



LEED Profile Laminate Flooring

PARADOR

Information Booklet for «Leadership in Energy and Environmental Design» (LEED)

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sustainability consultants

Publisher

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Structure of the Document

This document contains the data on a building material / building product that is relevant for the LEED system. It is primarily intended to support planners and architects in obtaining the product information needed for their purposes with reasonable effort.

Product properties are placed in the context of LEED evaluation as part of an evaluation. Applicable individual criteria are identified and transferred at building level. In this way, the potential LEED points are determined.

LEED Version

LEED certification system, Building Design and Construction (BD+C) in version 4 (last updated: 04/2017).

Date of issue

November 10th, 2017

Validity

November 9th, 2020

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1 General Information

The «Leadership in Energy and Environmental Design» (LEED) certification system serves to objectively describe and evaluate the sustainability of buildings and quarters. It was developed by the non-profit organization USGBC (U. S. Green Building Council). All LEED certification is based on the U. S. standards according to ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.). The quality is evaluated in a comprehensive sense, over the entire life cycle of the building. The LEED certification system is internationally applicable. Due to its flexibility, it can be applied precisely to different building uses.

Types and categories of use

The following types and categories of use according to LEED v4 are covered by this profile:

Building Design and Construction (BD+C)

- New Construction (NC)
- Core and Shell
- Schools
- Retail
- Data Centers
- Warehouses and Distribution Centers
- Hospitality
- Healthcare

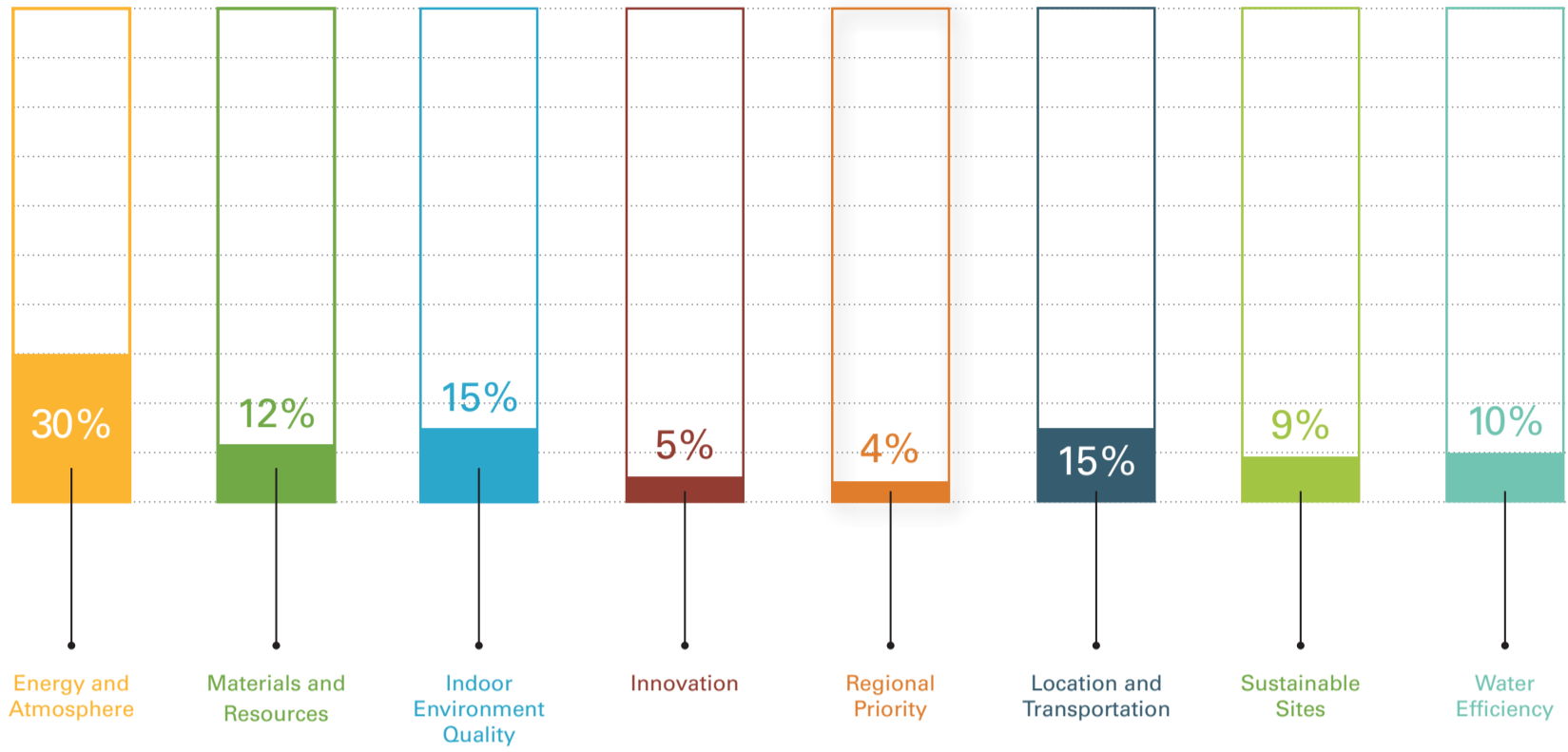
In sum, there can be a maximum of 110 points in every use category.

Valuation categories and their weighting

The usage type «Building Design and Construction (BD+C)» contains the category «New Construction (NC)» with the following valuation categories:

- | | | | |
|-------------------------------|-----------|-------------------------------------|-----------|
| • Integrative Process | 1 Point | • Materials and Resources (MR) | 13 Points |
| • Location and Transportation | 16 Points | • Indoor Environmental Quality (EQ) | 16 Points |
| • Sustainable Sites | 10 Points | • Innovation | 6 Points |
| • Water Efficiency | 11 Points | • Regional Priority | 4 Points |
| • Energy and Atmosphere | 33 Points | | |

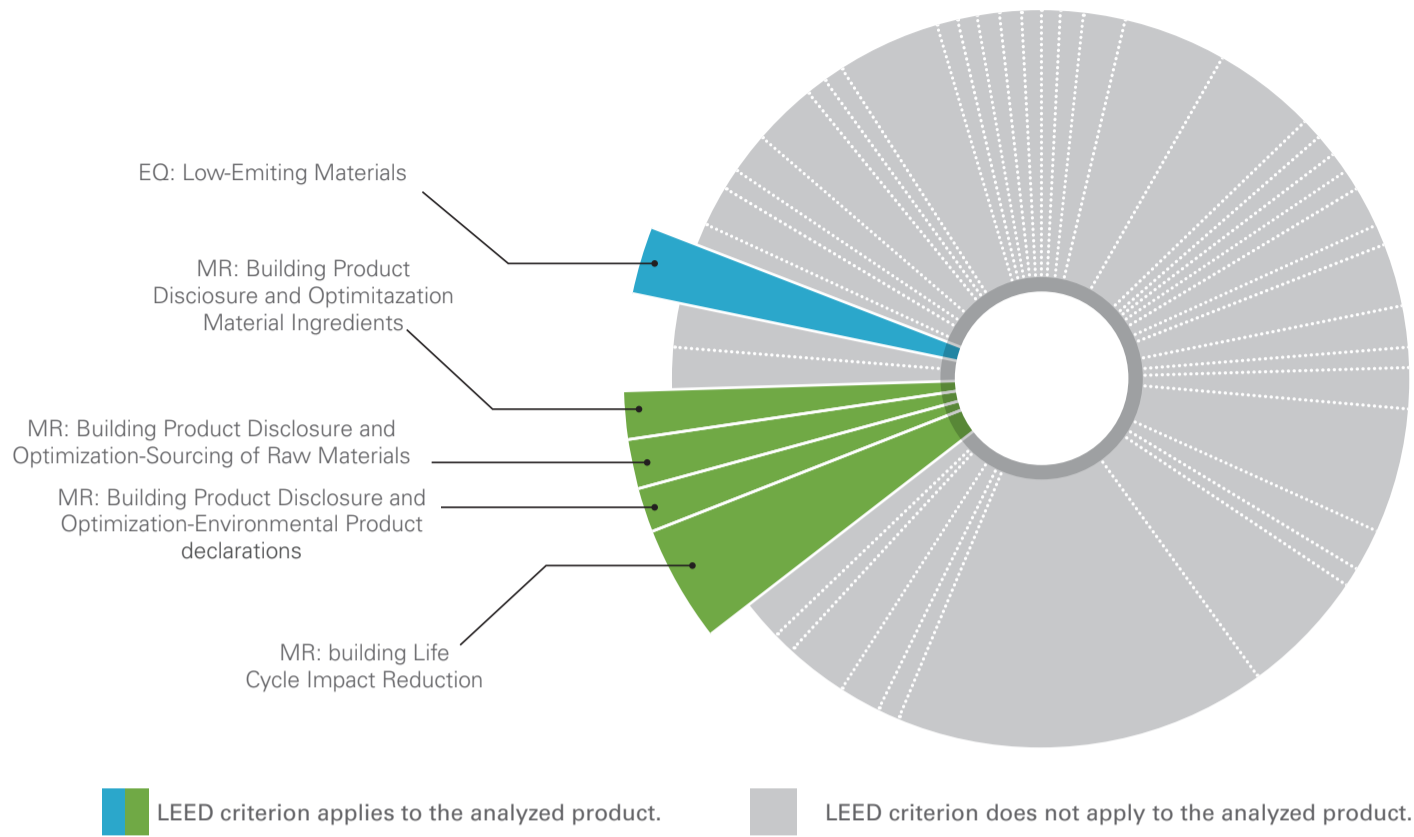
As a result, the following weighting holds for the category «New Construction (NC)»:



Each of the rating categories listed is subdivided into several individual criteria, which provide the total points of a rating category. There are also individual criteria that form the prerequisite for awarding a LEED certificate. The valuation category «Materials and Resources (MR)» is subdivided as follows:

0	0	0	Material and Resources (MR)		13
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
●	●	●	Credit	Building Life-Cycle Impact Reduction	5
●	●	●	Credit	Building Product Disclosure and Optimization- Environmental Product Declarations	2
●	●	●	Credit	Building Product Disclosure and Optimization- Sourcing of Raw Materials	2
●	●	●	Credit	Building Product Disclosure and Optimization- Material Ingredients	2
●	●	●	Credit	Construction and Demolition Waste Management	2

The following individual criteria are relevant for the analyzed product:



Note:

It should be considered that the analyzed construction product exerts influence on the fulfillment level of a criteria group (e.g. life cycle assessment or life cycle costs). However, this share does not depend on the analyzed product alone since:

- **all materials** in the context of the building need to be considered and
- **material independent factors** (for example the environmental impact through construction activity or the access of the building to a transport network) are relevant as well for the valuation of the building.

LEED levels of certification

The LEED valuation method awards the following levels of certification, based on a maximum of 100 (+10 bonus) possible points:



The LEED certification of a building is the publicly reported expression of its ecological value especially to investors, tenants and residents. Sustainable buildings reduce the strain on the environment, have significantly lower running costs and a higher comfort. They increase the standard of living and the overall value of the property.

2 Results Overview

Influence on LEED criteria



Materials and Resources

Building Life - Cycle Impact Reduction	
Option 4:	Whole-Building Life-Cycle Assessment > Life cycle assessment in accordance with ISO 14040 for laminate flooring is provided
Building Product Disclosure and Optimization - Environmental Product Declarations	
Option 1:	Environmental Product Declaration (EPD): > Product specific EPD, Type III > Valuation as an entire product
Option 2:	Multi-Attribute Optimization > Below the industry average in at least three categories (environmental impacts)
Building Product Disclosure and Optimization - Sourcing of Raw Materials	
Option 2:	Leadership Extraction Practices > FSC certificate exists > Valuation is based on 100 % of the costs
Building Product Disclosure and Optimization - Material Ingredients	
Option 2:	Material Ingredient Optimization > International Alternative Compliance Path – REACH optimization: The product contains no ingredients which fulfill the REACH criteria for substances of very high concern. > Valuation is based on 100 % of the costs



Indoor Environmental Quality (EQ)

Low-emitting materials	
Option 1:	General: > Emission test is in accordance with AgBB scheme > Utilization of Ultra-Low-Emitting Formaldehyde (ULEF) > Threshold values are complied with Certificates: > DE-UZ 176 (Blue Angel) > eco-INSTITUT-Label > Émissions dans l'air intérieur

3 Detailed Results



Materials and Resources

Building Life-Cycle Impact Reduction

Option 4: Whole-Building Life-Cycle Assessment

In the case of new buildings (buildings or sections of buildings), the structure and shell of a project must be subjected to an LCA, demonstrating that a reduction of at least 10% has been achieved compared to a reference building in at least three of the following six impact categories (one of which must be the greenhouse potential). No impact category assessed as part of the LCA may achieve an increase of more than 5% compared to the reference building.

Requirements: Life cycle assessments of the building products actually used:

- An EPD declaration in accordance with EN 15804 is provided by the manufacturer (see chapter 3).
- The ecological life cycle analysis at building level is supported on the basis of verified life cycle assessments according to ISO 14040/44.

Building Product Disclosure and Optimization (Environmental Product Declarations)

Option 1: Environmental Product Declaration (EPD)

Product specific EPD, Type III:

Source	EPD-PAR-20130290-IBC2
Reference unit	1 m ² laminate flooring manufactured by PARADOR
Declared unit	1 m ²

Standards: ISO 14025, 14040/44 and EN 15804

➤ Product is weighted at 100 %

Option 2: Multi-Attribute Optimization

The following three categories (environmental impacts) are lower than the industry average:

- global warming potential (greenhouse gases), in CO₂ equivalent;
- acidification of land and water sources, in moles H⁺ or kg SO₂;
- depletion of nonrenewable energy resources, in MJ.

Source: LEED verification, brands & values GmbH

Building Product Disclosure and Optimization - Sourcing of Raw Materials

FSC certificate number	TT-COC-004775
Valid to	30/11/2023

➤ Valuation is based on 100 % of the costs

Building Product Disclosure and Optimization - Material Ingredients

Option 2: Optimization of the ingredients of materials

International Alternative Compliance Path – REACH Optimization. The product does not contain any substances listed in the Authorization list – Annex XIV, the Restriction list – Annex XVII and the SVHC candidate list.

➤ Valuation is based on 100 % of the costs



Indoor Environmental Quality (EQ)

Low-emitting materials

Option 1: Product Category Calculations

LEED thresholds of compliance with emissions and content standards:

Category	Threshold	Emissions and content requirements
Flooring	100 %	General Emissions Evaluation

The PARADOR products meet the following requirements:

- Emission tests according to the AgBB scheme are available
- Use of ultra-low-emitting formaldehydes (ULEF)

TVOC value according to the AgBB scheme	after 28 days	35 µg/m ³
Formaldehyde value according to AgBB scheme	after 28 days	10 µg/m ³

Note:

With regard to VOC measurements, LEED accepts various European standards. These include assessments according to the German AgBB scheme and DiBt, as well as the French VOC label «Émissions dans l'air intérieur».

LEED also has its own thresholds for the release of formaldehyde. Only if the values are lower, the verifications lead to points in the LEED system.

Certificates:

RAL gGmbH: DE-UZ 176 (Der Blaue Engel)

Trademark User Agreement No. | 27259

Eco-INSTITUT Label

Certification number | ID 1112-12656-001
Valid to | 11/2018

Émissions dans l'air intérieur

Test Report No. | 52063-005 III
Date of report | 2017/05/17
Class | A

4 Life Cycle Information

The product lifecycle is modelled and evaluated through a life cycle assessment:



EPD standard	EN 15804; ISO 14025
Program holder	Institut Bauen und Umwelt e.V.
Declaration number	EPD-PAR-20130290-IBC2
Valid to	2018/12/18
Declared unit	1 m ² laminate flooring
Specific weight	7,45 kg/m ²

Further product and location-specific information can be found in the EPD.

The EPD data has been published on various portals:

- Institut Bauen und Umwelt e.V.
- Ökobau. dat of the German Federal Institute for Building, Urban and Spatial Research (BBSR)
- Website Parador

5 Certificates

Within the scope of LEED projects, corresponding certificates, brochures and other relevant documents are made available.

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