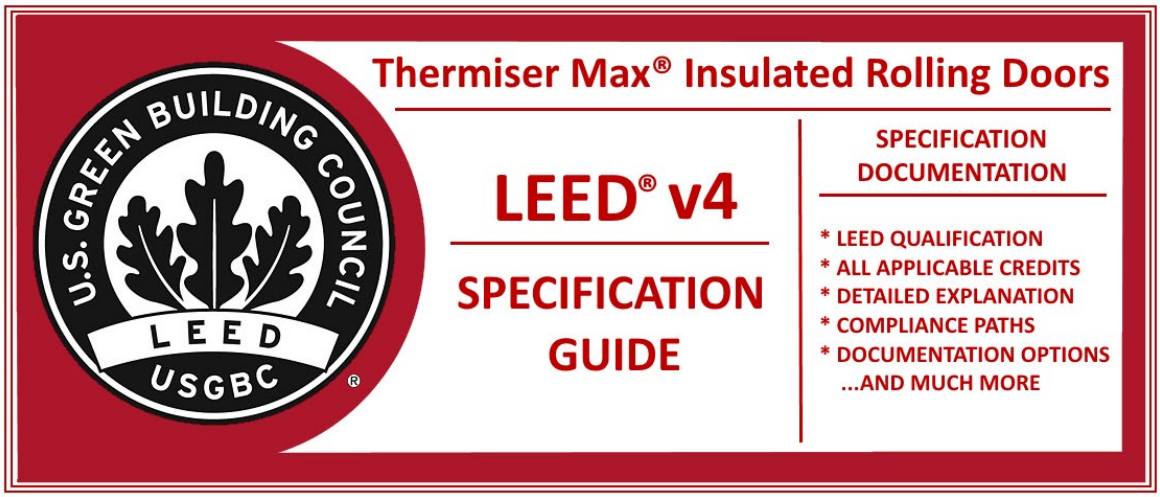
CORNELL

Innovative door solutions™



Thermiser Max® Insulated Rolling Doors

Comprehensive Guide to Earning LEED® v4 Credits

Thermiser Max® Insulated Rolling Doors

Earning LEED® v4 Credits

Cornell's Thermiser Max Insulated Rolling Doors can provide a significant contribution to earning LEED® (Leadership in Energy and Environmental Design) credit points on any project. As you pursue LEED certification, rely on the products and expertise of Cornell.

LEED credit points contribute to LEED certification and are granted based on the overall building's design and performance. While no one product or material alone can earn LEED credit points, Thermiser Max can help development project teams earn points in five (5) LEED certification credit categories when implemented as part of an integrated design and construction strategy.

Applicable Qualifying LEED® v4 Credits:

- ✓ Energy & Atmosphere Credit — Optimize Energy Performance (up to 20 pts)
- ✓ Materials & Resources Credit — Building Life-Cycle Impact Reduction (up to 6 pts)
- ✓ Indoor Environmental Quality Credit — Low Emitting Materials (up to 3 pts)
- ✓ Innovation Credit — Innovation (up to 5 pts)
- ✓ Regional Priority—Credits (up to 4 pts)

Total achievable points in LEED Credit Categories: Up to 38 points

Thermiser Max® Green Spec

LEED® & High Performance Construction Attributes

Cornell's Thermiser Max Insulated Rolling Doors are the perfect choice for your next green building project. These doors provide many innovative sustainability fundamentals for commercial building closure solutions that contribute to greener, more energy-efficient, high performance construction, as well as greater occupant health and comfort. Some of these attributes and benefits include:

- ✓ **Thermal resistance value (R-value) of 8.0 and a u-factor of .82** which provides a significant level of insulation for the building envelope and also assists in providing a marked improvement over baseline energy performance ratings for similar types of doors.

- ✓ **Highly reduced energy costs due to its capacity for < 0.3 cfm / sqft air-infiltration value,** providing a 94% decrease in air infiltration as compared to standard products, independently tested and confirmed to meet the requirements of IECC 2012 and ASHRAE 90.1.

- ✓ **Insulating process is CFC-free:** Thermiser Max products utilize insulation with an Ozone Depletion Potential rating of 0.00.

- ✓ **Recycled content:** Since each Thermiser Max product is custom built to order for the specific requirements (size, materials: steel, aluminum, stainless, etc.) of the application, the formula to determine recycled content is complicated. Please reference the cover page of the Cornell submittal drawings for the project-specific recycled content information. The recycled content information is provided as a Total Recycled Content weight and % of total product weight, and is further broken down into Post Consumer Content and Post Industrial Content. (For more information please see Appendix II: Recycled Content Calculator)

  Proven durability: Thermiser Max doors are constructed with durable steel slats and guides, providing optimum strength and impact resistance. If run an average of 10 cycles per day, the total lifespan of the door is more than 13 years. Many doors are run fewer cycles per day and are still in use after 20 or 30 years.

- ✓ **No volatile organic compounds (VOCs)** are emitted from Thermiser Max products - ensuring healthy environmental quality, both for the installers and other trade-workers and end-user indoor occupants.

- ✓ **Specified wind load durability:** Thermiser Max Insulated Rolling Doors can be configured to withstand the full range of specific wind load requirements for any given implementation, performance validated through third party testing.

Thermiser Max® Environmental Statement

Cornell has been the industry leading manufacturer of rolling doors for more than 180 years, covering North America and beyond. Cornell is the exclusive provider of Thermiser Max Insulated Rolling Doors – an industry standard for superior rolling doors.

Today, Cornell's emphasis is not only on rolling doors and grilles, but also on product support and information services to assist professionals that design, build or manage industrial, institutional and commercial buildings.

Cornell is a registered ISO 9001:2008 Company that specifies internal quality management systems which demonstrate the Company's ability to consistently provide products that meet or exceed customer, as well as applicable statutory and regulatory, requirements.

Thermiser Max Insulated Rolling Doors provide a significant thermal barrier with a thermal resistance value (R-value) of 8.0. The tested door system u-factor is .82 which represents a significant level of added insulation for the building envelope and also assists in providing a marked improvement over baseline energy performance ratings for similar types of doors (as calculated using the ASHRAE Handbook of Fundamentals).

Thermiser Max Insulated Rolling Doors are manufactured to meet the requirements in accordance with the IECC 2012 (International Energy Conservation Code) and ASHRAE 90.1 regarding the building thermal envelope, providing superior thermal performance. Additionally, Thermiser Max Insulated Rolling Doors are constructed with insulation material that is CFC-free with an Ozone Depletion Potential rating of 0.00.

Made from steel, stainless steel and/or aluminum, Thermiser Max Insulated Rolling Doors are easily recycled, reused or repurposed. Steel and aluminum are among the greenest, most sustainable materials used in construction projects today due to their inherent environmental benefits.

The Thermiser Max product line also considers another important component of the US Green Building Council's LEED integrated green building rating system, which is occupant/user comfort. Thermiser Max Insulated Rolling Doors are effective at significantly reducing sound transmission compared to standard non-insulated rolling doors with Sound Transmission Class (STC) rating of up to 30 for the curtain and up to 22 for the entire assembly, as tested per ASTM E90, based on testing a complete, operable assembly. STC 32 superimposed/double-insulated curtain assemblies, also available as tested per ASTM E90, based on testing a complete, operable assembly.

Cornell Inc. is proud to offer Thermiser Max Insulated Rolling Doors to the full spectrum of green building design, specification and construction professionals seeking opportunities to earn LEED certification through improved energy efficiency, air infiltration and thermal performance.

Thermiser Max® LEED v4 Credit Qualification Guide

The following document outlines in detail how Thermiser Max Insulated Rolling Doors are an excellent choice for green building designers, architects, specifiers and other industry professionals as part of a comprehensive green building design and construction strategy. They contribute toward earning points under the U.S. Green Building Council's current 2014 LEED v4 Green Building Rating System.

The most up-to-date LEED Building Rating System, LEED v4, represents the U.S. Green Building Council's continued determination to provide a national gold standard for what constitutes a "green building." Through its use as a design guideline and third-party certification tool, it aims to improve occupant well-being, environmental performance and economic returns of buildings using established and innovative practices, standards and technologies.

While no one product or material alone can earn LEED credit points, choosing Thermiser Max Insulated Rolling Doors as part of a comprehensive design and construction strategy can contribute toward earning points in several credit categories. This contribution advances the likelihood of attaining LEED certification or achieving the next level of prestigious USGBC LEED certification - the world's premier benchmark for high-performance green buildings.

The following document refers to the LEED v4 Rating System Credits, as they relate to Thermiser Max Insulated Rolling Doors, and as stated in the **LEED Reference Guide for Building Design and Construction v4, 2014 Edition.**

For all LEED Credits outlined in this Qualification Guide, please reference the detailed Credit Descriptions, Requirements and Calculations in the most current, USGBC-authored, *2014 LEED v4 Reference Guide for Green Building Design and Construction*.

This Qualification Guide is not intended to provide ALL of the necessary specification information or documentation in order to contribute toward achieving any given LEED Credit. It is recommended that this Guide be used as a tool in conjunction with a LEED Accredited Professional as part of an integrated design and construction team.

Qualifications for LEED Credit:

Energy & Atmosphere: Optimize Energy Performance

Intent

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

Application

- New Construction (1–18 points)
- Core and Shell (1–18 points)
- Schools (1–16 points)
- Retail (1–18 points)
- Data Centers (1–18 points)
- Warehouses and Distribution Centers (1–18 points)
- Hospitality (1–18 points)
- Healthcare (1–20 points)

Requirements

Credit requirements for the following project types: New Construction, Core and Shell, Schools, Retail, Warehouses and Distribution Centers, Hospitality, Healthcare.

Establish an energy performance target no later than the schematic design phase. The target must be established as kBtu per square foot-year (kW per square meter-year) of source energy use. Thermiser Max® contributes to points under the Compliance Path option described below.

Project teams documenting achievement in either of the 2 options are assumed to be in compliance with EA Prerequisite 2: Minimum Energy Performance.

Option 2. Prescriptive Compliance: ASHRAE Advanced Energy Design Guide (1–6 points)

To be eligible for Option 2, projects must use Option 2 in EA Prerequisite Minimum Energy Performance.

Implement and document compliance with the applicable recommendations and standards in Chapter 4, Design Strategies and Recommendations by Climate Zone, for the appropriate ASHRAE 50% Advanced Energy Design Guide and climate zone. For projects outside the U.S., consult ASHRAE/ASHRAE/IESNA Standard 90.1–2010, Appendixes B and D, to determine the appropriate climate zone.

Option 2. Prescriptive Compliance Paths

ASHRAE 50% Advanced Energy Design Guide for Small to Medium Office Buildings

- *Building envelope, opaque:* roofs, walls, floors, slabs, doors, and continuous air barriers (1 point)
- *Building envelope, glazing:* vertical fenestration (1 point)
- *Interior lighting,* including daylighting and interior finishes (1 point)
- *Exterior lighting* (1 point)
- Plug loads, including equipment and controls (1 point)

ASHRAE 50% Advanced Energy Design Guide for Medium to Large Box Retail Buildings

- *Building envelope, opaque:* roofs, walls, floors, slabs, doors, and vestibules (1 point)
- *Building envelope, glazing:* fenestration - all orientations (1 point)
- *Interior lighting,* excluding lighting power density for sales floor (1 point)
- *Additional interior lighting* for sales floor (1 point)
- *Exterior lighting* (1 point)
- Plug loads**,** including equipment choices and controls (1 point)

ASHRAE 50% Advanced Energy Design Guide for K–12 School Buildings

- *Building envelope, opaque:* roofs, walls, floors, slabs, and doors (1 point)
- *Building envelope, glazing:* vertical fenestration (1 point)
- *Interior lighting,* including daylighting and interior finishes (1 point)
- *Exterior lighting* (1 point)
- Plug loads, including equipment choices, controls, and kitchen equipment (1 point)

ASHRAE 50% Advanced Energy Design Guide for Large Hospitals

- *Building envelope, opaque:* roofs, walls, floors, slabs, doors, vestibules, and continuous air barriers (1 point)
- *Building envelope, glazing:* vertical fenestration (1 point)
- *Interior lighting,* including daylighting (form or nonform driven) and interior finishes (1 point)
- *Exterior lighting* (1 point)
- Plug loads, including equipment choices, controls, and kitchen equipment (1 point)

ASHRAE 50% Advanced Energy Design Guide for RETAIL Option 2: Prescriptive Compliance

Option 2. ASHRAE 50% Advanced Energy Design Guides (AEDGs)

Step 1. Confirm prerequisite requirements**.** Ensure that all HVAC and service water-heating equipment meets the requirements of the appropriate AEDG, determined in EA Prerequisite Minimum Energy Performance.

Step 2. Determine which points to pursue under AEDGs Consider the AEDG requirements for additional points.

Points can be achieved for building glazing and envelope, including opaque elements such as roofs and walls, interior and exterior lighting, and plug loads. Retail projects are subject to the prescriptive retail criteria listed in Appendix 3, Tables 1–4, but have an additional point opportunity addressing sales floor lighting.

Thermiser Max®

Choosing Thermiser Max products can help facilitate significant energy optimization benefits leading to higher building performance and greater energy cost-savings, enabling project teams to earn additional Credit points toward LEED Certification.

Thermiser Max Insulated Rolling Doors help insulate buildings, reducing a building's cooling or heating load while improving energy performance. Thermiser Max has a tested and confirmed Air Infiltration Value of less than 0.3 cfm/ft². These Air Infiltration / Air Barrier Performance values indicate a major improvement over standard Insulated Rolling Doors and Meet IECC 2012 and ASHRAE 90.1 standards. [1]

[1] ***Tested air leakage rates for doors that are mounted to face-of-wall: 0.27 cfm/sq ft, and for doors that are jamb-mounted: 0.5 CFM/sq ft.***[1]

Qualifications for LEED Credit:

Materials & Resources:
Building Life-Cycle Impact Reduction

Intent

To encourage adaptive reuse and optimize the environmental performance of products and materials.

Application

- Data Centers (2–5 points)
- Warehouses and Distribution Centers (2–5 points)
- Hospitality (2–5 points)
- Healthcare (2–5 points)
- New Construction (2–5 points)
- Core and Shell (2–6 points)
- Schools (2–5 points)
- Retail (2–5 points)

Requirements

Demonstrate reduced environmental effects during initial project decision-making by reusing existing building resources or demonstrating a reduction in materials use through life-cycle assessment. Achieve one of the following options.

Option 1. Historic Building Reuse (5 points BD+C, 6 points Core and Shell)

Maintain the existing building structure, envelope, and interior nonstructural elements of a historic building or contributing building in a historic district. To qualify, the building or historic district must be listed or eligible for listing in the local, state, or national register of historic places. Do not demolish any part of a historic building or contributing building in a historic district unless it is deemed structurally unsound or hazardous. For buildings listed locally, approval of any demolition must be granted by the local historic preservation review board. For buildings listed in a state register or the U.S. National Register of Historic Places (or local equivalent for projects outside the U.S.), approval must appear in a programmatic agreement with the state historic preservation office or National Park Service (or local equivalent for projects outside the U.S.).

Any alteration (preservation, restoration, or rehabilitation) of a historic building or a contributing building in a historic district on the project site must be done in accordance with local or national standards for rehabilitation, whichever are applicable. If building is not subject to historic review, include on the project team a preservation professional who meets U.S. federal qualifications for historic architects (or local equivalent for projects outside the U.S.); the preservation professional must confirm conformance to the Secretary of Interior's Standards for the Treatment of Historic Properties (or local equivalent for projects outside the U.S.).

OR

Option 2. Renovation of Abandoned or Blighted Building
(5 points BD+C, 6 points Core and Shell)

Maintain at least 50%, by surface area, of the existing building structure, enclosure, and interior structural elements for buildings that meet local criteria of abandoned or are considered blight. The building must be renovated to a state of productive occupancy. Up to 25% of the building surface area may be excluded from credit calculation because of deterioration or damage.

OR

Option 3. Building and Material Reuse
(2–4 points BD+C, 2-5 points Core and Shell)

Reuse or salvage building materials from off site or on site as a percentage of the surface area, as listed in Table 1. Include structural elements (e.g., floors, roof decking), enclosure materials (e.g., skin, framing), and permanently installed interior elements (e.g., walls, doors, floor coverings, ceiling systems). Exclude from the calculation window assemblies and any hazardous materials that are remediated as a part of the project.

Materials contributing toward this credit may not contribute toward MR Credit Material Disclosure and Optimization.

TABLE 1. Points for reuse of building materials

Percentage of completed project surface area reused	Points BD+C	Points BD+C (Core and Shell)
25%	2	2
50%	3	3
75%	4	5

OR

Option 4. Whole-Building Life-Cycle Assessment
(3 points)

For new construction (buildings or portions of buildings), conduct a life-cycle assessment of the project's structure and enclosure that demonstrates a minimum of 10% reduction, compared with a baseline building, in at least three of the six impact categories listed below, one of which must be global warming potential. No impact category assessed as part of the life-cycle assessment may increase by more than 5% compared with the baseline building.

The baseline and proposed buildings must be of comparable size, function, orientation, and operating energy performance as defined in EA Prerequisite Minimum Energy Performance. The service life of the baseline and proposed buildings must be the same and at least 60 years to fully account for maintenance and replacement. Use the same life-cycle assessment software tools and data sets to evaluate both the baseline building and the proposed building, and report all listed impact categories. Data sets must be compliant with ISO 14044.

Select at least three of the following impact categories for reduction:

- global warming potential (greenhouse gases), in CO2e;
- depletion of the stratospheric ozone layer, in kg CFC-11;
- acidification of land and water sources, in moles H+ or kg SO2;
- eutrophication, in kg nitrogen or kg phosphate;
- formation of tropospheric ozone, in kg NOx or kg ethene; and
- depletion of nonrenewable energy resources, in MJ.

For Options 2 and 3:

Each assembly (vertical or horizontal) may be calculated as up to three layers of surface area: enclosure and finish floor, structure, and interior finish and ceiling finish.
See *Further Explanation: Calculating Surface Area*.

Project Type Variations - Existing Buildings with Additions

Project teams may pursue only one option. For an existing building with an addition, the team can pursue either a reuse option (Option 1, 2, or 3) for the existing portions of the building or the LCA option (Option 4) for the new construction addition. In most cases, more points are available for reuse options, but the project team may determine the appropriate option given their sustainability goals.

Qualifications for LEED Credit:

Materials & Resources:
Building Life-Cycle Impact Reduction (continued)

Required Documentation

Option 1 (all of the following)

1. Documentation of historic designation status
2. Narrative describing demolition (if any)
3. Documentation of how additions and alterations (if any) meet local review board requirements

Option 2 (all of the following)

1. Narrative describing abandoned or blighted status
2. Reused elements table and calculations

Option 3

1. Reused elements table and calculations

Option 4 (all of the following)

2. Description of LCA assumptions, scope, and analysis process for baseline building and proposed building
3. Life-cycle impact assessment summary showing outputs of proposed building with percentage change from baseline building for all impact indicators

Thermiser Max®

Choosing Thermiser Max products can help project teams provide significant material resource reduction through opportunities such as restoring existing buildings, reusing building components and reducing a building's environmental footprint while contributing up to 6 Credit points (subject to project-type) toward LEED Certification.

Thermiser Max Insulated Rolling Doors have been proven adaptively reusable and can contribute to the optimization of the environmental performance of building construction or renovation through reducing waste and demolition disposal.

Qualifications for LEED Credit:

Indoor Environmental Quality: Low-Emitting Materials

Intent

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

Application

- New Construction (1–3 points)
- Core and Shell (1–3 points)
- Schools (1–3 points)
- Retail (1–3 points)
- Data Centers (1–3 points)
- Warehouses and Distribution Centers (1–3 points)
- Hospitality (1–3 points)
- Healthcare (1–3 points)

Requirements

This credit includes requirements for product manufacturing as well as project teams. It covers volatile organic compound (VOC) emissions into indoor air and the VOC content of materials, as well as the testing methods by which indoor VOC emissions are determined. Different materials must meet different requirements to be considered compliant for this credit.

The building interior and exterior are organized in seven categories, each with different thresholds of compliance. The building interior is defined as everything within the waterproofing membrane. The building exterior is defined as everything outside and inclusive of the primary and secondary weather-proofing system, such as waterproofing membranes and air- and water-resistive barrier materials.

Qualifications for LEED Credit:

Indoor Environmental Quality: Low-Emitting Materials (continued)

Option 1. Product Category Calculations

Achieve the threshold level of compliance with emissions and content standards for the appropriate product category.

TABLE 1. Thresholds of compliance with emissions and content standards for 7 categories of materials

Category	Threshold	Emissions and content requirements
Interior paints and coatings applied on site	At least 90%, by volume, for emissions; 100% for VOC content	• General Emissions Evaluation for paints and coatings applied to walls, floors, and ceilings • VOC content requirements for wet applied products
Interior adhesives and sealants applied on site (including flooring adhesive)	At least 90%, by volume, for emissions; 100% for VOC content	• General Emissions Evaluation • VOC content requirements for wet applied products
Flooring	100%	General Emissions Evaluation
Composite wood	100% not covered by other categories	Composite Wood Evaluation
Ceilings, walls, thermal, and acoustic insulation	100%	• General Emissions Evaluation • **Healthcare, Schools only** Additional insulation requirements
Furniture (include in calculations if part of scope of work)	At least 90%, by cost	Furniture Evaluation
Healthcare and Schools Projects only: Exterior applied products	At least 90%, by volume	Exterior Applied Products

Qualifications for LEED Credit:

Indoor Environmental Quality: Low-Emitting Materials (continued)

Option 1. Product Category Calculations (continued)

Achieve the threshold level of compliance with emissions and content standards for the number of product categories listed in Table 2.

TABLE 2. Points for number of compliant categories of products

Compliant categories	Points
New Construction, Core and Shell, Retail, Data Centers, Warehouses and Distribution Centers, Hospitality projects without furniture	
2	1
4	2
5	3
New Construction, Core and Shell, Retail, Data Centers, Warehouses and Distribution Centers, Hospitality projects with furniture	
3	1
5	2
6	3
Schools, Healthcare without furniture	
3	1
5	2
6	3
Schools, Healthcare with furniture	
4	1
6	2
7	3

Option 2. Budget Calculation Method

If some products in a category do not meet the criteria, project teams may use the budget calculation method (Table 3).

TABLE 3. Points for percentage compliance, under budget calculation method

Percentage of total	Points
≥ 50% and < 70%	1
≥ 70% and < 90%	2
≥ 90%	3

The budget method organizes the building interior into six assemblies:

- flooring;
- ceilings;
- walls;
- thermal and acoustic insulation;
- furniture; and
- Healthcare, Schools only: exterior applied products.

Include furniture in the calculations if it is part of the scope of work. Walls, ceilings, and flooring are defined as building interior products; each layer of the assembly, including paints, coatings, adhesives, and sealants, must be evaluated for compliance. Insulation is tracked separately.

For calculations please reference Equations 1, 2 and 3 in the LEED Reference Guide for Building Design & Construction, v4, pages 659-660.

Option 2. Budget Calculation Method (continued)

Calculate surface area of assembly layers based on the manufacturer's documentation for application.

If 90% of an assembly meets the criteria, the system counts as 100% compliant. If less than 50% of an assembly meets the criteria, the assembly counts as 0% compliant.

Manufacturers' claims. Both first-party and third-party statements of product compliance must follow the guidelines in CDPH SM V1.1–2010, Section 8. Organizations that certify manufacturers' claims must be accredited under ISO Guide 65.

Laboratory requirements. Laboratories that conduct the tests specified in this credit must be accredited under ISO/IEC 17025 for the test methods they use.

Emissions and Content Requirements

To demonstrate compliance, a product or layer must meet all of the following requirements, as applicable.

Inherently non-emitting sources. Products that are inherently non-emitting sources of VOCs (stone, ceramic, *powder-coated metals, plated or anodized metal*, glass, concrete, clay brick, and unfinished or untreated solid wood flooring) are considered fully compliant without any VOC emissions testing if they do not include integral organic based surface coatings, binders, or sealants.

General emissions evaluation. Building products must be tested and determined compliant in accordance with California Department of Public Health (CDPH) Standard Method v1.1–2010, using the applicable exposure scenario. The default scenario is the private office scenario. The manufacturer's or third-party certification must state the exposure scenario used to determine compliance. Claims of compliance for wet-applied products must state the amount applied in mass per surface area.

Manufacturers' claims of compliance with the above requirements must also state the range of total VOCs after 14 days (336 hours), measured as specified in the CDPH Standard Method v1.1:

- 0.5 mg/m3 or less;
- between 0.5 and 5.0 mg/m3; or
- 5.0 mg/m3 or more.

Projects outside the U.S. may use products tested and deemed compliant in accordance with either (1) the CDPH standard method (2010) or (2) the German AgBB Testing and Evaluation Scheme (2010). Test products either with (1) the CDPH Standard Method (2010), (2) the German AgBB Testing and Evaluation Scheme (2010), (3) ISO 16000-3: 2010, ISO 16000-6: 2011, ISO 16000-9: 2006, ISO 16000-11:2006 either in conjunction with AgBB, or with French legislation on VOC emission class labeling, or (4) the DIBt testing method (2010). If the applied testing method does not specify testing details for a product group for which the CDPH standard method does provide details, use the specifications in the CDPH standard method. U.S. projects must follow the CDPH standard method.

Thermiser Max®

Specifying Thermiser Max Insulated Rolling Doors as your exterior opening product helps project teams reduce a building's environmental footprint by choosing doors that are constructed of powder-coated, plated and/or anodized metal which are inherently non-emitting sources of VOCs (no volatile organic compounds, no chemical additives and no impurities).

Additionally, choosing Thermiser Max Insulated Rolling Doors guarantees protection against contaminants that can damage air quality, human health, productivity, and the environment and ensures the safety of both the installing trades as well as the end-user occupants.

Qualifications for LEED Credit:

Innovation Credit: Innovation

Intent

To encourage projects to achieve exceptional or innovative performance.

Application

- Data Centers (1–5 points)
- Warehouses and Distribution Centers (1–5 points)
- Hospitality (1–5 points)
- Healthcare (1–5 points)
- New Construction (1–5 points)
- Core and Shell (1–5 points)
- Schools (1-5 points)
- Retail (1–5 points)

Requirements

Project teams can use any combination of innovation, pilot, and exemplary performance strategies. Projects may earn *up to 5 points through any combination of the following*:

- Innovation (up to 4 points). This option is appropriate for strategies that are not addressed by any existing credits in the LEED rating system under which the project will be certified.

- Pilot credits (up to 4 points). This option requires project teams to achieve, document, and provide feedback on pilot credit strategies developed by USGBC members and committees.

- Exemplary performance (up to 2 points). This option is achieved by demonstrating performance that greatly exceeds the level or scope required by existing LEED prerequisites or credits.

Innovation Credit: Innovation (continued)

Option 1. Innovation (1 point)

Achieve significant, measurable environmental performance using a strategy not addressed in the LEED green building rating system. Identify the following:

- the intent of the proposed innovation credit;
- proposed requirements for compliance;
- proposed submittals to demonstrate compliance; and
- the design approach or strategies used to meet the requirements.

Option 2. Pilot (1 point)

Achieve one pilot credit from USGBC's LEED Pilot Credit Library

Option 3. Additional Strategies

- **Innovation (1-3 points)**
  Defined in Option 1 above.

- **Pilot (1–3 points)**
  Meet the requirements of Option 2.

- **Exemplary Performance (1–2 points)**
  Achieve exemplary performance in an existing LEED v4 prerequisite or credit that allows exemplary performance, as specified in the LEED Reference Guide, v4 edition. An exemplary performance point is typically earned for achieving double the credit requirements or the next incremental percentage threshold.

Behind the Intent

Sustainable design comes from innovative strategies and thinking. Institutional measures that reward such thinking—such as the achievement of this credit—benefit our environment. Recognition of exceptional efforts will spur further innovation.

When project teams innovate and go beyond LEED requirements, they not only achieve measurable environmental benefits beyond those specified by the LEED rating system, they also have the opportunity to explore cutting-edge pilot credits and contribute to the development of future LEED credits.

Innovation Credit: Innovation (continued)

When project teams can demonstrate that the project exceeds the standard level of performance associated with one or more LEED credits, their innovations can be adopted by other teams in the future.

Innovation credits are not awarded for the use of a particular product or design strategy if the technology aids in the achievement of an existing LEED credit, even if the project is not attempting to earn that credit.

No strategy can achieve more than 1 point under Innovation. That is, a single strategy cannot be double-counted for both exemplary performance and innovation (or both exemplary performance and a pilot credit, or both a pilot credit and innovation).

Required Documentation

Option 1: Innovation

1. Innovation narrative
2. Supporting documentation

Option 2: Pilot Credits

1. Supporting documentation
2. Pilot credit registration
3. Pilot credit survey
4. Pilot credit specific submittals

Option 3: Additional Strategies / Exemplary Performance

1. Supporting documentation
2. Exemplary performance credit and level

Thermiser Max®

Choosing Thermiser Max Insulated Rolling Doors as an innovative design element and/or utilizing Thermiser Max doors to achieve exceptional or innovative performance as a construction envelope element could contribute to any combination of innovation, pilot and exemplary performance strategies that may earn up to 5 Credit points toward LEED Certification. Thermiser Max is the proven environmentally responsible choice.

Qualifications for LEED Credit:

Regional Priority

Intent

To provide an incentive for the achievement of credits that address geographically specific environmental, social equity, and public health priorities.

Application

- Data Centers (1–4 points)
- Warehouses and Distribution Centers (1–4 points)
- Hospitality (1–4 points)
- Healthcare (1–4 points)
- New Construction (1–4 points)
- Core and Shell (1–4 points)
- Schools (1–4 points)
- Retail (1–4 points)

Requirements

Earn up to four of the six Regional Priority credits. These credits have been identified by the USGBC regional councils and chapters as having additional regional importance for the project's region. A database of Regional Priority credits and their geographic applicability is available on the USGBC website, http://www.usgbc.org. One point is awarded for each Regional Priority credit achieved, up to a maximum of four. A database of Regional Priority credits and their geographic applicability is available on the USGBC website, http://www.usgbc.org.

Required Documentation

No additional documentation is required to earn Regional Priority credits. Document compliance for the selected credits, and the related RP bonus points for their achievement will be awarded automatically. For every location in the U.S., six credits are prioritized.

Thermiser Max®

Choosing Thermiser Max as an innovative construction envelope element could contribute to the achievement of up to 4 Credit points that address geographically specific environmental, social equity and public health priorities. Recognizing a project location's priority environmental issues and addressing them through design, construction and operation choices, the utilization of Thermiser Max Insulated Rolling Doors is the proven environmentally AND socially responsible choice.

APPENDIX I:

Air Infiltration Testing

TEST REPORT
Report No.: E0704.03-109-44

Rendered to:
COOKSON
Mountain Top, Pennsylvania

PRODUCT TYPE: Insulated Steel Roll-up Garage Door
SERIES/MODEL: Temp-Master

Test Date: 09/17/14
Report Date: 10/20/14

Architectural Testing
Test Report No.: E0704.03-109-44
Report Date: 10/20/14

1.0 Report Issued To: Cookson
Crestwood Industrial Park
24 Elmwood Avenue
Mountain Top, Pennsylvania 18707

2.0 Test Laboratory: Architectural Testing, Inc.
130 Derry Court
York, Pennsylvania 17406-8405
717-764-7700

3.0 Project Summary:
3.1 Product Type: Insulated Steel Roll-up Garage Door
3.2 Series/Model: Temp-Master
3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). Test specimen description and results are reported herein.
3.4 Test Date: 09/17/2014
3.5 Test Record Retention End Date: All test records for this report will be retained until September 17, 2018.
3.6 Test Location: Architectural Testing, Inc. test facility in York, Pennsylvania.
3.7 Test Sample Source: The test specimen was provided by the client. Representative samples of the test specimen(s) will be retained by Architectural Testing for a minimum of four years from the test completion date.
3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

APPENDIX I (continued):

Air Infiltration Testing

3.9 List of Official Observers:
Name | Company
Joe Balay | Cookson
Daren Cragle | Cookson
Michael D. Stremmel, P.E. | Architectural Testing, Inc.
Stephen R. Fowler | Architectural Testing, Inc.
Test Report No.: E0704.03-109-44
Report Date: 10/20/14

4.0 Test Method(s):
ASTM E 283-04, *Test Method for Determining Rate of Airflow Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen.*

5.0 Test Specimen Description:
5.1 Product Sizes:
Overall Area:
9.3 m² (100.0 ft2)
Width Height
millimeters inches millimeters inches: Overall size 3048 120 3048 120
5.2 Test Chamber Description: The door was tested in a wood buck.
5.3 Garage Door Description: The steel garage door utilized a 10' 0" wide distance between guides and a 10' 0" tall door opening height. The door was installed using an interior mounting condition. The door curtain was constructed of nominal 1" thick, 3" high interlocking, 24 gage steel slats. Endlocks were located at each end of alternating slats and were secured with two 1/4" rivets per end. The jambs utilized a Zee guide track, (Reference Drawings 761849 001 B). All guides utilized a 4" by 3" by 1/4" wall mounting angle with 3/8"-16 x 1-1/2" long bolt and nut. The door utilized a lintel brush at the head. The jamb guides utilized a press on guide seal. The interior jamb guides utilized a 3" wide by 1-1/4" thick Low Density EPDM Foam Block, (Reference Option #1 Drawing). The door utilized a manual chain operator. The door was tested for air pressure resistance in the closed position.
5.4 Installation: The door was secured to the chamber with fasteners through the wall angle. The right and left hand guides were secured to the chamber with 3/8" lag bolts, located 36" on center.
Test Report No.: E0704.03-109-44
Report Date: 10/20/14

6.0 Test Results: The temperature during testing was 21°C (69°F). The results are tabulated as follows:

APPENDIX I (continued):

Air Infiltration Testing

Title of Test Results Allowed Note
Air Leakage, per ASTM E 283 at 75 Pa (1.57 psf) 1.4 L/s/m2 (0.27 cfm/ft2) 5.1 L/s/m2 (1.0 cfm/ft2) max. 1

***General Note**: All testing was performed in accordance with the referenced standard(s).*
Note 1: The door was closed to compress the slat joints per Photo #3.

Architectural Testing will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Architectural Testing, Inc. for the entire test record retention period.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, Inc.
Stephen R. Fowler Michael D. Stremmel, P.E.
Technician Senior Project Engineer

APPENDIX II:

Example Recycled Content Calculator

The content calculator represented here is submitted as an example of how Cornell measures the recycled content of the various assembly materials in any given custom-built product. Since each Thermiser Max product is custom built to order for the specific requirements (size, materials: steel, aluminum, stainless, etc.) of the application, the formula to determine recycled content is complicated.

Please reference the cover page of Cornell's submittal drawings for the project specific recycled content information. The recycled content information is provided as a Total Recycled Content weight and % of total product weight, and is further broken down into Post Consumer Content and Post Industrial Content.

LEED Recycled Content File Maintenance

Curtain

Galvanized Slat PC%	Galvanized Slat PI%	Stainless Slat PC%	Stainless Slat PI%
0.23	0.07	0.0	0.67
Galvanized Grille Rod PC%	Galvanized Grille Rod PI%	Stainless Grille Rod PC%	Stainless Grille Rod PI%
0.0	0.0	0.0	0.0

Bottom Bar

Galvanized Angle BBar PC%	Galvanized Angle BBar PI%	Stainless Angle BBar PC%	Stainless Angle BBar PI%
0.83	0.17	0.0	0.0
Stainless Bent BBar PC%	Stainless Bent BBar PI%		
0.0	0.67		

Hood

Galvanized Hood PC%	Galvanized Hood PI%	Stainless Hood PC%	Stainless Hood PI%
0.23	0.07	0.0	0.67

Guides

Galvanized Struct. Angle PC%	Galvanized Struct. Angle PI%	Stainless Struct. Angle PC%	Stainless Struct. Angle PI%
0.56	0.389	0.0	0.0
Stainless Bent Angle PC%	Stainless Bent Angle PI%		
0.0	0.67		

Shaft

Shaft Steel PC%	Shaft Steel PI%
0.0	0.33

Brackets

Bracket Steel PC%	Bracket Steel PI%
0.0	0.33