

Construction Products Technical Bulletin

LEED® for Homes: Using Building and Construction Products from Engineered Coated Products and Intertape Polymer Group to Achieve Certification Points

Introduction

In January of 2008, the U.S. Green Building Council (USGBC) launched the LEED® for Homes rating system. LEED® for Homes extended to the residential construction industry, a rating system similar to what had already been adopted in the commercial construction industry. LEED® for Homes has a number of categories in which points are awarded towards the Certified, Silver, Gold and Platinum certifications. The purpose of this Technical Notes is to describe how points can be earned using building and construction products from Engineered Coated Products and Intertape Polymer Group.

LEED® for Homes

LEED® for Homes is a rating system that promotes the transformation of the mainstream homebuilding industry to more sustainable, best-practice environmental features. LEED® for Homes defines a green home as being healthy, comfortable, durable, energy efficient and environmentally responsible. The rating system uses eight separate, yet integrated, categories:

- ◇ Innovation and Design Processes (ID)
- ◇ Location and Linkages (LL)
- ◇ Sustainable Sites (SS)
- ◇ Water Efficiency (WE)
- ◇ Energy and Atmosphere (EA)
- ◇ Materials and Resources (MR)
- ◇ Indoor Environmental Quality (EQ)
- ◇ Awareness and Education (EA)

Credit Categories



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The strength of the LEED® for Homes program is its third-party verification through LEED® for Homes Providers and Green Raters. Providers are local and regional organizations chosen by USGBC to provide certification to LEED® for Homes projects in their regional markets. A Green Rater is an individual who works as part of the LEED® for Homes Provider Team to perform field inspections and performance testing. A current list of authorized providers and more information on the LEED® for Homes program can be found at www.usgbc.org.

Certification Requirements

There are four certification levels

- ◇ Certified (45 – 59 points)
- ◇ Silver (60 – 74 points)
- ◇ Gold (75 – 89 points)
- ◇ Platinum (90-136 points)

The rating system includes prerequisites, i.e. mandatory measures that must be completed during the design of construction phase, minimum number of points that must be earned in some of the credit categories. These are summarized in the Table 1 below.

Table 1. Prerequisites and Minimum Point Requirements

Credit Category	Prerequisites (Mandatory Measures)	Minimum Point Requirements	Maximum Points Available
Innovation & Design Processes (ID)	3	0	11
Location and Linkages (LL)	0	0	10
Sustainable Sites (SS)	2	5	22
Water Efficiency (WE)	0	3	15
Energy and Atmosphere (EA)	2	0	38
Materials and Resources (MR)	3	2	16
Indoor Environmental Quality (EQ)	7	6	21
Awareness and Education (AE)	1	0	3
Total	18	16	136

Potential Points for Current ECP and Intertape Polymer Group Products

The following analysis shows examples of how ECP and Intertape building and construction products can be used to earn points under the different LEED® for Homes categories. However, USGBC certified Providers and Green Raters are responsible for awarding points. The LEED® for Homes requirements are in italics, the notes on how ECP and Intertape products can be used to earn points are in plain text.

Sustainable Sites (SS)

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Surface Water Management, 4.1 Permeable Lot, c, (1 point)

Impermeable surfaces that are designed to direct all runoff toward an appropriate permanent infiltration feature.

The Nova-Thene AquaMaster™ products are impermeable geomembranes that can be used to line ditches, ponds and basins and prevent the loss of water.

Nontoxic Pest Control 5, Pest Control Alternatives, c, (0.5 points)

Include no wood-to-concrete connections or separate any exterior wood-to-concrete connections (e.g. at posts, deck supports, stair stringers) with metal or plastic dividers.

The Nova-Thene AquaMaster™ products are plastic geomembranes that can be used to separate any exterior wood-to-concrete connections.

Water Efficiency (WE)

Water Reuse 1.1 Rainwater Harvesting System (maximum 4 points)

Designs and install rainwater harvesting system and storage system (including surface runoff and/or roof runoff) for landscape irrigation or indoor water use.

The Nova-Thene AquaMaster™ products are impermeable geomembranes that can be used to line ditches, ponds and basins and prevent the loss of water.

Energy and Atmosphere (EA)

Optimize Energy Performance 1.2 Exceptional Energy Performance (maximum 34 points).

Exceed the performance of ENERGY STAR for Homes.

FLEX-GARD® housewraps and Intertape sheathing tapes are excellent choices, along with other energy-efficient features, to meet and exceed ENERGY STAR home requirements.

Air Infiltration 3.3 Minimal Envelope Leakage (3 points, not available if points received in EA 1.2)

FLEX-GARD® Aspire™ housewrap and Intertape sheathing tapes are excellent choices to minimize air infiltration and leakage in the building envelope.

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Heating and Cooling Distribution System A. Forced-Air Systems 5.1 Reduced Distribution Losses (1 point); 5.2 Greatly Reduced Distribution Losses (2 points); 5.3 Minimal Distribution Losses (3 points).

Intertape's line of HVAC tapes, such as AC 698 film tape, offer maximum performance for sealing forced air heating and cooling systems.

Water Heating 7.2 Pipe Insulation (1 point)

All domestic hot water piping shall have R-4 insulation. Insulation shall be properly installed on all piping elbows to adequately insulate the 90-degree bend.

Intertape's FSK Sealant Tape is an excellent choice for taping insulation joints on tri-directional FSK jacketing to ensure that insulation remains properly installed.

Materials and Resources (MR)

Material Efficient Framing 1.4 Off-Site Fabrication (4 points)

FLEX-GARD® housewraps and Intertape sheathing tapes are excellent choices for use in manufactured panelized wall systems and manufactured housing.

Environmentally Preferable Products 2.2 c Local production (0.5 point per component)

Use products that were extracted, processed and manufactured within 500 miles of the home.

ECP and Intertape manufactures various products and numerous locations across North America. Contact your local representative to determine the distance from your construction project.

Waste Management 3.2 Construction Waste Reduction (maximum 3 points)

Generate 2.5 pounds or less of net waste per square foot of conditioned floor area.

ECP's FLEX-GARD® housewrap and Nova-Seal® synthetic roof underlayments weigh less than traditional materials such as asphalt-saturated kraft paper or asphalt-saturated felt and therefore are excellent ways to contribute to reduced construction waste.

Indoor Environmental Quality

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Radon-Resistant Construction in Moderate-Risk Areas (1 point)

If the home is outside EPA Radon Zone 1, design and build the home with radon-resistant construction techniques as prescribed by EPA, the International Residential Code, Washington State Ventilation and Indoor Air Quality Code, or some equivalent code or standard.

Note: Radon-resistant construction does not guarantee that occupants will not be exposed to radon. The Surgeon General and EPA recommend that every home in the country be tested for radon. For information, see www.epa.gov/radontest.html

ECP's VaporMaster™ 10 and VaporMaster™ 15 underslab vapor barriers may prevent the infiltration of radon vapor into concrete slab foundations.

Conclusion

The building and construction products from ECP and Intertape Polymer Group are ideally suited to help construction professionals earn LEED for Homes certifications. Please consult the U.S. Green Building Council for up-to-date information. The notes contained here are suggestions only and need to be verified with the USGBC.

Contact Information



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