



Modular flooring within the LEED certification system

LEED

Building design and construction (BD+C)

- New construction
- Core and shell
- Schools
- Retail
- Healthcare
- Data centres
- Hospitality
- Warehouse and distribution centres

Interior design and construction (ID+C)

- Commercial interiors
- Retail
- Hospitality

Building operations and maintenance (O+M)

- Existing buildings
- Data centres
- Warehouse and distribution centres
- Hospitality
- Schools
- Retail

Neighbourhood development (ND)

Homes (HOMES)

- Homes and multi-family low-rise
- Multi-family high-rise

Certification systems for sustainable construction such as the LEED Rating System (Leadership in Energy and Environmental Design) support developers and investors in designing and optimising buildings in terms of sustainability. The LEED System can be applied to almost all types of building and is a performance-oriented assessment of building quality. The focus of the sustainability assessment is on the entire life cycle of a building, not on individual materials. The U.S. Green Building Council (USGBC) brought the certification system to the property market in 1998 and has been constantly developing the system since then. Interface is a member of the USGBC.

The LEED v4 certification version comprises eight areas:

1. Location and transportation
2. Sustainable sites
3. Water efficiency
4. Energy and atmosphere
5. Materials and resources
6. Indoor environmental quality
7. Innovation and design
8. Regional priority

In general, no individual measures are evaluated, as the goal is to assess the implementation of defined performance or protection objectives. For a LEED Platinum certificate, a project must achieve a total performance level of at least 80 credit points out of a possible maximum of 110 credits, 60 credits for Gold, 50 credits for Silver and 40 credits for Certified status.

This guide describes the influence of modular flooring from Interface on the sustainability assessment of buildings when applying the LEED v4 system. Here, the flooring is one of many assessment components. Interface offers a variety of products that can help you to meet the requirements for LEED credits and improve the rating of the building. You can find details of these below.

Materials and resources (MR)

MR credit: Building product disclosure and optimisation – Environmental Product Declarations

Assessment:

- Maximum of 2 credit points possible, corresponding to approx. 0.03% of the overall LEED assessment.
- **Interface contribution:** Only partial as at least 20 building products from at least five different manufacturers are considered.

Description:

The aim of this credit is to encourage the use of building products which disclose their life-cycle information. They should have the minimum possible ecological, economic and social life-cycle impact. For this credit, at least 20 building products from at least five different manufacturers must be demonstrated for which the product life cycle has been verified and declared by means of a life-cycle assessment, e.g. product-specific declarations conforming to ISO 14044 or Environmental Product Declarations (EPDs) conforming to ISO 14025, 14040, 14044 and EN 15804 or ISO 21930.

Interface contribution:

Environmental Product Declarations (EPDs) based on the international standard ISO 14025 and verified by independent experts are available for all Interface products. In addition, Interface also publishes an Environmental Data Sheet (EDS) for each product. This provides a brief, factual summary of the environmental impact and considers all the phases of the life cycle. The EPDs and EDSs provide you with a quick overview of the life-cycle assessment characteristics and product-related environmental impacts and enable you to select the product with the smallest ecological footprint for your project.

MR credit: Building product disclosure and optimisation – sourcing of raw materials

Assessment:

- Maximum of 2 credit points possible, corresponding to approx. 0.03% of the overall LEED assessment.
- **Interface contribution:** Only partial as at least 20 building products from at least five different manufacturers are considered.

Description:

With regard to building products, the environmental impact of the production of raw materials is becoming increasingly important. The requirements for this credit are met if it can be demonstrated, for at least 20 building products from at least five different manufacturers and their raw material suppliers, that raw material production is carried out according to certain sustainability criteria. Such criteria may involve, for example, long-term environmentally responsible land use, a reduction in the environmental damage caused by raw material extraction or production processes or the use of bio-based materials, timber products and reused and/or recycled materials. Evidence for this is usually provided by third-party verified sustainability reports (CSRs), or by comparable CSR manufacturer declarations, e.g. conforming to the Global Reporting Initiative (GRI), the OECD Guidelines for Multinational Enterprises by the Organisation for Economic Co-operation and Development, the UN Global Compact or ISO 26000 (2010 Guidance on Social Responsibility).

Interface contribution:

Interface was one of the first companies to publicly commit themselves to sustainable action. In the mid-1990s, Interface's founder, Ray Anderson, formulated "Mission Zero" with the ambitious aim of becoming the first fully sustainable company by 2020. "Mission Zero" is the drive for Interface to always go one step further and, as a sustainability mission, influences all aspects of the company's business operations.

Over the last five years, Interface has regularly been recognised and acknowledged as one of the leading sustainable companies by the GlobeScan survey of 800 opinion formers from business, government, universities/research and other organisations. The annual GlobeScan survey of sustainability experts was launched in 1994 and investigates the trends in the field of sustainability. It provides strategic insights and predictions on global, social and environmental issues. The special feature of this survey is that it takes place spontaneously. As a relatively small multinational company operating in the B2B market, Interface has been highlighted by GlobeScan and is followed by large, well-known companies with consumer brands such as Walmart, Nike, Patagonia and Toyota. Interface is consistently among the top 3 in the GlobeScan survey year after year.

Interface has a good reputation among sustainability experts worldwide and is always considered to be one of the three most sustainable companies. Interface therefore demonstrates that, by concentrating on sustainability, coupled with an appropriate business strategy, you are moving in the right direction. For more information including the reports, visit the GlobeScan website, which can be found at the following link: <http://www.globescan.com/component/edocman/?view=document&id=103&Itemid=591>

MR credit: Building product disclosure and optimisation – material ingredients

Assessment:

- Maximum of 2 credit points possible, corresponding to approx. 0.03% of the overall LEED assessment.
- **Interface contribution:** Only partial as at least 20 building products from at least five different manufacturers are considered.

Description:

The production of sustainable and non-polluting materials can be made transparent through the use of recognised declarations of production methods and the ingredients used. Use at least 20 building products from at least five different manufacturers which disclose content information on the manufacturing process and the chemical composition of the product. All the ingredients they contain must be disclosed by means of the Chemical Abstracts Service Registry Number (CASRN) and the GreenScreen v1.2 benchmarks. Health product declarations with a full disclosure of known hazards are also recognised. Alternatively, evidence that documents the pollutant emission reduction (optimisation) of materials is also permitted. It is also possible to demonstrate products, whereby the manufacturers are demonstrably committed to safety, health and the reduction of hazards and risk and their supply chain has been verified by independent third parties.

Interface contribution:

Interface places great importance on ensuring that the emissions from its products are as low and as environmentally friendly as possible. This goal is achieved by removing toxic elements from products, vehicles and equipment. The production methods are already set up for this and are constantly being further developed. In addition, all Interface carpet tiles manufactured in Europe comply with the requirements of the Green Label Plus programme of the Carpet and Rug Institute (CRI). Green Label Plus certification is available for all products with the Graphlex® backing and verifies that the VOC emissions are LEED-compliant. In addition, Environmental Product Declarations (EPDs) based on the international standard ISO 14025 and verified by independent experts are available for all Interface products. Furthermore, Interface also publishes an Environmental Data Sheet (EDS) for each product. The EPDs and EDSs provide you with a quick overview of the life-cycle assessment characteristics and product-related environmental impacts and enable you to select the product with the lowest emissions and most sustainable production methods for your project.

MR credit: Construction and demolition waste management

Assessment:

- Maximum of 2 credit points possible, corresponding to approx. 0.03% of the overall LEED assessment.
- **Interface contribution:** Only partial as all construction waste in the building has to be included.

Description:

For this credit, the amount of construction waste resulting from the whole project is verified. The recyclable and reusable waste fractions are assessed. Points are scored when reusable waste is identified and fed back into the production cycle as reusable materials. 1 point can be obtained for a recyclable and recoverable share of the total waste of 50%. Another point, i.e. a maximum of 2 points, is awarded for a share of 75%.

Interface contribution:

The unique flexibility of modular Interface carpet tiles, which are quick and easy to install, means that less waste is produced and flooring can be laid, maintained, repaired and replaced easily without work stoppages. Waste and offcuts are reused in the production processes. Many materials can already be recycled now. The TacTiles® installation system patented by Interface does not leave any material stuck to the backing, making it easier to re-use carpet tiles and to recycle them at the end of the product life cycle. TacTiles® are made from PET and are fully recyclable. Used carpet tiles are taken back and the material is recycled back into the manufacturing process via the Interface ReEntry® collection and recycling scheme.

Indoor environmental quality (EQ)

EQ credit: Low-emitting materials

Assessment:

- Maximum of 3 credit points possible, corresponding to approx. 0.04% of the overall LEED assessment.
- **Interface contribution:** Only partial as all building materials in the building are considered.

Description:

In this credit, the impact of building products on indoor air quality is assessed. All the products installed in the entire building must meet the requirements for the VOC content in accordance with SCAQMD Rule # 1168. Low-emission or emission-free building and auxiliary materials should therefore be used. The assessment is carried out by classifying the VOC content into 7 categories: indoor paints and coatings, adhesives and sealants (including flooring adhesives), flooring, engineered wood, ceilings/walls/thermal and acoustic insulation and furniture. For carpets, the adhesives under the floor coverings are mainly considered. Flooring adhesives must comply at least 90% with the emission limits and 100% with the VOC limits. Flooring must comply 100% with the emission and VOC limits. Verification is carried out via safety data sheets, technical material data, manufacturer declarations or test certificates in accordance with the guidelines in CDPH SM V1.1-2010, Section 8, ISO Guide 65 ISO/IEC 17025 (Laboratory requirements). Projects outside the USA may alternatively demonstrate compliance via the German AgBB evaluation scheme or the method of the German Institute for Building Technology (DIBT).

Interface contribution:

The Interface adhesion method and the patented installation system of the adhesive-free TacTiles® meet the requirements of SCAQMD Rule # 1168. TacTiles® do not require the use of liquid adhesives and avoid almost all VOC emissions. That means less unpleasant odours, healthier working environments and a lower overall impact on the indoor environment. TacTiles® also have a significantly lower CO₂ footprint than other traditional carpet adhesives. Instead of the usual 110 g/m², TacTiles® require only 5 g/m². The use of flooring without glue makes verification much easier for both auditors and building contractors. In this case, the requirements of the criterion are met automatically, without the need to provide supporting documents.

In addition, all Interface carpet tiles manufactured in Europe comply with the requirements of the Green Label Plus programme of the Carpet and Rug Institute (CRI). The Green Label Plus programme guarantees consumers a floor covering with the lowest emissions on the market. This is an American standard with currently the strictest criteria, which are constantly being voluntarily tightened. Floor coverings are evaluated which have the corresponding certificates and few or no pollutant emissions. A conformity assessment for Green Label Plus certification, which is accepted without objection by the USGBC, is available for all products with the Graphlex backing and verifies that the VOC emissions are LEED-compliant. The Green Label Plus certificates for Interface products are available upon request.

EQ credit: Indoor air quality assessment

Assessment:

- Maximum of 2 credit points possible, corresponding to approx. 0.03% of the overall LEED assessment.
- **Interface contribution:** Only partial as all building materials in the building are considered.

Description:

This credit is intended to prevent problems of indoor air quality which are caused by building materials or the construction and improve the comfort and health of tradesmen and building users. The assessment is carried out either on the basis of the results of a "flush out" (controlled cross-ventilation) (1 point) or an indoor air measurement (2 points). The measurement of the air quality is carried out at the fixed workplaces after completion of the internal surfaces, i.e. milling, doors, paint, carpet, acoustic panels, and the mobile installations (e.g. workstations, partition walls). The measurements for formaldehyde, PM 10, TVOC, 4-PCH and CO must meet the requirements of SCAQMD Rule # 1168. The choice and installation of the flooring is relevant to the assessment indirectly. When sampling, it is important to select products that are classified as emission-free or low-emission. Textile floor coverings with a proven low emission behaviour are therefore preferable.

Interface contribution:

Generally, carpets pollute the indoor air with much lower VOC emissions than other building materials such as paints or adhesives. The VOC emissions from all Interface products are below the limits of the GUT test criteria and are well below the limits of various provisions of national environmental authorities for construction products, such as those of the AgBB evaluation scheme in Germany. Likewise, the Interface adhesion method and the patented installation system of the adhesive-free TacTiles® meet the requirements of SCAQMD Rule # 1168 in terms of the VOC limits.

EQ credit: Acoustic performance

Assessment:

- Maximum of 2 credit points possible, corresponding to approx. 0.03% of the overall LEED assessment.
- **Interface contribution:** Only partial as all acoustic building materials in the building are considered.

Description:

Soundproofing: When assessing this credit, the Sound Transmission Class (STC) according to the International Classification E413 and E90, which is commonly found in the USA as the STC unit, is used to evaluate the sound insulation of partition walls, ceilings, floors, doors, windows and outside walls. Outside the USA, the Sound Reduction Index (SRI) is used. Different target values of between 45 and 60 are required for the Sound Transmission Class of relevant components depending on the building use. If project-specific requirements are stricter, these apply. One of the factors affecting the Sound Transmission Class is footfall sound insulation. The movement of chairs and walking and running noises are examples of footfall. However, it can generally be stated with regard to textile floor coverings that noise-absorbing floor coverings (footfall) create more favourable conditions for optimal soundproofing than hard surfaces.

Reverberation time: The aim of this credit is to ensure an appropriate acoustic quality (sound absorption) with respect to the use of the rooms. Precise statements about the influence of a textile floor covering are highly dependent on specific projects, as factors such as room size, room surfaces on the floor, walls and ceiling, as well as the type of use affect the result. The reverberation time is measured for 3 single frequencies of 500, 1000 and 2000 Hz and the target values are between 0.6 and 2.0 sec. max. depending on the use in accordance with the Performance Measurement Protocols for Commercial Buildings, Table 9.1.

Interface contribution:

Soundproofing: A good acoustic environment is always the result of many factors. For quality assurance, the Sound Transmission Class of the relevant components should be established. Textile floor coverings for floor structures can play a decisive role here. There is no better alternative than carpeting for effectively controlling footfall and other related sounds. Footfall sound insulation, measured in decibels (dB), demonstrates how well insulated an adjacent room is. Our products reduce the footfall sound by 14–34 dB, as opposed to hard flooring, with footfall sound insulation of only 1–6 dB.

Reverberation time: For most projects, Interface's standard portfolio already contains the ideal product to achieve both acoustic and ergonomic comfort. With over 1000 colourways and a variety of structures in 80 collections, there is no need to compromise on the choice of design even when environmental and acoustic requirements have to be taken into account. For workplaces with more complex acoustic requirements, our high-quality SONE™ and Interlay acoustic backings can provide a suitable solution.

Innovation and design (IN)

IN credit: Innovation**Assessment:**

- Maximum of 1-5 credit points possible, corresponding to approx. 0.01%–0.06% of the overall LEED assessment.
- **Interface contribution:** 1 point possible when Cool Carpet® is used.

Description:

In this category, particular innovations in innovative design and exemplary performance can be included which go beyond the normal LEED standards. As a deliberate measure, no special application areas or target values are specified in order to allow the greatest possible variety of innovations. Up to 5 points can be achieved for five individual measures.

Interface contribution:

By using Interface products, extra points can be achieved for the LEED certification. With the Interface Cool Carpet® programme, for example, all the GHG emissions (GHG = Green House Gas (H₂O, CO₂, CH₄, N₂O, O₃, CFCs)) occurring during the life cycle are determined. Verified Emission Reduction Credits (ERCs) are then purchased to compensate for this. Interface therefore invests in renewable energy and other projects that limit GHG emissions. The CO₂ offset projects supported by Interface via its Cool Carpet® programme are certified according to the Voluntary Carbon Standard (VCS). This ensures that the emission certificates purchased by Interface actually exist and represent an additional benefit and that they are measurable, permanent and unique and are entered in a public register. Cool Carpet® is available as standard for all Interface products that come under the following categories:

- Microtuff constructions
- Products that can be installed in any direction (random design)
- Products that use bio-based yarn
- Products that use 100% recycled yarn, including the latest global collections such as
- Net Effect, Urban Retreat and Human Nature

On request, Cool Carpet® is also available for all other Interface products at no extra cost.

Interface offers Environmental Product Declarations (EPDs) based on the international standard ISO 14025 and verified by independent experts for all its products. These provide you with a quick overview of the life-cycle assessment characteristics and product-related environmental impacts and enable you to select the product with the smallest ecological footprint for your project.

Interface will be happy to advise you whether any additional innovation points are available for your project.

| Credit | Description | LEED Intention | Interface contribution |
|---|--|--|---|
| Indoor Environmental Quality Credit 4.1 1 point | Low Emitting Materials: Adhesive & Sealants | Reduce the quantity of indoor air contaminants from adhesives and sealant materials. | Our Glue and our glue-free Tactiles™ installation system comply with the requirements of SCAQMD Rule #1168. |
| Indoor Environmental Quality Credit 4.3 1 point | Low Emitting Materials: Flooring Systems | Reduce the quantity of indoor air contaminants that are odorous, irritating and harmful to occupants from floor finishes (including carpet). | Interface carpets made in Europe are compliant to the requirements of the CRI Green Label Plus programme. |
| Materials and Resources Credit 2.1 (+ 2.2) 1 (+1) point | Construction waste Management | Divert construction waste from landfills and incinerators to increase recycling and reuse of resources. | ReEntry diverts carpet from landfills by allowing its reuse or recycling. |
| Materials and Resources Credit 4.1 (+ 4.2) 1 (+1) point | Recycled Content | Increase demand for building products that incorporate recycled content materials. | With Graphlex® backing: Total RC: 54.12% Pre-consumer RC: 52.79% Post-consumer RC: 1.33% |
| Materials and Resources Credit 5.1 1 point | Regional Materials | Increase demand for building materials and products that are extracted and manufactured within the region. NB: for LEED CI ONLY | Products are manufactured in Scherpenzeel, The Netherlands. |
| Innovation and Design Credit 1-4 1 point | Climate Neutral products | "Innovative" performance in Green Building categories not specifically addressed by LEED. | An extra point is possible with Cool Carpet. Please consult us for more information. |
| Innovation and Design Credit 1-4 1 point | Pilot Credit 43 Certified Products | "Innovative" performance in Green Building categories not specifically addressed by LEED. | Products dispose of a 3rd party verified EPD for for this specific product. |

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Mission Zero:

our promise to eliminate any negative impact our company may have on the environment by the year 2020.