up when selecting below-slab moisture, soil gas, and termite protection systems.

LEED v4 Homes & Mid-Rise Credits Where Product Selection Can Make Significant Impacts

Credits where a barrier product may either contribute or align with the credit’s intent include:

Sustainable Sites: Non-Toxic Pest Control

Homes	SSc3	½-2 points
Mid-Rise	SSc3	½-2 points

These credits encourage the use of systems that minimize both problems associated with pests and the use of pesticides. A half point can be earned by utilizing a physical termite barrier that has been approved by code. Pango® Termite Defense System, which utilizes Pango Wrap, Pango Tape, and Pango Claw®, has been certified per the 2012 NGBS, Section 602.1.5. This section specifically calls on the use of a continuous physical foundation termite barrier—defined as an uninterrupted, non-chemical method of preventing ground termite infestation (e.g. aggregate barriers, stainless steel mesh, flashing, or plastic barriers)—be installed in geographical areas that have subterranean termite infestation potential. The Pango Termite Defense System provides a safer alternative to the chemical termiticides that this credit aims to minimize. Additionally, Pango Wrap also performs the function of an under-slab vapor barrier.

Energy & Atmosphere: Minimum Energy Performance

Homes	EAp1	---
Mid-Rise	EAp1	---

Energy & Atmosphere: Annual Energy Use

Homes	EAc1	1-29 points
Mid-Rise	EAc1	1-30 points

Stego Wrap, StegoCrawl® Wrap, and Pango Wrap prevent significant amounts of water vapor from entering the building envelope from below the foundation or crawl space. This reduced moisture migration can significantly decrease the latent moisture load and subsequent power required by the HVAC system to maintain indoor humidity and temperature setpoints. Stego barrier products may not reduce power consumption levels enough to meet the minimum energy performance thresholds or earn credits through optimization, but it can certainly contribute to an overall energy-performance enhancement strategy. Many variables are involved with energy optimization; please contact the Stego Industries Technical Department for more details on this subject.



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Materials & Resources: Durability Management

Homes	MRp2	---
Mid-Rise	MRp2	---

Materials & Resources: Durability Management Verification

Homes	MRC2	1 point
Mid-Rise	MRC2	1 point

The intent of this prerequisite and credit is to promote durability and performance of the building enclosure (and related components and systems) through appropriate design, materials selection, and construction practices. Specifically, the requirements of the ENERGY STAR for Homes Version 3, Water Management System Builder checklist must be met, subsequently inspected, and verified. In residential projects utilizing either a slab-on-grade or a crawlspace, the use of an under-slab vapor retarder is listed as part of the mandatory capillary break system.

Indoor Environmental Quality: Radon Resistant Construction

Homes	EQp4	---
Mid-Rise	EQp4	---

In areas defined as Zone 1 ("High Potential") for radon, radon-resistant construction is required. An integral component of a radon mitigation system is a soil gas retarder to prevent the transmission of the gas into the building envelope, thereby allowing the gas to be vented away from the home's interior. Stego Wrap Vapor Barrier, StegoCrawl Wrap, and Pango Wrap have all been evaluated to determine their radon diffusion coefficients and also provide superior levels of strength and longevity in the below-grade environment. Thus, the barrier products can fulfill a critical role in an effective radon mitigation system for residential projects. Please contact the Stego Industries Technical Department for additional information.

Indoor Environmental Quality: Low-Emitting Products

Homes	EQc7	½-3 points
Mid-Rise	EQc7	½-3 points

Stego Wrap Vapor Barrier, StegoCrawl Wrap, and Pango Wrap all have an extremely low water vapor permeance rating, in line with the most current industry-expert recommendations. This credit requires low-VOC adhesives and flooring materials to be used for interior applications. Unfortunately, low-VOC flooring adhesives, such as water-based adhesives, and carpet systems are susceptible to moisture-related damage and microbial growth due to water vapor migration. The barrier technologies represented by Stego Industries will help protect these flooring systems from moisture-related damage. Please contact the Stego Green Team for detailed information on VOC requirements.





Put Product Performance First

Stego Wrap Vapor Barriers and Retarders revolutionized building practices by replacing generic and often heavily recycled (“visqueen”) plastic sheeting that have proven to deteriorate and fail over time, often leading to catastrophic floor failures, mold and moisture invasion, and poor indoor air quality. The superior performance of the products Stego represents relies on prime virgin resins and unique engineering in their construction and manufacture. We believe this is the most sustainable philosophy: developing products that will protect buildings, and their components and people, for generations.

Stego's Commitment to True Sustainability

Stego Industries is committed to bringing innovative technologies to market centered around a company culture which promotes environmental responsibility, sustainability, and wellness. We are a pilot program member and sponsor of the Health Product Declaration Collaborative, which works to provide a framework to identify harmful components in construction products. In addition, Stego is among the Healthy Building Network's “Transparency Leaders” in our industry and operate from a 100 percent solar-powered facility with an Executive Green Team charting a sustainable future for the company.

