ENVIRONMENTAL PRODUCT DECLARATION

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

Owner of the Declaration	KRONOSPAN-MOFA Hungary Ltd.
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-KRO-20250164-CBI1-EN
Issue date	15.08.2025
Valid to	14.08.2030

Lacquered HDF

KRONOSPAN-MOFA Hungary Ltd.

Institut Bauen und Umwelt e.V.

ECO PLATFORM EPD VERIFIED

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General Information

KRONOSPAN-MOFA Hungary Ltd.

Programme holder

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

Declaration number

EPD-KRO-20250164-CBI1-EN

This declaration is based on the product category rules:

Wood-based panels, 01.08.2021
(PCR checked and approved by the SVR)

Issue date

15.08.2025

Valid to

14.08.2030

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

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

Lacquered HDF

Owner of the declaration

KRONOSPAN-MOFA Hungary Ltd.
Budapesti út 72
7700 Mohács
Hungary

Declared product / declared unit

1 m³ Lacquered High Density Fibreboard - LHDF

Scope:

LHDF boards are highly compressed wood-based panels made of (hard-, soft- and pine-) wood fibres impregnated with glue and pressed under pressure and heat. The result is a homogeneous panel with a smooth surface and even, firm edges. They are used where solid wood and other wood-based materials are inadequate or completely unsuitable. With the roll-lacquering technology, KRONOSPAN-MOFA Hungary Ltd. is capable of producing unicoloured (UNI) and wood-grain lacquered HDF boards (LHDF) with several wood-structures (oak, modern oak, beech, cherry, walnut, pine, anigree, wenge, maple, alder, calvados, plum, fantasy, etc.). The decor can be printed with up to 4 colours.

LHDF boards can be used in every field where aesthetic, moderately resistant surface are required. The main areas of application are: forming open and closed backs of cabinet furniture, door production and making bases of cabinet and bed drawers.

LHDFs can be produced in many different sizes. The most common size is 2800 mm x 2070 mm in thicknesses of 2.0-8.0 mm.

The basis for modelling is the produced amount of LHDF products in the business year 2022/2023 from 10.2022 to 09.2023. The environmental indicators in this EPD study are calculated for an average and therefore virtual LHDF product.
The output LCI and LCIA data refer to 1 m³ of average LHDF. A layer thickness of 3.08 mm as a weighted average was selected for the study.

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

Florian Gehring,
(Independent verifier)

Product

Product description/Product definition

HDF boards are highly compressed wood-based panels made of (hard-, soft- and pine-) wood fibres impregnated with glue and pressed under pressure and heat. With the roll-lacquering technology, KRONOSPAN-MOFA Hungary Ltd. are capable of producing unicoloured (UNI) and wood-grain lacquered HDF boards (LHDF) with several wood-structures (oak, modern oak, beech, cherry, walnut, pine, anigree, wenge, maple, alder, calvados, plum, fantasy, etc.). The decor can be printed with up to 4 colours.

The result is a homogeneous panel with a smooth surface and even, firm edges. They are used where solid wood and other wood-based materials are inadequate or completely unsuitable. For the use and application of the product, the respective national provisions at the place of use apply, in Germany for example, the building codes of the federal states and the corresponding national specifications.

Application

The panels are suitable for a wide range of applications, where aesthetic, moderately resistant surfaces are required, such as

- for furniture construction (especially forming open and closed backs of cabinet furniture, door production, making bases of cabinet and bed drawers)
- for exhibition stand and store fitting
- for interior fittings (in particular, panelling and planking)
- for (Food Contact) Packaging Material.

Technical Data

The table below indicates the technical specifications, including the reference to the test methods/test standards of LHDF.

Constructional data

Name	Value	Unit
Gross density (EN 323)	860	kg/m^3
Board size	2800 x 2070	mm x mm
Thickness	2.0 - 8.0	mm
Thickness tolerance (EN 324-1)	± 0.2	mm
Length and width tolerance (EN 324-1)	± 0.2 (max. ± 5.0 mm)	mm/m
Straightness (EN 324-2)	max. 1.5	mm/m
Squareness tolerance (EN 324-2)	± 2	mm/m
Density tolerance (EN 323)	± 7	%
Moisture content (EN 322)	4.0 – 11.0	%
Wear resistance (MSZ 9929)	≤ 0.350	g/100
Pencil tip hardness test (MSZ 9929)	min. 3	H
Hit resistance (MSZ 9929)	> 1500	mm
Adhesion (EN ISO 2409)	0 – 2 degrees of change	
Dry heat (MSZ 9927)	120	°C
Wet heat (MSZ 9927)	-	
Resistance against steam and cigarette (MSZ 9927)	No resistance	
UV radiation (Xenon, 72 hours) (MSZ 9931)	5 Level	
Artificial ageing (-20oC, +60oC / 20 cycles) (MSZ 9931)	100	%
Immersion in water – 24h (MSZ 9640/11)	No resistance	
Surface resistance to cold liquids (EN 12720)	≥ 4 degrees of change	
Surface resistance to scratching (EN 12317-2)	> 1 ≤ 2	N
Gloss, brightness, light reflection (Micro Gloss 60°) (ISO-MAT 0066)	8 – 20	%
Colour difference (inside of the table) (ISO-MAT 0066)	Not allowed	
Colour difference @ Daylight (between sample & etalon) (ISO-MAT 0066)	ΔE ≤ 2.0 @ uni colours; perceptible colour deviation is not allowed @ woodgrains	
Spots on the (A-side) surface (Clouded) (ISO-MAT 0066)	perceptible colour deviation is not allowed	
Shortness of lacquering, damaged edges, faulty, broken edges (visible)		
Impressers, Bulging (visible)	are allowed without any marked outlines per m² max. which are perceptible 5 pieces/m²; 0.1 mm	
Surface scratch (visible)	3 pieces per m², at most 0.5 mm wide are allowed. Which does not penetrate the design, and their common length is at most 50 cm. One scratch should not be longer than 25 cm.	
Gas Analysis (EN ISO 12460-3:2015)	≤ 3.5 mg/m²h (E1) Articles: all; Basic board PV ≤ QCL CARB Phase 2– TSCA/EPA (E-LE)	
Chamber test-1 (EN 717-1:2005)	≤ 0.124 mg/m³ (E1); ≤ 0.05 ppm (Articles: all)	
Chamber test-2 (EN 16516:2017)	≤ 0.1 ppm (Articles: all)	

The current technical data is available on the homepage https://kronospan.com/en_HU

The performance data of the product is according to the standards mentioned in the headline in the table for constructional data.

Performance data of the product in accordance with the declaration of performance with respect to its essential characteristics according to *EN 622-1* and with *EN 622-5* norm Table 3 – Requirements for general purpose boards for use dry conditions.

Base materials/Ancillary materials

The product consists of (hard-, soft- and pine) wood fibre. Hardened (effects of ammonium-nitrate and temperature) melamine-urea-formaldehyde artificial resin, formaldehyde catching urea and hydrophobic effects (paraffin-emulsion) are added. During the production, the board (top side) gets a thin film water-based lacquer and as a finish a coat of acrylic UV-lacquer.

Name	Value	Unit
hardwood	33.73	%
pine wood	23.62	%
softwood	22.30	%
mUF Resin	11.28	%
Top coat	2.79	%
Base coat	1.96	%
Purchased MDF/HDF	1.62	%
UAN Hardener	1.16	%
Others (each < 1 % volume share, e.g. Wood chips with bark, paraffin emulsion, Urea, N-Butyl-Acetate)	1.52	%

The product LHDF, according to the *1272/2008/EK policy* (regarding the classification, labelling and packaging of substances and mixtures) and its annexes, is not considered to be dangerous.

The product contains substances listed in *the candidate list* (date: 22.07.2024) exceeding 0.1 percentage by mass: no.

The product contains other carcinogenic, mutagenic, reprotoxic (CMR) substances in categories 1A or 1B which are not on *the candidate list*, exceeding 0.1 percentage by mass: no.

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.

Reference service life

The service life of LHDF essentially depends on the service life of the building or furniture in which the panels are installed and the environmental conditions (outdoor or indoor use). Due to the wide range of applications, no statement can be made about the service life.

LCA: Calculation rules

Declared Unit

1 m^3 LHDF was chosen as the declared unit.

Declared unit and mass reference

Name	Value	Unit
Layer thickness	0.00308	m
Weight per unit area	2.65	kg/m²
Gross density	859.02	kg/m^3
Declared unit	1	m^3

The environmental indicators in this EPD study are based on an average and, therefore virtual LHDF product. Data from the 2022/2023 business year was standardised to 1 m³ and analysed using life cycle assessment software. Results refer to 1 m³ of LHDF. A layer thickness of 3.08 mm as a weighted average was selected for the study.

KRONOSPAN-MOFA Hungary Ltd. offers LHDF in standard dimensions of 2800 mm x 2070 mm and in thicknesses from 2.0 to 8.0 mm. The possible specifications offer the customer maximum flexibility, while the formulation of the panels themselves changes only slightly. The results shown are therefore considered an average of the LHDF product group.

System boundary

The system boundaries are declared in the EPD report to be - cradle to gate with modules C1 – C4 and module D (A1 – A3 + C + D).

The required raw materials for the LHDF are included in module A1. It is distinguished between the raw materials required for crushing & fibre preparation (pine wood, hardwood, softwood and wood chips with bark), the raw materials required for the glueing & fibre drying process (mUF resin, UAN hardener, Paraffin emulsion and urea) and the raw materials required for the lacquering process (ink, colouring agents, coats).

All materials are transported (module A2) to the production site (Mohács, H), where they are used for manufacturing.

The manufacturing processes, the arising waste and its transport as well as the raw materials and production of packaging materials are considered in module A3.

Rejects incur during the processes of raw material supply, cruising & fibre preparation, glueing & fibre drying, panel production, cutting, lacquering and packaging of the final product. At the production site, heat is produced in a self-owned central biomass heater and gas boiler system. Utilisable losses are directly used for internal heat production. Additionally required raw materials for heat production (natural gas & firewood) are considered in module A1.

The LHDF is removed manually, so no efforts arise during the demolition (module C1). The transport to the waste treatment facilities is considered in module C2. At the end of life, the LHDF is incinerated with energy recovery with a rate higher than 60 % (module C3).

No remaining wastes are disposed of so that no impacts arise in module C4.

Resulting credits from energy recovery are accounted for in module D.

As the end of life of the packaging is not declared in module A5, its carbon uptake is not taken into account in the modules A1-A3. There is no secondary material used. There were no CO_2 certificates available.

Geographic Representativeness

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

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. *Umberto 11 software* with the *Ecoinvent EN15804 3.10.1* database was used to model the life cycle assessment for the production and disposal of LHDF.

LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon

The values are taken from ecoinvent (Ecoinvent EN 15804) and Vares et al (2005).

Information on describing the biogenic carbon content at factory gate

Name	Value	Unit
Biogenic carbon content in product	334.86	kg C / kg
Biogenic carbon content of the packaging materials	0.016	kg C / kg
Biogenic carbon content of the waste for internal incineration	92.24	kg C / kg

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO_2.

The following technical information can be used to develop specific scenarios as part of a building assessment.
The PERM and PENRM indicators of the modules A1 – A3 consider the packaging. Since it is disposed of in module A5 (-0.016 kg C/ kg which is not declared), the calorific values of the packaging materials are not considered in module C3.

End of life (C1-C4)

The waste of the final product at the end of life occurring in module C3 is treated by incineration with energy recovery.

Name	Value	Unit
Collected separately waste type waste type: EWC 03 01 05	859.02	kg
Energy recovery	859.02	kg

Reuse, recovery and/or recycling potentials (D), relevant scenario information

Rejects and wastes incur during the processes of raw material supply, crushing & fibre preparation, glueing & fibre drying, panel production, cutting, lacquering and packaging of the final product. At the production site heat is produced in a self-owned central biomass heater and gas boiler system. Utilisable materials are directly used for internal heat production and do not leave the system boundaries. The waste of the final product at the end of life occuring in module C3 is treated by incineration with energy recovery. The LHDF is considered as a non-hazardous waste according to *EWC: 03 01 05*.
For the transport there were no relevant losses measured.
Packaging waste in module A5 is not declared.

Name	Value	Unit
electricity recovery	-3.880E+02	kWh
heat recovery	-7.914E+02	kWh

LCA: Results

The following table contains the LCA results for a declared unit of 1 m³ LHDF with a surface weight of 2.65 kg/m² and a layer thickness of 0.00308 m.

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	MND	MND	MND	MND	MNR	MNR	MNR	MND	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m³ LHDF

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Global Warming Potential total (GWP-total)	kg CO_2 eq	-7.38E+02	0	1.12E+01	1.62E+03	0	-3.47E+02
Global Warming Potential fossil fuels (GWP-fossil)	kg CO_2 eq	6.85E+02	0	1.12E+01	1.92E+02	0	-3.46E+02
Global Warming Potential biogenic (GWP-biogenic)	kg CO_2 eq	-1.42E+03	0	7.53E-03	1.43E+03	0	-1.43E+00
Global Warming Potential luluc (GWP-luluc)	kg CO_2 eq	1.6E+00	0	3.71E-03	1.01E-02	0	-2.05E-01
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC11 eq	1.41E-05	0	2.22E-07	4.31E-07	0	-4.69E-06
Acidification potential of land and water (AP)	mol H^+ eq	3.98E+00	0	2.32E-02	1.91E-01	0	-2.25E+00
Eutrophication potential aquatic freshwater (EP-freshwater)	kg P eq	2.4E-01	0	7.56E-04	9.66E-03	0	-2.26E-01
Eutrophication potential aquatic marine (EP-marine)	kg N eq	6.31E-01	0	5.58E-03	8.68E-02	0	-3.25E-01
Eutrophication potential terrestrial (EP-terrestrial)	mol N eq	7.14E+00	0	6.02E-02	8.5E-01	0	-3.18E+00
Formation potential of tropospheric ozone photochemical oxidants (POCP)	kg NMVOC eq	2.96E+00	0	3.86E-02	2.34E-01	0	-1.04E+00
Abiotic depletion potential for non fossil resources (ADPE)	kg Sb eq	4.81E-03	0	3.71E-05	1.38E-04	0	-2.86E-04
Abiotic depletion potential for fossil resources (ADPF)	MJ	1.24E+04	0	1.57E+02	2.84E+02	0	-6.05E+03
Water use (WDP)	m^3 world eq deprived	5.99E+02	0	7.68E-01	1.06E+02	0	-8.68E+01

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 m³ LHDF

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Renewable primary energy as energy carrier (PERE)	MJ	3.61E+03	0	2.69E+00	1.33E+04	0	-7.33E+02
Renewable primary energy resources as material utilization (PERM)	MJ	1.33E+04	0	0	-1.33E+04	0	0
Total use of renewable primary energy resources (PERT)	MJ	1.69E+04	0	2.69E+00	1.71E+01	0	-7.33E+02
Non renewable primary energy as energy carrier (PENRE)	MJ	9.73E+03	0	1.57E+02	2.97E+03	0	-6.05E+03
Non renewable primary energy as material utilization (PENRM)	MJ	2.7E+03	0	0	-2.69E+03	0	0
Total use of non renewable primary energy resources (PENRT)	MJ	1.24E+04	0	1.57E+02	2.84E+02	0	-6.05E+03
Use of secondary material (SM)	kg	0	0	0	0	0	0
Use of renewable secondary fuels (RSF)	MJ	0	0	0	0	0	0
Use of non renewable secondary fuels (NRSF)	MJ	0	0	0	0	0	0
Use of net fresh water (FW)	m^3	1.46E+01	0	2.11E-02	2.1E+00	0	-3.34E+00

RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 m³ LHDF

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed (HWD)	kg	5.44E+01	0	2.29E-01	8.53E+01	0	-2.34E+01
Non hazardous waste disposed (NHWD)	kg	1.85E+03	0	4.84E+00	1.14E+03	0	-1.1E+03
Radioactive waste disposed (RWD)	kg	3.23E-02	0	5.06E-05	2.82E-04	0	-3.2E-02
Components for re-use (CRU)	kg	0	0	0	0	0	0
Materials for recycling (MFR)	kg	0	0	0	0	0	0
Materials for energy recovery (MER)	kg	0	0	0	0	0	0
Exported electrical energy (EEE)	MJ	0	0	0	1.4E+03	0	0
Exported thermal energy (EET)	MJ	0	0	0	2.85E+03	0	0

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional: 1 m³ LHDF

Parameter	Unit	A1-A3	C1	C2	C3	C4	D
Incidence of disease due to PM emissions (PM)	Disease incidence	4.6E-05	0	8.22E-07	2.18E-06	0	-1.96E-05
Human exposure efficiency relative to U235 (IR)	kBq U235 eq	1.34E+02	0	2.04E-01	1.09E+00	0	-1.34E+02
Comparative toxic unit for ecosystems (ETP-fw)	CTUe	6.72E+03	0	4.28E+01	3.41E+03	0	-7.6E+02

Comparative toxic unit for humans (carcinogenic) (HTP-c)	CTUh	8.92E-06	0	8.93E-08	2.92E-07	0	-4.75E-07
Comparative toxic unit for humans (noncarcinogenic) (HTP-nc)	CTUh	1.24E-05	0	1.02E-07	1.64E-06	0	-2.81E-06
Soil quality index (SQP)	SQP	7.33E+04	0	9.48E+01	1.65E+02	0	-2.19E+03

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

Compared to the average LHDF (1 m³ LHDF in 3.08 mm layer thickness), the results of the 1 m³ LHDF in 2 mm fluctuate between 0.2 % and 32.6 %. The results of the 1 m³ LHDF in 8 mm fluctuate between -1.0 % and -39.5 %.

This EPD was created using a software tool.

References

Standards

CEN/TR 15941
Nachhaltigkeit von Bauwerken - Umweltproduktdeklarationen - Methoden für Auswahl und Verwendung von generischen Daten; Deutsche Fassung (CEN/TR 15941:2010-03)

EN 12317-2
DIN EN 12317-2:2010-12, Flexible sheets for waterproofing - Determination of shear resistance of joints - Part 2: Plastic and rubber sheets for roof waterproofing.

EN 12720
DIN EN 12720:2014-02, Furniture - Assessment of surface resistance to cold liquids.

EN 15804
DIN EN 15804:2022-03, Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.

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

EN 322
DIN EN 322:1993-08, Wood-based panels; determination of moisture content.

EN 323
DIN EN 323:1993-08, Wood-based panels; determination of density.

EN 324-1
DIN EN 324-1:1993-08, Wood-based panels; determination of dimensions of boards; part 1: determination of thickness, width and length.

EN 324-2
DIN EN 324-2:1993-08, Wood-based panels; determination of dimensions of boards; part 2: determination of squareness and edge straightness.

EN 622-1
DIN EN 622-1:2003-09, Fibreboards - Specifications - Part 1: General requirements.

EN 622-5
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EN 717-1
DIN EN 717-1:2005-01, Wood-based panels - Determination of formaldehyde release - Part 1: Formaldehyde emission by the chamber method.

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ISO 12460-3
DIN EN ISO 12460-3:2023-12, Wood-based panels - Determination of formaldehyde release - Part 3: Gas analysis method (ISO 12460-3:2023).

ISO 14001
DIN EN ISO 14001:2015-11, Environmental management systems - Requirements with guidance for use.

ISO 14025
DIN EN ISO 14025:2011-10, Environmental labels and declarations - Type III environmental declarations - Principles and procedures (ISO 14025:2006).

ISO 14040
DIN EN ISO 14040:2021-02, Environmental management - Life cycle assessment - Principles and framework (ISO 14040:2006 + Amd 1:2020).

ISO 14044
ISO 14044:2006-07, Environmental management - Life cycle assessment - Requirements and guidelines (ISO 14044:2006 + Amd 1:2017 + Amd 2:2020).

ISO 2409
DIN EN ISO 2409:2020-12, Paints and varnishes - Cross-cut test.

MSZ 9640-11
MSZ 9640/11:1983, Test of paint coats and coat systems. Determination of waterproofness.

MSZ 9927
MSZ 9927:1986, Furniture surfaces. Resistance to heat. Test.

MSZ 9929
MSZ 9929:1986, Furniture surfaces. Resistance to mechanical

effects. Test.

MSZ 9931
MSZ 9931:1986, Furniture surfaces. Resistance to climature. Test.

Laws and regulations

1272/2008/EK
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

PCR

PCR Part A
Product Category Rules (PCR) Part A, Calculation Rules for the Life Cycle Assessment and Requirements on the Project Report according to EN 15804+A2:2019, Version 1.4. (Institut Bauen und Umwelt e.V), 15.04.2024.

PCR Part B
Product Category Rules (PCR) Part B, Requirements on the EPD for Wood-based panels, Version 11 (Institut Bauen und Umwelt e.V), 01.08.2024.

Software / Database

Umberto 11
Software zur Modellierung von Ökobilanzen, iPoint-systems gmbh, Hamburg

Ecoinvent EN15804
Database version 3.10. Revision 1

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