SENTINEL HOLDING
INSTITUT

SHI-PRODUKTPASS

Produkte finden - Gebäude zertifizieren

SHI-Produktpass-Nr.:

1782-10-1010

Modular ONE Hydron

Warengruppe: Designbeläge

PARADOR

Parador GmbH
Millenkamp 7 – 8
48653 Coesfeld

Produktqualitäten:

- SHI-Produkt bewertung 2024
- QNG Qualitätssiegel Nachhaltiges Gebäude
- DGNB NEUBAU 2023.2
- DGNB NEUBAU 2023
- DGNB NEUBAU 2018
- BNB-BN NEUBAU V2015
- EU-TAXONOMIE
- BREEAM DE NEUBAU 2018
- LEED v4.1 (outside US)

GEPRÜFT NACHHALTIGES PRODUKT
SHI PRODUKT PASS
SENTINEL HOLDING INSTITUT
www.sentinel-holding.eu/pruefkriterien

Köttner

Helmut Köttner
Wissenschaftlicher Leiter
Freiburg, den 17.08.2026

SENTINEL HOLDING
INSTITUT

Produkt:
Modular ONE Hydron

SHI Produktpass-Nr.:
1782-10-1010

PARADOR

Inhalt

SHI-Produktbewertung 2024	1
QNG - Qualitätssiegel Nachhaltiges Gebäude	2
DGNB Neubau 2023.2	3
DGNB Neubau 2023	4
DGNB Neubau 2018	5
BNB-BN Neubau V2015	6
EU-Taxonomie	7
BREEAM DE Neubau 2018	8
LEED v4.1	9
Produktsiegel	10
Rechtliche Hinweise	11
Technisches Datenblatt/Anhänge	12

Wir sind stolz darauf, dass die SHI-Datenbank, die erste und einzige Datenbank für Bauprodukte ist, die ihre umfassenden Prozesse sowie die Aktualität regelmäßig von dem unabhängigen Prüfunternehmen SGS-TÜV Saar überprüfen lässt.

SGS TÜV SAAR

SENTINEL HOLDING
INSTITUT

Produkt:
Modular ONE Hydron

SHI Produktpass-Nr.:
1782-10-1010

PARADOR

SHI-Produktbewertung 2024

Seit 2008 etabliert die Sentinel Holding Institut GmbH (SHI) einen einzigartigen Standard für schadstoffgeprüfte Produkte. Experten führen unabhängige Produktprüfungen nach klaren und transparenten Kriterien durch. Zusätzlich überprüft das unabhängige Prüfunternehmen SGS-TÜV Saar regelmäßig die Prozesse und Aktualität.

Kriterium	Produktkategorie	Schadstoffgrenzwert	Bewertung
SHI-Produktbewertung	Sonstige Bodenbeläge	TVOC ≤ 160 µg/m³ Formaldehyd ≤ 10 µg/m³	Schadstoffgeprüft
Gültig bis: 21.08.2027			

SENTINEL HOLDING
INSTITUT

Produkt:
Modular ONE Hydron

SHI Produktpass-Nr.:
1782-10-1010

PARADOR

QNG - Qualitätssiegel Nachhaltiges Gebäude

Das Qualitätssiegel Nachhaltiges Gebäude, entwickelt durch das Bundesministerium für Wohnen, Stadtentwicklung und Bauwesen (BMWSB), legt Anforderungen an die ökologische, soziokulturelle und ökonomische Qualität von Gebäuden fest. Das Sentinel Holding Institut prüft Bauprodukte gemäß den QNG-Anforderungen für eine Zertifizierung und vergibt das QNG-ready Siegel. Das Einhalten des QNG-Standards ist Voraussetzung für den KfW-Förderkredit. Für bestimmte Produktgruppen hat das QNG derzeit keine spezifischen Anforderungen definiert. Diese Produkte sind als nicht bewertungsrelevant eingestuft, können jedoch in QNG-Projekten genutzt werden.

Kriterium	Pos. / Bauproduktgruppe	Betrachtete Stoffe	QNG Freigabe
3.1.3 Schadstoffvermeidung in Baumaterialien	2.2 Elastische Bodenbeläge – auch mehrschichtige Systeme	VOC / Emissionen / gefährliche Stoffe / Polyzyklische Aromatische Kohlenwasserstoffe (PAK) / SVHC / Schwermetalle	QNG-ready
Nachweis: Blauer Engel zertifiziert			

SENTINEL HOLDING
INSTITUT

Produkt:
Modular ONE Hydron

SHI Produktpass-Nr.:
1782-10-1010

PARADOR

DGNB Neubau 2023.2

Kriterium	Pos. / Relevante Bauteile / Bau-Materialien / Flächen	Betrachtete Stoffe / Aspekte	Qualitätsstufe
ENV 1.2 Risiken für die lokale Umwelt			nicht bewertungsrelevant

SENTINEL HOLDING
INSTITUT

Produkt:
Modular ONE Hydron

SHI Produktpass-Nr.:
1782-10-1010

PARADOR

DGNB Neubau 2023

Das DGNB-System (Deutsche Gesellschaft für Nachhaltiges Bauen) bewertet die Nachhaltigkeit von Gebäuden verschiedener Art. Das System ist sowohl anwendbar für private und gewerbliche Großprojekte als auch für kleinere Wohngebäude. Die Version 2023 setzt hohe Standards für ökologische, ökonomische, soziokulturelle und funktionale Aspekte während des gesamten Lebenszyklus eines Gebäudes.

Kriterium	Pos. / Relevante Bauteile / Bau-Materialien / Flächen	Betrachtete Stoffe / Aspekte	Qualitätsstufe
ENV 1.2 Risiken für die lokale Umwelt, 03.05.2024 (3. Auflage)	7 Bodenbeläge (Elastische Bodenbeläge)	VVOC, VOC, SVOC Emissionen und Gehalt an gefährlichen Stoffen	Qualitätsstufe: 4
Nachweis: Blauer Engel Zertifikat vom 30.06.2021			

Kriterium	Pos. / Relevante Bauteile / Bau-Materialien / Flächen	Betrachtete Stoffe / Aspekte	Qualitätsstufe
ENV 1.2 Risiken für die lokale Umwelt, 29.05.2025 (4. Auflage)	7 Bodenbeläge in der Innenanwendung (Elastische Bodenbeläge)	VVOC, VOC, SVOC Emissionen und Gehalt an gefährlichen Stoffen	Qualitätsstufe: 4
Nachweis: Blauer Engel Zertifikat vom 30.06.2021			

SENTINEL HOLDING
INSTITUT

Produkt:
Modular ONE Hydron

SHI Produktpass-Nr.:
1782-10-1010

PARADOR

DGNB Neubau 2018

Das DGNB-System (Deutsche Gesellschaft für Nachhaltiges Bauen) bewertet die Nachhaltigkeit von Gebäuden verschiedener Art. Das System ist sowohl anwendbar für private und gewerbliche Großprojekte als auch für kleinere Wohngebäude.

Kriterium	Pos. / Relevante Bauteile / Bau-Materialien / Flächen	Betrachtete Stoffe / Aspekte	Qualitätsstufe
ENV 1.2 Risiken für die lokale Umwelt	7 Bodenbeläge (Elastische Bodenbeläge)	VOC / SVOC / gefährliche Stoffe	Qualitätsstufe: 4
Nachweis: Blauer Engel Zertifikat vom 30.06.2021			

SENTINEL HOLDING
INSTITUT

Produkt:
Modular ONE Hydron

SHI Produktpass-Nr.:
1782-10-1010

PARADOR

BNB-BN Neubau V2015

Das Bewertungssystem Nachhaltiges Bauen ist ein Instrument zur Bewertung von Büro- und Verwaltungsgebäuden, Unterrichtsgebäuden, Laborgebäuden sowie Außenanlagen in Deutschland. Das BNB wurde vom damaligen Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit (BMUB) entwickelt und unterliegt heute dem Bundesministerium für Wohnen, Stadtentwicklung und Bauwesen.

Kriterium	Pos. / Bauprodukttyp	Betrachtete Schadstoffgruppe	Qualitätsniveau
1.1.6 Risiken für die lokale Umwelt	2a Elastische Bodenbeläge – mit und ohne ankaschierte Verlege- oder Dämmunterlage	VOC / gefährliche Stoffe / Schwermetalle	Qualitätsniveau 5
Nachweis: Blauer Engel zertifiziert			

SENTINEL HOLDING
INSTITUT

Produkt:
Modular ONE Hydron

SHI Produktpass-Nr.:
1782-10-1010

PARADOR

EU-Taxonomie

Die EU-Taxonomie klassifiziert wirtschaftliche Aktivitäten und Produkte nach ihren Umweltauswirkungen. Auf der Produktebene gibt es gemäß der EU-Verordnung klare Anforderungen zu Formaldehyd und flüchtigen organischen Verbindungen (VOC). Die Sentinel Holding Institut GmbH kennzeichnet qualifizierte Produkte, die diesen Standard erfüllen.

Kriterium	Produkttyp	Betrachtete Stoffe	Bewertung
DNSH - Vermeidung und Verminderung der Umweltverschmutzung	Bodenbeläge	Stoffe nach Anlage C, Formaldehyd, Karzinogene VOC Kategorie 1A/1B	Erfüllt
Nachweis: Blauer Engel zertifiziert			

SENTINEL HOLDING
INSTITUT

Produkt:
Modular ONE Hydron

SHI Produktpass-Nr.:
1782-10-1010

PARADOR

BREEAM DE Neubau 2018

BREEAM (Building Research Establishment Environmental Assessment Methodology) ist ein britisches Gebäudebewertungssystem, welches die Nachhaltigkeit von Neubauten, Sanierungsprojekten und Umbauten einstuft. Das Bewertungssystem wurde vom Building Research Establishment (BRE) entwickelt und zielt darauf ab, ökologische, ökonomische und soziale Auswirkungen von Gebäuden zu bewerten und zu verbessern.

Kriterium	Produktkategorie	Betrachtete Stoffe	Qualitätsstufe
Hea 02 Qualität der Innenraumluft	Bodenbeläge (einschließlich Bodenspachtelmassen und Harzböden)	Emissionen: Formaldehyd, TVOC, TSVOC, Krebserregende Stoffe	herausragende Qualität
Nachweis: Eco Institut Prüfbericht vom 21.08.2025 (Nr. 60172-A001-BE-L)			

SENTINEL HOLDING
INSTITUT

Produkt:
Modular ONE Hydron

SHI Produktpass-Nr.:
1782-10-1010

PARADOR

LEED v4.1

LEED (Leadership in Energy and Environmental Design) ist ein international anerkanntes Gebäudezertifizierungssystem des U.S. Green Building Council. Es zählt zu den weltweit am weitesten verbreiteten Nachhaltigkeitsstandards für Gebäude und wird insbesondere bei international ausgerichteten Projekten eingesetzt. LEED bewertet Gebäude ganzheitlich in Kategorien wie Energieeffizienz, Ressourcenschonung, Materialauswahl, Innenraumqualität und Standortqualität. Je nach erreichter Punktzahl werden die Zertifizierungsstufen LEED Certified, Silver, Gold oder Platinum vergeben.

Kriterium	Produktkategorie	Betrachtete Stoffe	Bewertung
EQ Credit: Low-Emitting Materials	Bodenbeläge	Emissionen: Formaldehyd, VOC, Krebserregende Stoffe	Erfüllt
Nachweis: Eco Institut Prüfbericht vom 21.08.2025 (Nr. 60172-A001-BE-L)			

SENTINEL HOLDING
INSTITUT

Produkt:
Modular ONE Hydron

SHI Produktpass-Nr.:
1782-10-1010

PARADOR

Produktsiegel

In der Baubranche spielt die Auswahl qualitativ hochwertiger Materialien eine zentrale Rolle für die Gesundheit in Gebäuden und deren Nachhaltigkeit. Produktlabels und Zertifikate bieten Orientierung, um diesen Anforderungen gerecht zu werden. Allerdings besitzt jedes Zertifikat und Label eigene Prüfkriterien, die genau betrachtet werden sollten, um sicherzustellen, dass sie den spezifischen Bedürfnissen eines Bauvorhabens entsprechen.

Der vom Umweltbundesamt als Zeichengeber und vom RAL e.V. als verantwortliche Prüforganisation verliehene „Blaue Engel" ist eines der ältesten und in Deutschland das am häufigsten vorkommende Umweltzeichen. Den „Blauen Engel" gibt es in zahlreichen Ausprägungen für die unterschiedlichsten Produktgruppen. Die zugrunde liegenden Prüfkriterien der jeweiligen Umweltzeichen (UZ) sollten in gesundheitlicher Hinsicht individuell betrachtet werden, da es durchaus Unterschiede in der Relevanz und Strenge gibt.

Das IBU ("Institut Bauen und Umwelt e.V.") ist eine Initiative von Bauprodukt- und Baukomponentenherstellern, die sich dem Leitbild der Nachhaltigkeit im Bauwesen verpflichten. IBU ist Programmbetreiber für Umwelt-Produktdeklarationen (Environmental Product Declaration, kurz: EPD) nach der Norm EN 15804. Das IBU-EPD-Programm steht für umfassende Ökobilanzen und Umweltwirkungen von Bauprodukten und eine unabhängige Überprüfung durch Dritte.

Produkte mit dem QNG-ready Siegel des Sentinel Holding Instituts eignen sich für Projekte, für welche das Qualitätssiegel Nachhaltiges Gebäude (QNG) angestrebt wird. QNG-ready Produkte erfüllen die Anforderungen des QNG Anhangdokument 3.1.3 "Schadstoffvermeidung in Baumaterialien". Das KfW-Kreditprogramm Klimafreundlicher Neubau mit QNG kann eine höhere Fördersumme ermöglichen.

Dieses Produkt ist schadstoffgeprüft und wird vom Sentinel Holding Institut empfohlen. Gesundes Bauen, Modernisieren und Betreiben von Immobilien erfolgt dank des Sentinel Holding Konzepts nach transparenten und nachvollziehbaren Kriterien.

Produkt:
Modular ONE Hydron

SHI Produktpass-Nr.:
1782-10-1010

PARADOR

Rechtliche Hinweise

(*) Die Kriterien dieses Steckbriefs beziehen sich auf das gesamte Bauobjekt. Die Bewertung erfolgt auf der Ebene des Gebäudes. Im Rahmen einer sachgemäßen Planung und fachgerechten Installation können einzelne Produkte einen positiven Beitrag zum Gesamtergebnis der Bewertung leisten. Das Sentinel Holding Institut stützt sich einzig auf die Angaben des Herstellers.

Alle Kriterien finden Sie unter:
https://www.sentinel-holding.eu/de/Themenwelten/Pr%C3%BCfkriterien%20f%C3%BCr%20Produkte

Wir sind stolz darauf, dass die SHI-Datenbank, die erste und einzige Datenbank für Bauprodukte ist, die ihre umfassenden Prozesse sowie die Aktualität regelmäßig von dem unabhängigen Prüfunternehmen SGS-TÜV Saar überprüfen lässt.

Herausgeber

Sentinel Holding Institut GmbH
Bötzinger Str. 38
79111 Freiburg im Breisgau
Tel.: +49 761 590 481-70
info@sentinel-holding.eu
www.sentinel-holding.eu

PARADOR

Modular ONE Hydron

Produkteigenschaften			
Format		856 x 403 x 5,5 mm	1290 x 196 x 5,5 mm
Verpackung	**Paket:**	8 Elemente / 2,76 m2 / 19,44 kg	8 Elemente / 2,023 m2 / 14,34 kg
	Palette:	30 Pakete / 82,792 m2 / 598,14 kg	48 Pakete / 97,091 m2 / 703,42 kg

Toleranzen (Anforderung EN 16511:2023)		
Rechtwinkligkeit des Elementes (≤ 0,20mm)		≤ 0,15 mm
Bestimmung der Kantengeradheit (≤ 0,30 mm/m)		≤ 0,20 mm/m
Ebenheit konkav/konvex	**längs (≤ 0,50 / ≤ 1,0 %)**	≤ 0,35 / ≤ 1,0 %
	breit (≤ 0,15 / ≤ 0,20 %)	≤ 0,10 / ≤ 0,15 %
Höhendifferenz	**(mittel ≤ 0,10 mm)**	mittel ≤ 0,10 mm
	(max. ≤ 0,15 mm)	max. ≤ 0,15 mm
Fugenöffnung	**(mittel ≤ 0,15 mm)**	mittel ≤ 0,05 mm
	(max. ≤ 0,20 mm)	max. ≤ 0,10 mm

Garantieleistung (laut Parador Garantiebestimmungen)		Hinweise
Privater Bereich	Gewerblicher Bereich	- geeignet für vollflächige Verklebung
Lifetime	10 Jahre	- Reinigung und Pflege siehe Anleitung
		- Technische Änderungen vorbehalten

EN 14041:2004/AC:2006 · ÉMISSIONS DANS L'AIR INTÉRIEUR A+ · BLAUER ENGEL DAS UMWELTZEICHEN www.blauer-engel.de/uz120 · floor score CERTIFIED BY SCS Global Services · TÜVRheinland ZERTIFIZIERT Qualität Fertigung überwacht Funktionalität www.tuv.com ID 0000057515 · THIRD-PARTY VERIFIED EPD ISO 14025 and EN 15804 Institut Bauen und Umwelt e.V.

Klassifizierung

Nutzungsklasse 23 = privater Wohnbereich mit intensiver Nutzung	Nutzungsklasse 33 = gewerblicher Bereich mit intensiver Nutzung
Der Designboden erfüllt alle Eigenschaften der ausgewiesenen Nutzungsklasse.	

Anforderungen / Eigenschaften		Prüfnorm	Bewertung
	Brandverhalten	EN 13501-1	C_{fl} s1
	Gleitreibung	EN 13893 EN 14041	μ ≥ 0,30 DS
	Fleckenunempfindlichkeit	EN 438-2	Gruppe 1+2: Grad 5, keine sichtbare Veränderung Gruppe 3: Grad 4, leichte Veränderung
	Lichtechtheit	EN ISO 105 – B02 Verfahren 3	Wollblauskala: Stufe ≥ 6
	Beanspruchung durch Stuhlrollen	EN ISO 4918	Typ W, keine sichtbaren Veränderungen
	Wärmedurchlasswiderstand Zur Verlegung auf Fußbodenheizung geeignet.	EN 12667	0,033 m²*K/W
	Verschieben eines Möbelfußes	EN ISO 16581	kein sichtbarer Schaden (Stempel Typ 0)
	Eindruck nach konstanter Belastung	EN ISO 24343-1	≤ 0,05 mm
	Trittschallminderung	EN ISO 10140-3	17 dB
	Verbindungsfestigkeit	ISO 24334	Längs ≥ 1 KN/m Quer ≥ 1,5 KN/m
	Beständigkeit gegen Abrieb	ISO 24338, Verfahren B	> 7.000 Umdrehungen
	Beständigkeit gegen Stoßbeanspruchung	EN 13329 Anhang F	≥ 1.800 mm
	Maßhaltigkeit unter Temperatureinfluss	EN ISO 23999	≤ 0,10 %
	Schüsselung unter Temperatureinfluss	EN ISO 23999	≤ 2mm
	Wasserbeständigkeit	EN 317	wasserfest
	Mikrokratzbeständigkeit	EN 16094	Verfahren A MSR-A2 Für matte Oberflächen (Glanz ≤ 7): ≤ 1,5 Einheitenänderung bei 60°
	Rutschhemmung	EN 16165, Anh. B Schiefe Ebene	R10
		EN 16165, Anh. C Pendelprüfung	PTV (trocken (Gleiter 96)) ≥ 36 Low slip potential gem. UK Slip resistance group
	Entsorgung	EAK-Schlüssel (Europäischer Abfallkatalog)	17 02 03

URKUNDE

PARADOR GmbH
48653 Coesfeld, Deutschland

wird aufgrund des Zeichenbenutzungsvertrages Nr. 36424 zur DE-UZ 120 Ausgabe 2011 das Recht verliehen, für das Produkt

PARADOR Modular ONE Hydron

das nachstehend abgebildete Umweltzeichen als Ausweis für die besondere Umweltfreundlichkeit zu führen.

Bonn, den 30. Juni 2021

Geschäftsführer
RAL gGmbH

Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit

Umwelt Bundesamt

Jury Umweltzeichen

RAL gGmbH

ENVIRONMENTAL PRODUCT DECLARATION

as per *ISO 14025* and *EN 15804+A2*

Owner of the Declaration	Parador GmbH
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-PAR-20210321-IBC1-EN
Issue date	31.01.2023
Valid to	30.01.2028

Design flooring Modular ONE Hydron

Parador GmbH

Institut Bauen und Umwelt e.V.

www.ibu-epd.com | https://epd-online.com

ECO PLATFORM EPD VERIFIED



PARADOR

1. General Information

Parador GmbH

Programme holder

IBU – Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

Declaration number

EPD-PAR-20210321-IBC1-EN

This declaration is based on the product category rules:

Floor coverings, 01.01.0001
(PCR checked and approved by the SVR)

Issue date

31.01.2023

Valid to

30.01.2028

Dipl.-Ing. Hans Peters
(Chairman of Institut Bauen und Umwelt e.V.)

Dr. Alexander Röder
(Managing Director Institut Bauen und Umwelt e.V.)

Design flooring Modular ONE Hydron

Owner of the declaration

Parador GmbH
Millenkamp 7-8
48653 Coesfeld
Germany

Declared product / declared unit

The declared unit is one square metre (1 m²) of design flooring Modular ONE Hydron.

Scope:

This EPD relates to the manufacture, transport, installation and disposal of an average square metre of Parador design flooring Modular ONE Hydron. The technical characteristics are described in chapter 2.3. The product is manufactured in Coesfeld, Germany.
The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

The EPD was created according to the specifications of EN 15804+A2. In the following, the standard will be simplified as *EN 15804*.

Verification

The standard EN 15804 serves as the core PCR
Independent verification of the declaration and data according to ISO 14025:2011
☐ internally ☒ externally

Angela Schindler,
(Independent verifier)

2. Product

2.1 Product description/Product definition

The multi-layered structure of Modular ONE Hydron floors is characterised by the coating of the decor foil with polypropylene (PP). This allows an authentic structuring of the decor foil and thus enables realistic reproduction of real wood surfaces.
The core material of Modular ONE Hydron flooring is a waterproof, dimensionally stable polymer core board (PP-based), which is equipped with a waterproof polymer acoustic backing (polyethylene (PE) backing). A polyurethane (PUR) adhesive is used to bond the layers.

Modular ONE Hydron is 100% waterproof due to this special product structure.

Regulation (EU) No 305/2011 (Construction Products Regulation) applies to placing the product on the market in the European Union/EFTA (with the exception of Switzerland). The product requires a declaration of performance taking into account the harmonised standard *DIN EN 14041:2018-05, Resilient, textile, laminate and modular multilayer floor coverings - Essential characteristics* and the CE marking. The respective national regulations apply to the use.

2.2 Application

Design floors are suitable for private and commercial indoor use. They are either installed floating on screed or other existing subfloors in conjunction with suitable underlays or glued to the full surface of the screed. The principles of proper installation can be found in the enclosed installation instructions or in the "Guide Design flooring Vinyl flooring and Modular ONE"

2.3 Technical Data

Structural Data

Name	Value	Unit
Product thickness	5.5	mm
Wear class	23/33	
Grammage	7135	g/m^2
Length of the surface layer	according to current type list	mm
Width of the surface layer	according to current type list	mm
Type of manufacture	Lamination	-

Further technical information can be found at:
https://parador.de/en/services/downloads/design-flooring
and there under the heading "Technical data sheets.

Certificates can be found at:
https://parador.de/en/services/downloads/design-flooring and there under the heading "Certificates".

Performance values of the product as stated in the declaration of performance in relation to its essential characteristics according to *EN 14041:2018-05, Resilient, textile, laminate and modular multi-layer floor coverings - Essential characteristics*.

You will find the declarations of performance at:
https://parador.de/en/services/downloads/design-flooring
and there under the heading "CE - Declaration of Performance".

2.4 Delivery status

The Modular ONE Hydron floors are delivered in the following condition:

Format	
Length	856-1290 mm
Width	196-403 mm
Height	5.5 mm

2.5 Base materials/Ancillary materials

The averaged percentage of ingredients per m² in mass per cent for the EPD is as follows:

- PP core board: 92 %
- PE backing: 3 %
- PP wear layer/top layer: 3 %
- PUR adhesive: 2 %

The product/at least one part of the product contains substances on the Candidate List (*ECHA*) (date 17.01.2022) above 0.1 % by mass: no.

The product/at least one part of the product contains other CMR substances of category 1A or 1B not on the candidate list (*ECHA*) above 0.1 % by mass in at least one part of the product: no.

Biocidal products have been added to the present construction product or it has been treated with biocidal products (it is therefore a treated product within the meaning of the Biocidal Products Regulation (*Regulation (EU) No 528/2012*)): no.

2.6 Manufacture

The polymer core board, the wear layer and the polymer backing are pressed together using an adhesive.

The planks are then formatted and given a longitudinal and transverse profile.

After quality control of the individual flooring elements, they are packed in half-shell cartons and shrink-wrapped in polyethylene (PE).

These individual packaging units are stacked on pallets according to the different formats and made available in the warehouse for subsequent delivery.

All processes are continuously inspected and documented as part of the in-house Factory Production Control (FPC).

2.7 Environment and health during manufacturing

At the Coesfeld site, wood chips and production waste are collected in containers provided for this purpose and disposed of.

Parador is certified according to the European Environmental Management System *EMAS*, which, in addition to environmental aspects, also reviews the energy aspects of the plant for continuous improvement.

2.8 Product processing/Installation

For the installation of design flooring, Parador recommends the use of the following tools: measuring tape, cutter, adhesive tape, pencil, hammer, and jigsaw or circular/mitre saw (ensure to use the finest possibleteeth). Spacer wedges, drawbars, protective block, and a MultiTool are also useful. The usual safety precautions (e.g. safety goggles and dust mask when sawing) must be observed. The shavings and sawdust

produced during installation should be extracted. The provisions of the employers' liability insurance association apply for commercial processing.

The residual material and packaging must be disposed of separately according to their waste category.

Further information can be found in the installation instructions enclosed with the product or in the "Guide design flooring Vinyl and Modular ONE" (https://parador.de/pcms/downloads/downloadfile/file_id/100/).

2.9 Packaging

The planks are packed in halfshell cartons which are wrapped in PE shrink film for better protection against moisture.

Exchangeable europallets and PET strapping are also used for transport.

All packaging components can be recycled pursuant to their category.

2.10 Condition of use

Polymer materials are temperature sensitive and react to temperature changes, such as strong heating due to solar radiation, with expansion.
During use it is therefore important to ensure a balanced room climate and, if necessary, shading, in order to avoid possible dimensional changes.

The room climate should be at a temperature of approx. 20 °C and a relative humidity of between 35 and 60 % all year round.

2.11 Environment and health during use

There are no known negative effects between product, environment, and health. Risks to water, air, and soil cannot occur when used as intended. Emissions of pollutants are well below current legal limits.
In terms of emission behaviour, the modular flooring meets the award criteria of *DE-UZ 120* (Blue Angel) "Contract 36424".

2.12 Reference service life

The Sustainable Building Assessment System (*BNB*) takes a useful life of 20 years as a basis under code no. 352.711.

2.13 Extraordinary effects

Fire
In the area of fire protection, the following building material class according to *EN 13501-1* is complied with:

Fire protection

Name	Value
Building material class	Cfl
Burning droplets	N.r.
Smoke gas development	s1

N.r.: Not relevant for floor coverings

Water
The product is waterproof and will not be damaged by water standing on the surface. However, penetration of moisture to the back of the floor covering can lead to mould growth. Dangerous impact on the environment due to water exposure is not to be expected.

Mechanical destruction
Mechanical destruction is not expected to have any negative consequences for the environment.

2.14 Re-use phase

In case of selective dismantling, the product can easily be reused even after the end of the useful life. Residues and waste of this modular flooring must be recycled in accordance with *AVV* 17 02 03. If repeated use as a floor covering is no longer possible, the product is sent for thermal recycling to generate process heat and electricity.
Open burning or burning in a chimney is not possible, as the combustion of plastics results in harmful emissions. Incineration should therefore take place in a plant with connected flue gas cleaning system, such as a waste incineration plant.

2.15 Disposal

Disposal is to be organized under the following *AVV* code: 17 02 03.

2.16 Further information

Additional information about the company and other products as well as information brochures – including the *EMAS* Environmental Statement – can be downloaded at: https://parador.de/en

3. LCA: Calculation rules

3.1 Declared Unit

The declared unit is one square metre (1 m²) of design flooring Modular ONE Hydron.

Declared unit

Name	Value	Unit
Declared unit	1	m^2
Packaging materials	0.99	kg/m²
Layer thickness	0.0055	m
Grammage	7.129	kg/m^2
Total	7.227	kg/m²

3.2 System boundary

Type of EPD: Cradle to factory gate with options.

Modules A1-A3, A4 and A5
The product stage (A1-A3) begins with considering the production of the necessary raw materials and energies, including all corresponding upstream chains and the actual procurement transports. Furthermore, the entire manufacturing phase was mapped, including treatment of production waste until endofwaste status (EoW) was reached. In addition, both the distribution transports from Coesfeld/DE (A4) and the packaging waste generated during installation (A5) were taken into account. Product losses as well as power consuming tools, auxiliary materials, and installation materials were not considered in A5.

Modules C1-C4
The modules include the environmental impacts for the treatment of the waste categories until endofwaste status (EoW) is reached, including the associated transports at the end of the product life cycle.
Module C1 is declared with the value "0", as the Modular ONE Hydron design floor can be dismantled by hand and no power-operated tools are required. Module C4 does not contain any values because all the floor covering can be reused in another

form and is not put into landfill.

Module D
Identification of the benefits and costs of the product outside the system boundary. These consist of energy credits from the thermal utilisation of the foil packaging (A5) and the product (C3) in the form of the average European electricity mix or thermal energy from natural gas

3.3 Estimates and assumptions
It is assumed that the plastic chips (polyethylene (PE) and polypropylene (PP)) are thermally recycled in a waste incineration plant. The Modular ONE Hydron design flooring is completely recycled thermally at the end of the use phase. All benefits and avoided loads outside the system boundary are assigned to module D.

It was also assumed that thermal waste processing at end of life uses systems with an R1 factor (efficiency of energy conversion or energy efficiency of waste incineration plants according to the European Waste Framework Directive) > 0.6.

3.4 Cut-off criteria
Components in the decor/wear layer for which no matching data sets are available and whose mass fraction is significantly less than 0.1 % in each case, were partially truncated.

Euro pallets for transporting the flooring were truncated. PET strapping used to secure the packages on the pallet was also neglected due to the low apparent percentage (exact percentage not determined) of the total weight.

The sum of neglected substances is less than 5 % of the material use or influence on impact categories.

3.5 Background data
The software system for holistic balancing *GaBi* was used to model the life cycle. The entire manufacturing process as well as the energy consumption were modelled on the basis of manufacturer-specific data. However, generic background datasets were used for the upstream and downstream processes. The majority of the background datasets used were taken from the current version of the *GaBi* database. *Ecoinvent* datasets were only used for substances which in any case have only a very small mass fraction and could theoretically be truncated.

The data sets contained in the databases are documented online. For the modules A1-A3 - where possible - country-specific, and for the disposal scenarios (C modules) the corresponding European data sets were used.

3.6 Data quality
The background data sets used for balancing purposes originate from the *GaBi* databases current at the time of the calculation.

Ecoinvent datasets were only used for substances that have a very low mass fraction anyway and could theoretically be cut off.

The data for the examined products was captured on the basis of evaluations of internal production and environmental data, the collection of LCA relevant data within the supply chain, as well as the evaluation of relevant data for the energy supply. The collected data were checked for plausibility and consistency. Good representativity can be assumed

3.7 Period under review
The data was collected in 2021.

3.8 Geographic Representativeness
Land or region, in which the declared product system is manufactured, used or handled at the end of the product´s lifespan: Europe

3.9 Allocation
All required energies, raw materials, and supplies could be clearly assigned to the declared product. No by-products are produced and no allocation is required.

Module A1-A3 credits electricity and heat for the thermal recovery of production waste.
Packaging materials and the product are incinerated at the end of life in a waste incineration plant. Any emissions that occur are taken into account in the model. Depending on their elementary composition and the resulting heating values, credits for recycling are taken into account in module D.

3.10 Comparability
Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to *EN 15804* and the building context, respectively the product-specific characteristics of performance, are taken into account.
The used background database is *GaBi* version 10.6, content version 2021.2.

4. LCA: Scenarios and additional technical information

Characteristic product properties biogenic carbon
The product contains less than 5 % biogenic carbon. Therefore, the biogenic carbon content of the product is not indicated.

Information describing the biogenic carbon content at the factory gate

Name	Value	Unit
Biogenic carbon content in product	< 5 %	kg C
Biogenic carbon content in accompanying packaging	0.035	kg C

Transport to construction site (A4)

Name	Value	Unit
Transport distance	713	km
Capacity utilisation (including empty runs)	50	%

Reference service life

Name	Value	Unit
Life Span (according to BBSR)	20	a

End of life (C2-C3)

Name	Value	Unit
Energy recovery	7.129	kg
Landfilling	-	kg
Transport distance truck to MVA	75	km
Truck load factor (including empty runs)	50	%

Reuse, recovery and recycling potential (D), relevant scenario data

Name	Value	Unit
Combustible material	7.129	kg
R1 factor waste incineration plant	> 0.6	-
Lower heating value	18.3	MJ/kg

The entire product is thermally utilised in a wasteto-energy plant. Module D contains credits from the energy recovery of packaging waste in module A5 and the resilient floor coverings in module C3.

5. LCA: Results

The environmental impacts for 1 m² of design flooring Modular ONE Hydron are shown below. The following tables show the results of the impact assessment, the use of resources as well as waste and other output flows in relation to the declared unit.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; ND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

Product stage			Construction process stage		Use stage							End of life stage				Benefits and loads beyond the system boundaries
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	MND	MND	MNR	MNR	MNR	MND	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m^2 Modular ONE Hydron

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq	1.15E+01	3.98E-01	1.75E-01	0	4.87E-02	1.04E+01	0	-4.82E+00
GWP-fossil	kg CO_2 eq	1.16E+01	3.95E-01	4.77E-02	0	4.83E-02	1.04E+01	0	-4.81E+00
GWP-biogenic	kg CO_2 eq	-1.27E-01	0	1.27E-01	0	0	0	0	0
GWP-luluc	kg CO_2 eq	1.72E-02	3.22E-03	5.74E-06	0	3.95E-04	6.89E-04	0	-2.96E-03
ODP	kg CFC11 eq	6.92E-10	7.77E-17	3.65E-18	0	9.53E-18	6.14E-15	0	-4.86E-14
AP	mol H^+ eq	2.13E-02	1.32E-03	7.09E-06	0	1.73E-04	2.64E-03	0	-5.9E-03
EP-freshwater	kg P eq	3.74E-05	1.17E-06	2.47E-09	0	1.43E-07	1.74E-06	0	-5.6E-06
EP-marine	kg N eq	6.85E-03	6.08E-04	2.1E-06	0	8.03E-05	6.62E-04	0	-1.73E-03
EP-terrestrial	mol N eq	7.29E-02	6.79E-03	3.44E-05	0	8.96E-04	1.15E-02	0	-1.85E-02
POCP	kg NMVOC eq	2.11E-02	1.19E-03	5.11E-06	0	1.57E-04	1.79E-03	0	-4.87E-03
ADPE	kg Sb eq	3E-06	3.49E-08	1.13E-10	0	4.28E-09	9.03E-08	0	-7.36E-07
ADPF	MJ	3.03E+02	5.24E+00	1.47E-02	0	6.43E-01	8.44E+00	0	-8.33E+01
WDP	m^3 world eq deprived	4.25E+00	3.65E-03	4.33E-03	0	4.48E-04	1.4E+00	0	-3.27E-01

GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential)

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 m^2 Modular ONE Hydron

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	4.74E+01	3.02E-01	1.41E+00	0	3.7E-02	1.96E+00	0	-1.67E+01
PERM	MJ	1.41E+00	0	-1.41E+00	0	0	0	0	0
PERT	MJ	4.88E+01	3.02E-01	1.65E-03	0	3.7E-02	1.96E+00	0	-1.67E+01
PENRE	MJ	1.73E+02	5.26E+00	1.47E-02	0	6.45E-01	1.39E+02	0	-8.33E+01
PENRM	MJ	1.3E+02	0	0	0	0	-1.3E+02	0	0
PENRT	MJ	3.03E+02	5.26E+00	1.47E-02	0	6.45E-01	8.44E+00	0	-8.33E+01
SM	kg	7.48E-02	0	0	0	0	0	0	9.2E-03
RSF	MJ	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0
FW	m^3	5.2E-02	3.46E-04	1.02E-04	0	4.24E-05	3.35E-02	0	-1.64E-02

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 m^2 Modular ONE Hydron

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	7.79E-08	2.77E-10	1.5E-12	0	3.4E-11	1.71E-09	0	-1.84E-08
NHWD	kg	1.65E-01	8.25E-04	1.88E-04	0	1.01E-04	1.83E+00	0	-3.7E-02
RWD	kg	9.02E-03	9.54E-06	3.43E-07	0	1.17E-06	5.24E-04	0	-5.38E-03
CRU	kg	0	0	0	0	0	0	0	0
MFR	kg	0	0	8.4E-02	0	0	0	0	0
MER	kg	3.76E-01	0	1.5E-02	0	0	7.13E+00	0	0
EEE	MJ	0	0	1E-01	0	0	1.82E+01	0	0

EET	MJ	0	0	1.78E-01	0	0	4.13E+01	0	0

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional:
1 m^2 Modular ONE Hydron

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Disease incidence	ND	ND	ND	ND	ND	ND	ND	ND
IR	kBq U235 eq	ND	ND	ND	ND	ND	ND	ND	ND
ETP-fw	CTUe	ND	ND	ND	ND	ND	ND	ND	ND
HTP-c	CTUh	ND	ND	ND	ND	ND	ND	ND	ND
HTP-nc	CTUh	ND	ND	ND	ND	ND	ND	ND	ND
SQP	SQP	ND	ND	ND	ND	ND	ND	ND	ND

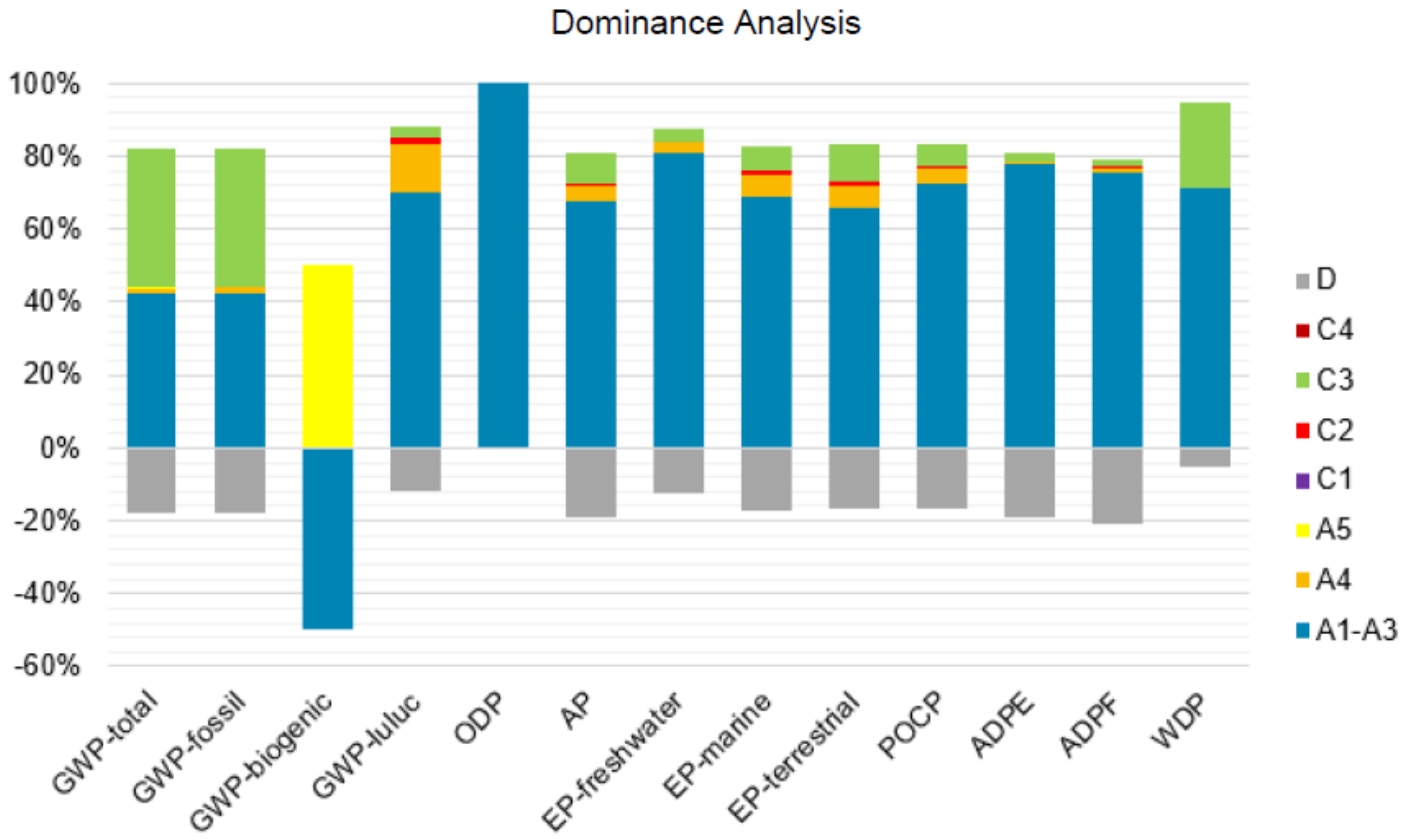
PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

The additional indicators according to EN 15804+A2 are optional. The indicators are not shown in the EPD ("ND").

Limitation note 1 - applies to the indicator: Potential Human exposure efficiency relative to U235 (IR)
This impact category mainly addresses the possible effect of low-dose ionising radiation on human health in the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents and occupational exposure, nor does it consider the disposal of radioactive waste in underground facilities. Potential ionising radiation from soil, radon and some building materials is also not measured by this indicator.

Limitation note 2 - applies to the indicators: Abiotic depletion potential for non-fossil resources (ADPE), Abiotic depletion potential for fossil resources (ADPF), Water (user) deprivation potential (WDP), Potential comparative Toxic Unit for ecosystems (ETP-fw), Potential comparative Toxic Unit for humans (HTP-c), Potential comparative Toxic Unit for humans (HTP-nc), Potential Soil Quality Index (SQP). The results of this environmental impact indicator must be used with caution, as the uncertainties in these results are high or as there is limited experience with the indicator.

6. LCA: Interpretation



Environmental impacts
The dominance analysis shows that the manufacturing phase (modules A1-A3) is dominant in most impact categories of the floor covering. GWP-biogenic is offset in module A5 by the recycling of the packaging materials. Thermal recovery of the flooring at the end of life (Module C3) has a significant impact on the GWP-total and GWP-fossil indicators.

In the manufacturing phase (modules A1-A3), the datasets used for the core board contribute the most to the potential environmental impacts in most of the categories considered. This is due to the high mass proportion of core board in the product.

Primary energy
For both renewable and nonrenewable primary energy (PERT and PENRT, respectively), the influences are largely in the manufacturing phase and there in the production of the core board.

Range of results
The floors differ in the appearance of the decors. Therefore, a significant variance of the LCA results is not expected.

7. Requisite evidence

The certificates valid for the product and the manufacturer are listed below.

VOC emissions

Testing laboratory:
eco-INSTITUT Germany GmbH
Schanzenstraße 6-20
Carlswerk 1.19
D-51063 Cologne

Test report: 56073-001

Test method: Emission analysis according to *EN 16516*

Results overview (3 days)

Name	Value	Unit
HCHO	0	µg/m³
TVOC	12	µg/m³
TSVOC	< 5	µg/m³
KMR 1	< 1	µg/m³

Reaction to Fire

Testing laboratory:
TFI Aachen GmbH
Charlottenburger Allee 41
D-52068 Aachen

Test report: 21-000210-02

Test method: Reaction to Fire according to *EN 13501-1*

Certificate DE-UZ 120 Blue Angel
Modular ONE Hydron (contract no. 36424) may use the eco-label "Blue Angel" on the basis of the above-mentioned trademark agreements of RAL gGmbH, Fränkische Straße 7, 53229 Bonn, Germany and the of the Federal Environment Agency because they are low in emissions.

8. References

Standards

EN 13501-1
DIN EN 13501-1:2019-05, Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests.

EN 14041
DIN EN 14041:2018-05, Resilient, textile, laminate and modular multilayer floor coverings - Essential characteristics.

EN 15804
DIN EN 15804:2012+A2:2019+AC:2021, Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.

EN 16511
DIN EN 16511:2019-07, Loose-laid panels - Semi-rigid multilayer modular floor covering (MMF) panels with wear resistant top layer.

EN 16516
DIN EN 16516:2020-10, Construction products: Assessment of release of hazardous substances - Determination of emissions to indoor air.

ISO 14025
DIN EN ISO 14025:2011-10, Environmental labels and declarations - Type III environmental declarations - Principles and procedures.

Further literature

AgBB Scheme - August 2018
Indoor air quality requirements in buildings: health assessment of emissions of volatile organic compounds (VVOCs, VOCs and SVOCs) from building products.

AVV
Waste Catalogue Ordinance (AVV) of 10 December 2001 (BGBl. I p. 3379), last amended by Article 1 of the Ordinance of 30 June 2020 (BGBl. I p. 1533).

BNB
BNB Code No. 352.711 Useful lives of building components for life cycle analyses according to the Sustainable Building Assessment System, 2017: Linoleum, laminate, PVC, plastic engineered wood flooring, cork, rubber, sports hall coverings. Berlin: Federal Ministry of the Interior, for Construction and Home Affairs.

DE-UZ 120
'Blue Angel" eco-label for low-emission elastic floor coverings.Modular ONE Hydron, Contract No.: 36424; Bonn: RAL gGmbH, Dessau-Roßlau: Federal Environment Agency, 30.06.2021.

ECHA
List of Candidate Substances of Very High Concern for Authorisation (ECHA Candidate List), dated 17.01.2022, published in accordance with Article 59(10) of the REACH Regulation. Helsinki: European Chemicals Agency.

ecoinvent
ecoinvent 3.6 Database on Life Cycle Assessment Inventories (Life Cycle Inventory data). Zurich: ecoinvent Association, 2020.

EMAS
Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a community eco-management and audit scheme (EMAS), repealing Regulation (EC) No 761/2001 and Commission Decisions 2001/681/EC and 2006/193/EC. https://www.emas.de/home/

GaBi
GaBi 10.6: Software System and Database for Life Cycle Engineering, Sphera Solutions GmbH, Leinfelden-Echterdingen, 2021.

IBU 2021
Institut Bauen und Umwelt e.V.: General guide for the EPD programme of the Institut Bauen und Umwelt e.V., Version 2.0, Berlin: Institut Bauen und Umwelt e.V., 2021. www.ibuepd.com

PCR Part A
Product category rules for building-related products and services. Part A: Calculation rules for LCA and requirements for the project report according to EN 15804+A2:2019, version 1.2. Berlin: Institut Bauen und Umwelt e.V. (ed.), 2021.

PCR: Floor coverings
Product category rules for building-related products and services. Part B: EPD requirement for floor coverings, version 1.2. Berlin: Institut Bauen und Umwelt e.V. (ed.), 14.02.2018.

Test report: 56073-001
Emission analysis of Modular ONE Hydron according to EN 16516. Cologne: eco-INSTITUT Germany GmbH. 16.03.2021.

Test report: 21-000210-02
Classification of the Reaction to Fire of Modular ONE Hydron according to EN 13501-1:2010. Aachen: TFI Aachen GmbH. 26.03.2021.

Regulation (EU) No 305/2011
Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC. https://eur-lex.europa.eu/legal-content/DE/TXT/PDF/?uri=CELEX:02011R0305-20210716&from=EN

Regulation (EU) No 528/2012
Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocide products.

Publisher

Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

+49 (0)30 3087748- 0
info@ibu-epd.com
www.ibu-epd.com

Programme holder

Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

+49 (0)30 3087748- 0
info@ibu-epd.com
www.ibu-epd.com

Author of the Life Cycle Assessment

brands & values GmbH
Altenwall 14
28195 Bremen
Germany

+49 421 70 90 84 33
info@brandsandvalues.com
www.brandsandvalues.com

Owner of the Declaration

Parador GmbH
Millenkamp 7-8
48653 Coesfeld
Germany

02541 736 678
info@parador.de
www.parador.de