

Quiet Transmission 25

& LEED

How Quiet Transmission 25
Can Contribute to
Obtaining LEED® v4 Credits.



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What is LEED?

Overview

Recycled rubber underlayment is a growing category for sound insulation within the construction industry and continues to increase in popularity as a practical solution for construction applications. The easy installation, durability, and quality of Quiet Transmission 25 Sound Insulation make it ideal for a wide variety of sound control applications.

The popularity of recycled rubber sounds insulation is also on the rise because of its positive environmental attributes. Benefits, such as high-recycled content, low-VOC emissions, and low life-cycle costs, make it an environmentally preferable underlayment solution for a number of applications. These benefits also enable it to potentially contribute to a number of points under the Leadership in Energy & Environmental Design (LEED®) rating system. Summit International Flooring designed this educational guide to assist specifiers in understanding how our products apply to the LEED v4 rating system.

What Is LEED?

LEED has driven the green building market by creating a demand for environmentally preferable building products. This helped to transform the way we think about how our buildings and communities are designed, constructed, maintained, and operated.

LEED addresses the entire building lifecycle. Building projects must satisfy prerequisites and earn points to achieve different levels of certification. Prerequisites and credits differ for each of the four rating systems. A project team must determine which rating system and category is the best fit for their project.

Rating Systems:

Building Design & Construction (BD+C)

This rating system is appropriate for new construction and major renovation of these categories: New Construction, Core and Shell, Schools, Retail, Hospitality, Data Centers, Warehouses and Distribution Centers, Healthcare, Homes, and Multifamily Midrise.

Interior Design & Construction (ID+C)

This rating system is appropriate for interior spaces that are a complete interior fit-out of these categories: Commercial Interiors, Retail, and Hospitality.

Building Operations & Maintenance (O+M)

This rating system is appropriate for buildings that are undergoing improvement work with little to no construction. This system applies to these categories: Existing Buildings, Schools, Retail, Hospitality, Data Centers, and Warehouses and Distribution Centers.

Neighborhood Development (ND)

This rating system is appropriate for new land development projects or redevelopment projects containing residential uses, nonresidential uses, or a mix. This system includes these categories: Neighborhood Development Plan and Built Project.

How Quiet Transmission 25 Can Apply to LEED

The Benefits of LEED

Why is obtaining LEED certification beneficial? In addition to the obvious environmental benefits, certification proves to the market that a building is efficient and incorporates responsible building practices. LEED certification showcases environmental commitment and leadership to both the community and employees. As a result, positive publicity, and exposure could be generated.

Green buildings have also been proven to be more economically efficient as a result of these factors:

- Increased health and safety benefits for employees or students
- Increased employee productivity and lower turnover and absenteeism
- Increased sales in retail establishments
- Reduced operating costs
- Increased building evaluation and return on investment
- Qualification for money-saving incentives, like tax rebates and zoning allowances

How Quiet Transmission 25 can apply to LEED

Many products have the potential to contribute points to LEED; but, since credits are based on the performance of all the products involved in a particular project, there is not one stand-alone product that can guarantee LEED credits. It is the combination and the weight of each that is critical.

Quiet Transmission 25, which is manufactured by Summit International Flooring, is designed to meet the stringent criteria required to help earn points under 2 of the 5 categories of LEED—Materials and Resources and Indoor Environmental Quality. The Materials and Resources category deals with the conservation, purchasing, and waste management of physical products. Indoor Environmental Quality includes the conditions inside a building, such as air quality, lighting, thermal conditions, ergonomics, acoustics, and their effect on occupants. Based on these criteria, Quiet Transmission 25 can, potentially, contribute up to 8 LEED points in BD+C and ID+C, 5 LEED points in BD+C: Homes/Midrise, and 3 LEED points in O+M.

BD+C, ID+C: — Quiet Transmission 25 LEED Credit Areas

Category	Credit Title	B+C Points Attainable	ID+C Points Attainable
Materials & Resources	Building Product Disclosure and Optimization-Environmental Product Declarations	1	1
	Building Product Disclosure and Optimization-Sourcing of Raw Materials	1	1
	Building Product Disclosure and Optimization-Material Ingredients	1	1
	Construction and Demolition Waste Management	2	2
Indoor Environmental Quality	Low Emitting Materials	1	1
	Acoustic Performance	1-2 (Except Core & Shell, Retail)	2 (except Retail)

O+M — Quiet Transmission 25 LEED Credit Areas

Category	Credit Title	Points Attainable
Materials and Resources	Purchasing-Facility Maintenance and Renovation	1
	Solid Waste Management-Facility Maintenance and Renovation	2

BD+C: Homes — Quiet Transmission 25 LEED Credit Areas

Category	Credit Title	Points Attainable
Materials & Resources	Environmentally Preferable Products	1
	Construction Waste Management	3
Indoor Environmental Quality	Low Emitting Products	1

BD+C, ID+C — Materials and Resources

Definition of BD+C, ID+C Credits — Materials and Resources:

Building Product Disclosure and Optimization — Environmental Product Declarations (possible 2 points)

Option 1: Environmental Product Declaration (EPD) (1 point)

Use at least 20 different permanently installed products sourced from at least five different manufacturers that meet one of the disclosure criteria below:

- Product specific declaration (1/4 point)
- Industry-wide (generic) EPD (1/2 point)
- Product-specific Type III EPD (1 point)

AND/OR

Option 2: Multi-attribute Optimization (1 point)

Use products that comply with one of the criteria below for 50%, by cost, of the total value of permanently installed products in the project. Third party certified products that demonstrate impact reduction below industry average in at least three of the following categories are valued at 100% of their cost for credit achievement calculations.

- Global warming potential (greenhouse gases)
- Depletion of the stratospheric ozone layer
- Acidification of land and water sources
- Eutrophication
- Formation of tropospheric ozone
- Depletion of nonrenewable energy resources

How Quiet Transmission 25 can Contribute:

Summit International Flooring has obtained an externally verified, product-specific Type III Environmental Product Declaration for Quiet Transmission 25. To view our EPD, please visit: <http://www.summit-flooring.com>

Potential Strategies:

Research and specify products from manufacturers who have available EPDs or that meet one or more of the attributes listed in the credit requirements under Option 2. During construction, coordinate a review of the submittals to ensure that selected products meet credit requirements. To track progress toward credit achievement, regularly enter information into the Materials and Resources Building Product Disclosure and Optimization calculator. Calculate compliance of products and materials using the equations provided by the USGBC.



BD+C, ID+C — Materials and Resources

Definition of BD+C, ID+C Credits — Materials and Resources:

Building Product Disclosure and Optimization - Sourcing of Raw Materials (possible 2 points)

Option 1: Raw Material Source and Extraction Reporting (1 point)

Use at least 20 different permanently installed products sourced from at least five different manufacturers that have publically released a report from their raw material suppliers, which include, raw material supplier extraction locations, a commitment to long-term ecologically responsible land use, a commitment to reducing environmental harms from extraction and/or manufacturing processes, and a commitment to meeting applicable standards or programs voluntarily that address responsible sourcing criteria. Reports from manufacturers may be self-declared (0.5 points) or a third-party verified corporate sustainability report (1 point).

AND/OR

Option 2: Leadership Extraction Practices (1 point)

Use permanently installed building products that meet at least one responsible extraction criteria:

- Extended producer responsibility
- Bio-based materials
- Certified wood products
- Materials reuse
- Recycled content

How Quiet Transmission 25 can Contribute:

Quiet Transmission 25 is comprised of shredded and cleaned recycled tire rubber (post-consumer waste) and some EPDM flecks. The result is a polymerically bound insulation with very high recycled content. Recycled content is defined in accordance with the International Organization for Standardization® document, ISO 14021 – Environmental labels and declarations:

- Postconsumer material – waste materials diverted from the waste stream after consumer or commercial use.
- Preconsumer material – material diverted from the waste stream during the manufacturing process. Excluded is rework, regrind, or scrap materials capable of being reclaimed within the same process that generated them.

Recycled content is the sum of postconsumer recycled content plus one-half the preconsumer recycled content, based on cost. Products meeting recycled content criteria are valued at 100 percent of their cost for the purposes of credit achievement calculation.

Please consult the recycled content chart on the left side of this page for more information.

Potential Strategies:

Establish a project goal to utilize materials from manufacturers who disclose raw material sourcing information and/or manufacturers that utilize responsible extraction. During the design phase, specify products that meet one or more of the criteria listed in the credit requirements. Try to focus on applications that use either significant quantities of materials or small amounts of high-cost materials. During construction, track your purchases in the Materials and Resources Building Product Disclosure and Optimization calculator. Do not forget to collect relevant documentation from manufacturers.

Quiet Transmission 25 Recycled Content - 92%

BD+C, ID+C — Materials and Resources

Definition of BD+C, ID+C Credits— Materials and Resources:

Building Product Disclosure and Optimization — Material Ingredients (possible 2 points)

Option 1: Material Ingredient Reporting (1 point)

Use at least 20 different permanently installed products sourced from at least five different manufacturers that use any of these programs to demonstrate the chemical inventory of the product to at least 0.1% (1000 ppm):

- Manufacturer Inventory
- Health Product Declaration (HPD)
- Cradle to Cradle

AND/OR

Option 2: Material Ingredient Optimization (1 point)

Use permanently installed building products that document their material ingredient optimization using one of these paths:

- GreenScreen v1.2 Benchmark
- Cradle to Cradle Certified
- REACH Optimization

AND/OR

Option 3: Product Manufactured Supply Chain Optimization (1 point)

Use permanently installed building products that are sourced from product manufacturers who engage in validated and robust safety, health, hazard, and risk programs.

How Quiet Transmission 25 can Contribute:

Summit International Flooring is in the process of creating a Health Product Declaration for Quiet Transmission 25. This document will include full disclosure of known hazards in compliance with the Health Product Declaration Open Standard. Please check back here and/or on the Sustainability section of the Quiet Transmission 25 website to access the HPD when it becomes available.

Potential Strategies:

During the design phase, identify products that meet the criteria. Specify compliant products and track your purchases. Calculate your compliance as you go and collect all ingredient disclosure reports.

BD+C, ID+C — Materials and Resources

Definition of BD+C, ID+C Credits — Materials and Resources:

Construction and Demolition Waste Management

Option 1: Diversion (1-2 Points)

Path 1 (1 point): Divert at least 50 percent of the total construction and demolition from at least three material streams.

OR

Path 2 (2 points): Divert at least 75 percent of the total construction and demolition material from at least four material streams.

OR

Option 2: Reduction of Total Waste (2 points)

Do not generate more than 2.5 pounds of construction waste per square foot of the building's floor area.

How Quiet Transmission 25 can Contribute:

Customers must first submit an application to have their material accepted into the program. Both product scrap and old materials must be free of excessive adhesive and foreign contaminants, including stones, wood, concrete, asphalt, etc. Materials accepted into the Redeux program will be sorted, shredded, cleaned, and ground for the next generation of flooring, underlayment, and industrial products.

Potential Strategies:

The key to success for this credit is to start early to allow time for planning and coordination, identifying strategies, developing contractual agreements, and educating project teams. Be sure to integrate the contractor into the early design phase. Establish goals of diversion from disposal in landfills and incineration facilities, and adopt a construction waste management plan to achieve these goals. Goals and strategies for waste diversion should be developed as part of the construction waste management plan prerequisite.

Identify products that can be recycled or whose manufacturer offers a take back program. Consider recycling cardboard, metal, brick, rubber, concrete, plastic, clean wood, glass, gypsum wallboard, carpet, and insulation. Other strategies include source reduction, such as modular construction, reduced packaging, pre-fabrication, and diversion options. Establish infrastructure, practices, and policies, such as designating a specific area on the construction site for segregated or commingled collection of recyclable materials. Be sure to track recycling efforts throughout the construction process, keeping reports and receipts for documentation. It is also helpful to calculate diversion rates regularly so adjustments can be made to meet goals.



BD+C, ID+C — Indoor Environmental Quality

Definition of BD+C, ID+C Credits — Indoor Environmental Quality

Low Emitting Materials (Possible 3 points)

This credit details requirements for 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.

Option 1: Product Category Calculations

Achieve the threshold level of compliance with emissions and content standards for the maximum number of product categories.

Option 2: Budget Calculation Method

If some products in a category do not meet the criteria, project teams may use the budget calculation method in which they achieve points for percentage compliance.

Thresholds of compliance with emissions and content standards for 2 of 7 categories of materials Quiet Transmission 25 contributes to:

Category	Threshold	Emissions and Content Requirements
Flooring	100%	Emissions: California Department of Public Health (CDPH) Standard Method v1.1–2010
Interior adhesives and sealants applied on site (including flooring adhesive)	At least 90%, by volume, for emissions; 100% for VOC content	Emissions: California Department of Public Health (CDPH) Standard Method v1.1–2010 VOC Content: SCAQMD Rule #1168

How Quiet Transmission 25 can Contribute:

Quiet Transmission 25 Sound Control has earned FloorScore certification. The FloorScore program was developed by the Resilient Floor Covering Institute (RFCI) in conjunction with SCS Global Services, which tests and certifies flooring as well as flooring adhesive products, and certifies production facilities for compliance with rigorous indoor air quality emission requirements. Individual volatile organic compounds (VOCs) are evaluated using health-based specification. Flooring and adhesives that earn FloorScore certification qualify for use in high performance schools and office buildings. Products are tested to the California Standard Method for VOC Emissions Testing and Evaluation (Standard Method v1.1), otherwise known as CA Section 01350. This is the general emissions standard that must be met under LEED v4's low emitting products credit. Bearing the FloorScore label also qualifies Quiet Transmission 25 for the Collaborative for High Performance Schools (CHPS).





BD+C, ID+C — Indoor Environmental Quality

Definition of BD+C, ID+C Credits — Indoor Environmental Quality:

Acoustic Performance (possible 1 point — except Core & Shell, Retail) (possible 2 points in BD+C: Healthcare, ID+C: Hospitality, Commercial Interiors)

For all occupied spaces, meet the requirements, as applicable, for HVAC background noise, sound isolation, reverberation time, and sound reinforcement and masking.

HVAC Background Noise

Achieve maximum background noise levels from heating, ventilating, and air conditioning (HVAC) systems per 2011 ASHRAE Handbook, HVAC Applications, Chapter 48, Table 1; AHRI Standard 885-2008, Table 15; or a local equivalent. Calculate or measure sound levels.

Sound Isolation

Meet the composite sound transmission class (STCC) ratings, depending on adjacency combinations or local building code, whichever is more stringent.

Reverberation Time

Meet the reverberation time requirements based on room type.

Sound Reinforcement and Masking Systems

Sound Reinforcement

For all large conference rooms and auditoriums seating more than 50 persons, evaluate whether sound reinforcement and AV playback capabilities are needed. If needed, the sound reinforcement systems must meet these criteria:

- Achieve a speech transmission index (STI) of at least 0.60 or common intelligibility scale (CIS) rating of at least 0.77 at representative points within the area of coverage to provide acceptable intelligibility.
- Have a minimum sound level of 70 dBA and must maintain sound-level coverage within ± 3 dB at the 2000 Hz octave band throughout the space.

Masking Systems

For projects that use masking systems, the design levels must not exceed 48 dBA. Ensure that loudspeaker coverage provides uniformity of ± 2 dBA and that speech spectra are effectively masked.

How Quiet Transmission 25 can Contribute:

Acoustic performance of a space is the combination of all the elements in the room, including flooring. Rubber is inherently better at sound absorption and transmission than other types of surfacing. In addition, Quiet Transmission 25 is specifically designed to insulate sound. Quiet Transmission 25 has been tested in more than 400 laboratory and field test assemblies. For more information on these results, please visit: <http://www.summit-flooring.com>

Potential Strategies:

The first step is determining the acoustic needs of a space, based on activities, user groups, and sound/privacy sensitivity requirements. Evaluate how the four performance areas addressed by this credit affect the applicable space. Prepare a log or spreadsheet to record relevant acoustic information for each space. Identify products and equipment that could contribute to the acoustic performance of the occupied space. Implement and verify HVAC background noise, sound isolation, reverberation time, and sound reinforcement and masking.

O+M — Materials and Resources

Definition of O+M— Materials and Resources:

Purchasing - Facility Maintenance and Renovation (possible 2 points)

Option 1: Products and Materials (1 point)

Purchase at least 50 percent, by cost, of the total maintenance and renovation materials that meet at least one of these criteria:

- Recycled content
- Wood products
- Bio-based materials
- Materials reuse
- Extended producer responsibility
- GreenScreen v1.2 Benchmark
- Cradle to Cradle Certified
- REACH Optimization
- Product Manufacturer Supply Chain Optimization
- Low emissions of VOCs
- VOC content requirements for wet-applied products
- Low emissions of formaldehyde

AND/OR

Option 2: Furniture (1 point)

Purchase at least 75%, by cost, of total furniture and furnishings that meet one or more of these criteria:

- Recycled content
- Wood products
- Bio-based materials
- Materials reuse
- Extended producer responsibility
- GreenScreen v1.2 Benchmark
- Cradle to Cradle Certified
- REACH Optimization
- Product Manufacturer Supply Chain Optimization
- Low emissions of VOCs

OR Option 3: No Alterations or Furniture Purchasing (1 point)

Make no alterations to the project space and do not purchase any furniture.

How Quiet Transmission 25 can Contribute:

Quiet Transmission 25 can potentially contribute to three of the criterion listed in option 1: recycled content, extended producer Quiet Transmission 25, and low emissions of VOCs. Quiet Transmission 25 is comprised of shredded and cleaned recycled tire rubber and some EPDM flecks. For more information about recycled content, please refer to page 6 of this guide.

Quiet Transmission 25's extended producer responsibility program is called Redeux, under which Summit International Flooring can take back scrap and old material. For more information about the Redeux program, please see page 8.

Potential Strategies:

Review schedules for space planning or tenant fit-outs to determine whether maintenance, renovations, or furniture purchases will occur during the performance period. Determine which credit options are suitable for the project and timeline. Teams may select Option 1 and 2 simultaneously or Option 3. For option 1 and 2, evaluate purchasing patterns and determine percentage compliance. Try to swap out non-compliant items for compliant substitutes. Develop a tracking system to gather data for all purchases for the building. For option 3, verify that no facility renovation activities will be undertaken during the pre-determined performance period.

O+M — Materials and Resources

Definition of O+M — Materials and Resources:

Solid Waste Management - Facility Maintenance and Renovation (possible 2 points)

Divert at least 70 percent of the waste (by weight or volume) generated by facility maintenance and renovation activities from disposal in landfills and incinerators. Include materials and products permanently and semi-permanently installed in the project (flooring, wall coverings, etc.).

Exclude furniture and furnishings that pose human health concerns as well as components not considered base building elements; mechanical, electrical, and plumbing components; and specialty items (such as elevators).

How Quiet Transmission 25 can Contribute:

All Quiet Transmission 25 salvages, overages, and old material can be packaged and shipped back, at the owner's expense, to Summit International Flooring's Redeux Reclamation Program in Lancaster, PA. For more information about the Redeux program, please see page 8 of this guide.

Potential Strategies:

Implement the facility maintenance and renovations solid waste management policy developed in the corresponding prerequisite. As maintenance and renovation projects are scheduled, be sure to share this policy with contractors and other personnel involved in the work, so waste diversion goals can be met. You may adapt your policy to better suit renovations projects as they come along. Develop a tracking system to gather data on all facility maintenance and renovations waste during the performance period.



BD+C: Homes and Midrise — Materials and Resources

Definition of BD+C: Homes and Midrise — Materials and Resources:

Environmentally Preferable Products (BD+C: Homes — possible 4 points, BD+C: Midrise – possible 5 points)

Use building component materials that meet one or more of these criteria:

Option 1: Local Production

Use products that were extracted, processed, and manufactured locally (100 miles) for these components:

- Framing (0.5 point)
- Aggregate for concrete and foundation (0.5 point)
- Drywall or interior sheathing (0.5 point)

AND/OR

Option 2: Environmentally Preferable Products

Use products that meet one or more of the following criteria (0.5 points each). At least 90 percent of each compliant building component, by weight or volume, must meet one of the following requirements. A single component that meets more than one criterion does not earn additional credit.

- The product contains at least 25 percent reclaimed material, including salvaged, refurbished, or reused materials.
- The product contains at least 25 percent postconsumer or 50% preconsumer recycled content.
- Wood products must be Forest Stewardship Council (FSC) Certified.
- Bio-based products must meet the Sustainable Agriculture Network's Sustainable Agriculture Standard.
- Concrete that consists of at least 30 percent fly ash or slag used as a cement substitute and 50 percent recycled content or reclaimed aggregate OR 90 percent recycled content or reclaimed aggregate.
- Products purchased from a manufacturer that participates in an extended producer responsibility program or is directly responsible for extended producer responsibility.

How Quiet Transmission 25 can Contribute:

All Quiet Transmission 25 products are made with recycled materials, resulting in a high recycled content. All Quiet Transmission 25 products exceed 25 percent postconsumer recycled content. To see which meet the environmentally preferable product criteria, please consult the recycled content chart on page 6.

Potential Strategies:

During the design phase, look for local and environmentally preferable products. Be sure to collect relevant documentation from the manufacturer.

BD+C: Homes and Midrise — Materials and Resources

Definition of BD+C: Homes and Midrise — Materials and Resources:

Construction Waste Management (possible 3 points)

Reduce total construction waste or divert from landfills and incinerators a large proportion of the waste generated from new construction. Excavated soil, land-clearing debris, and alternative daily cover (ADC) do not qualify for this credit. Any waste-to-energy is not considered recycling for this credit.

Percentage reduction	Points
10%	0.5
20%	1.0
30%	1.5
40%	2.0
50%	2.5
60%	3.0

How Quiet Transmission 25 can Contribute:

All Quiet Transmission 25 salvages, overages, and old material can be packaged and shipped back, at the owner's expense, to Ecore's Redeux Reclamation Program in Lancaster, PA. For more information about the Redeux program, please see page 8 of this guide.

Potential Strategies:

During the design phase, establish waste reduction goals. Try preventing construction waste by using modular construction, precut materials, and purchasing only as much as you need. For the waste that is generated, develop a waste management reduction plan regarding sorting and diverting waste materials. Document quantities of waste and calculate compliance based on percentage reduced.



BD+C: Homes and Midrise — Indoor Environmental Quality

Definition of BD+C: Homes and Midrise— Indoor Environmental Quality:

Low-Emitting Products (possible 3 points)

In the interior of the home, use products that have been tested and found compliant with the California Department of Public Health Standard Method V1.1–2010, using CA Section 01350, Appendix B, New Single-Family Residence Scenario, for emissions testing guidance. At least 90 percent of a component must meet the requirements to earn credit.

Requirements for compliance for the low-emitting product categories Quiet Transmission 25 can contribute to:

Product	Requirement	Points Attainable
Flooring	CA Section 01350	0.5 point
Site-applied adhesives and sealants	CA Section 01350	0.5 point

How Quiet Transmission 25 can Contribute:

Quiet Transmission 25 Sound Control has earned FloorScore certification, which is tested to the California Standard Method for VOC Emissions Testing and Evaluation (Standard Method v1.1), otherwise known as CA Section 01350. For more information on Quiet Transmission 25 FloorScore certification, please see page 9 on this guide.

Potential Strategies:

During the design phase, research low-emitting materials and finishes. Specify products and document compliance as you make purchases.

