

Understanding the role of CertainTeed Foundation Systems in meeting Green Building Standards



CertainTeed's Form-A-Drain concrete footing form system, ThermaEZE foam Insulation panels, T-Roc thermal laminate foundation insulation system, EnergyEdge high performance slab edge insulation system and Platon waterproofing membrane provide users the leading edge in green building, while simplifying installations and reducing callbacks, all with the latest technologies. CertainTeed's Foundation Products offer drainage, insulation, waterproofing protection and support radon venting for residential and commercial projects. Homeowners also benefit from the safe, comfortable, and energy-efficient structures that the complete system provides. This foundation system contributes to earning points under multiple categories in both the LEED and NAHB green rating systems.

Along with providing superior drainage and protection against basement water infiltration, **Form-A-Drain** also contributes to the home's overall **environmental quality** by supporting venting of harmful radon gas under the basement slab. Furthermore, Form-A-Drain **reduces waste** generated on the job site and saves time and money by eliminating the need to install, remove and dispose of footing forms. Form-A-Drain is also a Green Approved product for the NAHB Green Building Standard—automatically contributing points toward certain credits. **ThermaEZE** is an **ENERGY STAR rated** product that provides a cost effective means for building thermally efficient above- and below-grade poured concrete walls. **T-Roc** is a composite panel permanently laminated to high R-value EPS foam product. T-Roc installs easily in conventional concrete wall forms for an insulated and semi-finished basement solution. The **EnergyEdge** product, comprised of expanded polystyrene foam (EPS) and a finished surface, serves as a form for the slab and provides slab insulation for both commercial and residential projects. The EnergyEdge system makes it easy to form and insulate the foundation slab by providing a thermal barrier to improve energy efficiency of the building and meet required energy standards. EnergyEdge can help earn ENERGY STAR ratings, and help contribute to earning points in the LEED and NAHB rating systems. **Platon** is a tough, durable, high density polyethylene air-gap waterproofing membrane that provides superior foundation wall and under-slab **moisture protection**. This dimpled 24-mil. wrap separates water from the foundation wall and permanently bridges foundation cracks, preventing moisture from entering the basement of a home.

CertainTeed is committed to using environmentally preferable materials in our products and our products play a unique role in improving the home environment. Form-A-Drain foundation system lineals are made from 100% pre- and post-consumer recycled PVC, which translates into millions of pounds per year of PVC diverted from landfills. In addition to landfill waste reduction, the use of recycled PVC reduces the release of CO2 into the atmosphere that would have occurred if we made our product from virgin PVC. EnergyEdge high performance slab edge insulation system is made from all local materials, helping to contribute to regional material credits in the LEED ratings systems. EnergyEdge's EPS foam can be recycled after use and contains no CFCs, HCFCs, or Formaldehyde. Platon is manufactured from 92% post-consumer content. Platon's high recycled content will help projects qualify for LEED and NAHB points and is a Green Approved product for the NAHB National Green Building Standard.

Both LEED and NAHB standards provide verification that the building project meets high performance standards for green building.

When use in combination, Form-A-Drain, ThermaEZE, T-Roc, EnergyEdge, and Platon create a highly efficient insulation and waterproofing foundation system that provides energy efficiency, long-term durability, and moisture protection.

** See "Credit Tables for GFS 8.22.11" spreadsheet for how each product contributes to the LEED-H, NC, CS, Schools, Retail, Healthcare, and NAHB's National Green Building Standard



NAHB's National Green Building Standard, developed in cooperation with the International Code Council (ICC), has been approved as the ANSI standard for green building practices. This standard awards points based on the design and material choices made in constructing the home.

buildingresponsibly™

CertainTeed respects the environment through the responsible development of sustainable building products and systems.



NAHB* NATIONAL GREEN BUILDING STANDARD CREDITS

	POSSIBLE POINTS
FORM-A-DRAIN	
Resource Efficiency	
602.3: Interior and exterior foundation perimeter drains are installed and drain pipe is sloped to discharge to daylight, drywell or sump pit.	4
604.1: Use recycled-content building materials.	3
608.1: Use indigenous materials for major elements of the building.	2
Indoor Environmental Quality	
902.3: Install a passive radon system.	10-15
THERMA-EZE, ENERGYEDGE AND T-ROC	
Resource Efficiency	
602.8: Use termite-resistant materials.	2-6
608.1: Use indigenous materials for major elements of the building.	2
Energy Efficiency	
702.2: Energy efficiency features are implemented to achieve energy cost performance that exceeds ICC IECC by 15-60%.	30-120
703.1: Total building thermal envelope UA improved by 10-20% over that required by IECC. Insulation must receive a Grade 1 rating.	10-36
703.2.1: Install insulation and air sealing.	15
PLATON	
Resource Efficiency	
602.7: Install a continuous physical foundation termite barrier.	4
602.11: Install enhanced foundation waterproofing.	4
604.1: Use recycled-content building materials.	3
608.1: Use indigenous materials for major elements of the building.	2
Indoor Environmental Quality	
903.3.1: Use a crawlspace vapor retarder for the floors and walls.	6

*National Association of Home Builders



When used in combination, Form-A-Drain, ThermaEZE, T-Roc, EnergyEdge and Platon create a highly efficient foundation insulation and waterproofing system that provides energy efficiency, long-term durability and moisture protection.

LEED-H CREDITS**

POSSIBLE POINTS

FORM-A-DRAIN

Innovation and Design

Durability Management Process (credit 2): **Contributes to durability of home. Durability plan will be verified by a third-party Green Rater to earn credits in this category.**

3

Materials and Resources

Environmentally Preferable Products—Materials (credit 2.2): **Increase demand for environmentally preferable products and products or building components that are extracted, processed, and manufactured within the region.**

.5

Indoor Environmental Quality

Radon Protection (credit 9): **If home is located in EPA Zone 1, design and build home with radon resistant construction techniques (required). If home is located outside EPA Zone 1, build home with radon resistant construction techniques.**

1

THERMA-EZE, ENERGYEDGE AND T-ROC

Energy and Atmosphere

Optimize Energy Performance (credit 1): **Improve the overall energy performance of home by meeting or exceeding the performance of an ENERGY STAR home.**

1-34

Insulation (credit 2): **Install insulation that exceeds or meets the R-value requirements listed in Chapter 4 of the 2004 IECC or exceeds the R-value requirements listed in Chapter 4 of the 2004 IECC by 5%.**

2

Materials and Resources (EnergyEdge Only)

Environmentally Preferable Products—Local (credit 2.2): **Increase demand for environmentally preferable products and products or building components that are extracted, processed, and manufactured within the region.**

.5

PLATON

Innovation and Design

Durability Management Process (credit 2): **Contributes to durability of home. Durability plan will be verified by a third-party Green Rater to earn credits in this category.**

3

Materials and Resources

Environmentally Preferable Products—Materials (credit 2.2): **Increase demand for environmentally preferable products and products or building components that are extracted, processed, and manufactured within the region.**

.5

**Based on LEED for Homes (H) 2009

For complete details on the LEED or NAHB rating systems and certification processes, contact your LEED and NAHB professional, or visit www.usgbc.org/LEED or www.nahbgreen.org. To learn more about CertainTeed Foundation products, please visit www.certainteed.com.

LEED-NC, LEED-CS, LEED-SCH, LEED FOR RETAIL, LEED FOR HC***

POSSIBLE POINTS

FORM-A-DRAIN

Materials and Resources

Sustainably Sourced Materials and Products (Healthcare Only) (credit 3): **To reduce the environmental burdens of materials and products acquired to construct building and upgrade building services.**

NC	CS	SCH	Retail	HC
N/A	N/A	N/A	N/A	1-4

Recycled Content 10%-20% (credit 4): **Use materials with recycled content that contributes at least 10% or 20% (based on cost) of total value of materials in project. CertainTeed Form-A-Drain contains pre- and post-consumer materials that can contribute to these credits.**

1-2	1-2	1-2	1-2	N/A
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THERMA-EZE, ENERGYEDGE AND T-ROC

Energy and Atmosphere

Minimum Energy Performance (prerequisite credit 2): **Design the building envelope to maximize energy performance.**

required	required	required	required	required
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Optimize Energy Performance (credit 1): **Achieve increasing levels of building energy performance above the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.**

1-19	3-21	1-19	1-19	1-24
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Materials and Resources (EnergyEdge Only)

Sustainably Sourced Materials and Products (Healthcare Only) (credit 3): **To reduce the environmental burdens of materials and products acquired to construct building and upgrade building services.**

N/A	N/A	N/A	N/A	1-4
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Recycled Content (credit 4): **Use materials with recycled content that contributes at least 10% or 20% (based on cost) of total value of materials in project.**

1-2	1-2	1-2	1-2	N/A
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Indoor Environmental Quality

Thermal Comfort – Design (credit 7): **Provide a comfortable thermal environment that supports the productivity and well-being of building occupants.**

N/A	1	N/A	N/A	1
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Thermal Comfort – Design (credit 7.1): **Provide a comfortable thermal environment that supports the productivity and well-being of building occupants.**

1	N/A	1	1	N/A
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PLATON

Materials and Resources

Sustainably Sourced Materials and Products (Healthcare Only) (credit 3): **To reduce the environmental burdens of materials and products acquired to construct building and upgrade building services.**

N/A	N/A	N/A	N/A	1-4
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Recycled Content 10%-20% (credit 4): **Use materials with recycled content that contributes at least 10% or 20% (based on cost) of total value of materials in project. CertainTeed Platon contains post-consumer materials that can contribute to these credits.**

1-2	1-2	1-2	1-2	N/A
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***Based on LEED for New Construction (NC), LEED Core & Shell (CS) LEED for Schools (SCH), LEED for Retail and LEED for Healthcare (HC), 2009 Version 3 standards

The U.S. Green Building Council (USGBC) developed the Leadership for Energy and Environmental Design (LEED) Rating System to provide standards for the design, construction and operation of high performance sustainable buildings. For a building to become LEED certified, it must meet certain prerequisites and achieve specified performance levels to qualify for points. CertainTeed is a member of the U.S. Green Building Council and fully supports the LEED program.

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Code No. 40-95-25C

