

ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A2

Owner of the Declaration	James Halstead PLC
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-JHA-20250157-CBA1-EN
Issue date	04.03.2025
Valid to	03.03.2030

Polyflor Polyclad Pro PU James Halstead PLC

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General Information

James Halstead PLC

Programme holder

IBU – Institut Bauen und Umwelt e.V.
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Germany

Declaration number

EPD-JHA-20250157-CBA1-EN

This declaration is based on the product category rules:

Wall coverings, 01.08.2021
(PCR checked and approved by the SVR)

Issue date

04.03.2025

Valid to

03.03.2030



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



Florian Pronold
(Managing Director Institut Bauen und Umwelt e.V.)

Polyflor Polyclad Pro PU

Owner of the declaration

James Halstead PLC
Beechfield, Hollinhurst Rd. .
M261JN Whitefield, Manchester
United Kingdom

Declared product / declared unit

1 m² of installed Polyflor Polyclad Pro PU.

Scope:

Polyflor Polyclad Pro PU from James Halstead plc, Manchester, UK. The declaration refers to a decorative homogeneous wall covering of thickness 1.25mm. The product is manufactured in Manchester, UK. The results in this core-EPD were calculated using an LCA tool verified by IBU in 2024.

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	
<input type="checkbox"/>	internally
<input checked="" type="checkbox"/>	externally



Ms Emma Wilde,
(Independent verifier)

Product

Product description/Product definition

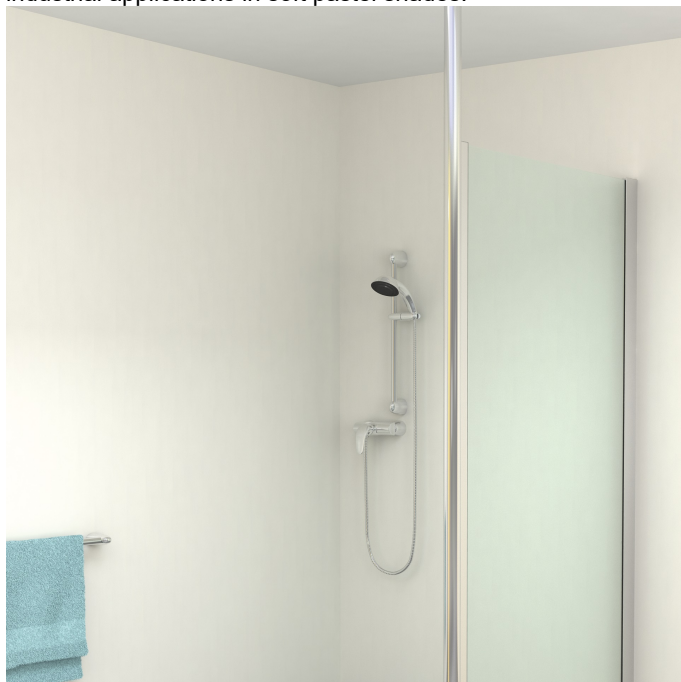
Polyflor Polyclad Pro PU is a homogeneous vinyl wall covering with a subtle marbleised decoration and a thickness of 1.25mm. Available as a sheet wall covering, manufactured in accordance with EN 15102:2007+A1:2011.

For the placing on the market of the product in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) Regulation (EU) No. 305/2011 (CPR) applies. The product needs a declaration of performance taking into consideration EN 15102:2007 +A1:2011 Decorative wall coverings. Roll and panel form products. For the application and use the respective national provisions apply.

CE Declarations of Performance are available at www.polyflor.com or www.objectflor.de.

Application

Polyflor Polyclad Pro PU is a heavy-duty homogeneous wall and ceiling cladding suitable for hygiene critical areas within the demanding healthcare sector, education, commercial and industrial applications in soft pastel shades.



Example of a use area - Polyflor Polyclad Pro PU

Technical Data

Product standards:

- EN 15102:2007 +A1:2011 Decorative wall coverings. Roll and panel form products.
- EN 13501-1 Fire classification of construction products and building elements - Classification using data from reaction to fire tests.
- ISO 846 Part C Plastics, Evaluation of the action of microorganisms.
- ISO 14644-1 Cleanrooms and associated controlled environments. Classification of air cleanliness by particle concentration.

Polyflor Polyclad Pro PU is classified as Class B-s2-d0 according to EN 13501-1 Fire classification of construction products and building elements.

Technical data sheets are available at www.polyflor.com or www.objectflor.de.

Constructional data

Name	Value	Unit
Product thickness	1.25	mm
Grammage	1900	g/m ²
Product Form	Sheet	-
Type of manufacture	Calendaring	-

Performance data of the product in accordance with the declaration of performance with respect to its essential characteristics according to EN 15102:2007 +A1:2011 Decorative wall coverings. Roll and panel form products.

Base materials/Ancillary materials

Name	Value	Unit
Mineral Filler	45 - 50	%
Polyvinyl Chloride	30 - 35	%
Plasticiser	9 - 14	%
Titanium Dioxide	2 - 5	%
Epoxidised Ester Blend	1 - 3	%
Stabiliser	<1	%
Pigments	<1	%
Additives	<1	%
Polyurethane Coating	<1	%

Production of the wall coverings can contain up to 25% of recycled material which can consist of either or both post consumer and post industrial material.

1) "This product/article/at least one partial article contains substances listed in the candidate list (date: 27/01/2025) exceeding 0.1 percentage by mass: no".

2) "This product contains other CMR substances in categories 1A or 1B which are not on the candidate list, exceeding 0.1 percentage by mass: no".

3) "Biocide products were added to this construction product or it has been treated with biocide products (this then concerns a treated product as defined by the (EU) Ordinance on Biocide Products No. 528/2012): no".

Period Under Review

The data collection period for the LCA calculation was 01/07/2023 to 30/06/2024.

Reference service life

For this product, the stated Reference Service Life (RSL) is 1 year.

James Halstead plc recommend a service life of 25 years, which is based on their experience of wall and ceiling cladding manufacture and supply. The recommended service life is applicable as long as the product use complies with that defined by EN 15102:2007+A1:2011.

It should be noted, however, that the service life of a Homogeneous Polyvinyl chloride wall covering may vary depending on the amount & nature of use, the type & frequency of maintenance, and misuse of the product. Therefore, the RSL is stated as 1 year to allow the effects of maintenance (B2) to be calculated as required for the products anticipated useful

life.

LCA: Calculation rules

Declared Unit

This declaration refers to a declared unit of 1 m² of installed Polyflor Polyclad Pro PU wall covering.

Declared unit and mass reference

Name	Value	Unit
Declared unit	1	m ²
Grammage	2.04	kg/m ²
Product thickness	0.00125	m

The EPD results are calculated based on the measured weight of the declared wall covering provided in the table directly above. The grammage provided in the "construction data" table is the nominal weight for the declared product, which refers to the average/marketed weight.

System boundary

The type of EPD according to EN 15804: "cradle to gate with options, modules C1-C4, and module D". The following modules are declared: A1-A3, C, D and additional modules: A4, A5, and B2.

The following life cycle stages are considered:

Production - Modules A1-A3

The product stage includes:

- Raw material supply (A1): raw material extraction and processing including recycled content.
- Transport to the manufacturer (A2):
- Manufacturing (A3): manufacturing expenses of the products including packaging materials and consumption of electricity (0.39 kg CO₂eq./kWh) and thermal energy (0.064 kg CO₂ eq./MJ).
- The product is manufactured in Manchester, UK.

Construction Stage - Modules A4-A5

The construction process stage includes:

- Transport to the construction site (A4).
- Production and treatment of generated cutting waste at the installation and packaging material (A5). Benefits of potential avoided burdens due to energy substitution of electricity and thermal energy are declared in module D. It also includes the consumption of adhesive during

installation.

Use Stage - Module B2

The Use stage includes:

- Maintenance (B2): detergents and water.
- Data used covers 100% manual cleaning.

End-of-life (EOL) Stage - Modules C1-C4

- Mechanical dismantling with electricity consumption (C1).
- Transport to EoL (C2): 25 km distance travelled via truck transport.
- EoL Scenario 0 (C3): 100% thermal treatment of the wall covering with energy recovery (including auxiliaries at installation).
- EoL Scenario 1 (C3/1): 100% recycling of the wall covering (including auxiliaries at installation).
- EoL Scenario 2 (C4): 100% landfill of the wall covering (including auxiliaries at installation).

Benefits and Loads beyond the product system boundary

Benefits for potential avoided burdens during treatment of packaging materials, installation cuttings and/or auxiliaries (from module A5) due to energy substitution of electricity and thermal energy generation and/or material recycling under European condition are declared in Module D (duplicated in D/1 and D/2, respectively).

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

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. Sphera LCA software (GaBi ts) content update package (CUP) version 2023.2.

LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon

For 1 m² of Polyflor Polyclad Pro PU wall covering, the biogenic carbon content is declared below:

Information on describing the biogenic carbon content at factory gate

Name	Value	Unit
Biogenic carbon content in product	0.0272	kg C
Biogenic carbon content in accompanying packaging	0.0348	kg C

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO₂.

Transport to the construction site (A4)

This declaration considers the transport of the wall covering product from the factory gate to an average European customer site calculated from a combination of haulier routes via truck, rail, and ship transport in module A4.

Name	Value	Unit
Transport distance (via truck)	756	km
Transport distance (via ship)	1258	km
Transport distance (via rail)	0	km

Installation in the building (A5)

Name	Value	Unit
Installation cutting waste	6	%
Adhesive (water based acrylic)	0.3	kg/m ²
Paper & cardboard packaging	0.0380	kg/m ²
Wood packaging	0.0451	kg/m ²
Plastic packaging (PE/PET/PS)	0.0016	kg/m ²

Maintenance (B2)

This information refers to 1 year (RSL).

Name	Value	Unit
Maintenance cycle	156	Number/RSL
Water consumption	0.003	m ³
Auxiliary (detergent)	0.044	kg

End of Life (C1-C4)

Name	Value	Unit
Electricity consumption for deconstruction (C1)	0.09	MJ
Transport distance (via truck) (C2)	25	km
Energy recovery, (100%, scenario 0)	2.04	kg
Recycling (100%, Scenario 1)	2.04	kg
Landfilling (100%, Scenario 2)	2.04	kg

Recovery, Reuse and or Recycling potentials (D), relevant scenario information

Benefits for potential avoided burdens during treatment of packaging materials, installation cuttings and/or auxiliaries (from module A5) due to energy substitution of electricity and thermal energy generation and/or material recycling under European conditions are declared in module D (duplicated in modules D/1 and D/2) and affects only the rate of primary material (no secondary materials).

Loads and benefits beyond the product system boundary from thermal treatment of the wall covering with benefits for potential avoided burdens due to energy substitution of electricity and thermal energy under European conditions is declared in module D.

No benefits were accounted from the recycling EoL scenario (C3/1) in module D/1.

No benefits were accounted from the landfill EoL scenario (C4) in module D/2.

LCA: Results

Results provided in this section are presented in relation to 1 m² of the Polyflor Polyclad Pro PU wall covering product. For the maintenance scenario (B2), the results refer to a period of one year. For the calculation of impacts of module B2 for a certain service life, the impacts results for module B2 have to be multiplied by the estimated service life in years.

For the End-of-Life (EoL) stage, three scenarios are considered:

- Scenario 0 (C3) considers 100% thermal treatment. Corresponding loads & benefits beyond system boundary are declared in Module D.
- Scenario 1 (C3/1) considers 100% recycling. Corresponding loads & benefits beyond system boundary are declared in Module D/1.
- Scenario 2 (C4) applies to 100% landfilling. Corresponding loads & benefits beyond system boundary are declared in Module D/2.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = 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	X	MNR	MNR	MNR	MND	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m² Polyflor Polyclad Pro PU

Parameter	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C3/1	C4	D	D/1	D/2
GWP-total	kg CO ₂ eq	3.45E+00	1.61E-01	7.9E-01	3.44E-02	8.14E-03	4.26E-03	1.87E+00	9.97E-02	2.6E-01	-6.32E-01	-3.89E-01	-3.89E-01
GWP-fossil	kg CO ₂ eq	3.65E+00	1.61E-01	7.19E-01	3.27E-02	8.07E-03	4.26E-03	1.77E+00	0	1.61E-01	-6.29E-01	-3.87E-01	-3.87E-01
GWP-biogenic	kg CO ₂ eq	-2.03E-01	4.35E-07	6.87E-02	1.66E-03	7.01E-05	2.22E-07	1E-01	9.97E-02	9.97E-02	-2.88E-03	-1.78E-03	-1.78E-03
GWP-luluc	kg CO ₂ eq	3.12E-03	1.55E-04	1.74E-03	2.02E-05	8.77E-07	4.91E-06	2.08E-04	0	1.33E-04	-4.1E-05	-2.5E-05	-2.5E-05
ODP	kg CFC11 eq	2.04E-11	1.93E-14	2.3E-12	1.16E-14	1.49E-13	5.3E-16	2E-12	0	2.71E-13	-5E-12	-3.1E-12	-3.1E-12
AP	mol H ⁺ eq	8.13E-03	6.11E-04	1.14E-03	1.52E-04	1.72E-05	4.06E-06	7.26E-04	0	4.84E-04	-7.9E-04	-4.9E-04	-4.9E-04
EP-freshwater	kg P eq	4.69E-05	6.71E-07	4.88E-06	2.01E-06	3.01E-08	2.12E-08	8.92E-07	0	3.1E-05	-1E-06	-6.3E-07	-6.3E-07
EP-marine	kg N eq	2.87E-03	2.76E-04	3.84E-04	3.27E-05	4.12E-06	1.71E-06	2.53E-04	0	1.11E-04	-2.3E-04	-1.4E-04	-1.4E-04
EP-terrestrial	mol N eq	3.06E-02	3.04E-03	4.52E-03	2.79E-04	4.31E-05	1.93E-05	3.03E-03	0	1.22E-03	-2.47E-03	-1.52E-03	-1.52E-03
POCP	kg NMVOC eq	1.02E-02	7.26E-04	1.21E-03	9E-05	1.1E-05	3.93E-06	6.91E-04	0	3.52E-04	-6.4E-04	-4E-04	-4E-04
ADPE	kg Sb eq	1.9E-06	1.04E-08	3.01E-07	6.55E-08	1.25E-09	2.84E-10	1.88E-08	0	4.26E-09	-4.5E-08	-2.8E-08	-2.8E-08
ADPF	MJ	8.5E+01	2.1E+00	1.16E+01	9.19E-01	1.7E-01	5.67E-02	4.43E+00	0	2.41E+00	-1.16E+01	-7.16E+00	-7.16E+00
WDP	m ³ world eq deprived	8.14E-01	8.01E-03	1.06E-01	1.13E-02	1.8E-03	2.52E-04	3.54E-01	0	-2.28E-03	-6E-02	-3.71E-02	-3.71E-02

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 m² Polyflor Polyclad Pro PU

Parameter	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C3/1	C4	D	D/1	D/2
PERE	MJ	9.99E+00	7.85E-02	3.42E+00	3.54E-02	1.01E-01	2.42E-03	2.05E+00	0	2.17E-01	-3.38E+00	-2.09E+00	-2.09E+00
PERM	MJ	2.07E+00	0	-1.25E+00	0	0	0	-8.17E-01	-8.17E-01	0	0	0	0
PERT	MJ	1.21E+01	7.85E-02	2.17E+00	3.54E-02	1.01E-01	2.42E-03	1.23E+00	-8.17E-01	2.17E-01	-3.38E+00	-2.09E+00	-2.09E+00
PENRE	MJ	6.67E+01	2.26E+00	1.19E+01	9.19E-01	1.7E-01	6.08E-02	2.25E+01	0	2.41E+00	-1.16E+01	-7.16E+00	-7.16E+00
PENRM	MJ	1.83E+01	0	-1.95E-01	0	0	0	-1.81E+01	-1.81E+01	0	0	0	0
PENRT	MJ	8.5E+01	2.26E+00	1.17E+01	9.19E-01	1.7E-01	6.08E-02	4.43E+00	-1.81E+01	2.41E+00	-1.16E+01	-7.16E+00	-7.16E+00
SM	kg	1.66E-02	0	9.96E-04	0	0	0	0	0	0	0	2.04E+00	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0
FW	m ³	3E-02	2.65E-04	4.02E-03	2.67E-04	8.19E-05	8.31E-06	8.77E-03	0	2.37E-05	-2.74E-03	-1.69E-03	-1.69E-03

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 m2 Polyflor Polyclad Pro PU

Parameter	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C3/1	C4	D	D/1	D/2
HWD	kg	7.65E-07	6.44E-12	1.82E-06	3.05E-06	0	1.75E-13	6.53E-11	0	2.03E-10	-6.2E-10	-3.8E-10	-3.8E-10
NHWD	kg	5.83E-01	1.83E-04	1.47E-01	3.24E-03	1.24E-04	5.29E-06	1.16E+00	0	2.33E+00	-5.74E-03	-3.54E-03	-3.54E-03
RWD	kg	2.85E-03	6.4E-06	2.72E-04	1.43E-05	2.7E-05	1.74E-07	2.51E-04	0	2.85E-05	-9E-04	-5.5E-04	-5.5E-04
CRU	kg	0	0	0	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	2.34E+00	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	4.84E-01	0	0	0	2.5E+00	0	0	0	0	0
EET	MJ	0	0	8.76E-01	0	0	0	4.51E+00	0	0	0	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 m2 Polyflor Polyclad Pro PU

Parameter	Unit	A1-A3	A4	A5	B2	C1	C2	C3	C3/1	C4	D	D/1	D/2
PM	Disease incidence	1.34E-07	1.45E-08	1.6E-08	1.13E-09	1.45E-10	2.81E-11	1.35E-08	0	4.69E-09	-6.7E-09	-4.1E-09	-4.1E-09
IR	kBq U235 eq	2.85E-01	5.38E-04	3.23E-02	2.34E-03	4.49E-03	1.47E-05	3.9E-02	0	4.22E-03	-1.49E-01	-9.22E-02	-9.22E-02
ETP-fw	CTUe	3.4E+01	1.76E+00	4.26E+00	6.49E-01	4.72E-02	4.74E-02	2.14E+00	0	2.05E+00	-1.62E+00	-1E+00	-1E+00
HTP-c	CTUh	1E-09	2.79E-11	1.56E-10	1.71E-11	2.5E-12	7.56E-13	9.46E-11	0	1.05E-10	-1.3E-10	-7.9E-11	-7.9E-11
HTP-nc	CTUh	4.4E-08	6.32E-10	8.74E-09	1.04E-09	3.98E-11	1.76E-11	6.33E-09	0	8.42E-09	-3.2E-09	-1.9E-09	-1.9E-09
SQP	SQP	3.8E+01	3.35E-01	8.64E+00	2.14E-02	6.66E-02	1.07E-02	1.09E+00	0	2.08E-01	-2.22E+00	-1.37E+00	-1.37E+00

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

Disclaimer 1 – for the indicator “Potential Human exposure efficiency relative to U235”. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure or radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and from some construction materials is also not measured by this indicator.

Disclaimer 2 – for the indicators “abiotic depletion potential for non-fossil resources”, “abiotic depletion potential for fossil resources”, “water (user) deprivation potential, deprivation-weighted water consumption”, “potential comparative toxic unit for ecosystems”, “potential comparative toxic unit for humans – cancerogenic”, “Potential comparative toxic unit for humans - not cancerogenic”, “potential soil quality index”. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high as there is limited experience with the indicator.

This EPD was created using a software tool.

References

Standards

EN 13501-1

Fire classification of construction products and building elements. Classification using data from fire resistance and/or smoke control tests, excluding ventilation services.

ISO 846 Part C

Plastics, Evaluation of the action of microorganisms.

EN 15804

Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products.

EN 15102:2007+A1:2011

Decorative wall coverings. Roll and panel form products.

ISO 14644-1

Cleanrooms and associated controlled environments. Classification of air cleanliness by particle concentration.

ISO 10425

Environmental labels and declarations - Type III environmental declarations - Principles and procedures.

Further References

IBU 2021

Institut Bauen und Umwelt e.V.: General Instructions for the EPD programme of Institut Bauen und Umwelt e.V., Version 2.0, Berlin: Institut Bauen und Umwelt e.V., 2021

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PCR Part A

PCR - Part A: Calculation rules for the Life Cycle Assessment and Requirements on the Background Report, version 1.4, Institut Bauen und Umwelt e.V., 15.04.2024.

PCR Part B

PCR – Part B: Requirements of the EPD for Wall coverings, v10, Institut Bauen und Umwelt e.V., www.bau-umwelt.com, 01.08.2021.

Polyflor LCA tool

LCA tool for PVC floor coverings

LCA Tool No.: IBU-JHA-202401-LT1-EN

Developed by Sphera Solutions

Sphera LCA FE (GaBi ts)

GaBi ts dataset documentation for the software-system and databases, LBP, University of Stuttgart and thinkstep, Leinfelden-Echterdingen, 2023 (<https://www.gabi-software.com/support/gabi>).

Sphera LCA Calculator Software (GaBi Envision)

GaBi Envision 5.0 Sphera Solution GmbH, the LCA, EPD and Ecodesign tool, <http://www.gabisoftware.com/international/software/gabi-envision/>, 2023



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