# MASS BALANCE PRODUKT INFORMATION

Owner of the Document	Fritz EGGER GmbH & Co. OG Holzwerkstoffe	
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Valid to	09.05.2026	

## EGGER Decorative Chipboards BMB Fritz EGGER GmbH & Co. OG Holzwerkstoffe



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## **General Information**

## Fritz EGGER GmbH & Co. OG

#### **Programme holder**

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

## Document number

MBA-EGG-0001

# This document is oriented towards the product category rules:

Wood-based panels, 10/07//2023 (PCR checked and approved by the SVR)

Issue date

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09.05.2026

Man liten

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

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

## Product

## **Product description/Product definition**

EGGER Decorative Chipboards (formerly marketed as "EGGER Eurodekor") are board-shaped wood-based materials according to

EN 312:2010-09, Particleboards - Specifications And

## **EGGER Decorative Chipboards BMB**

## **Owner of the Document**

Fritz EGGER GmbH & Co. OG Holzwerkstoffe Weiberndorf 20 6380 St. Johann in Tyrol Austria

#### Declared product / declared unit

1 m<sup>2</sup> EGGER Decorative Chipboards BMB

(11.57 kg/m²) with a moisture content of 6 %

#### Scope:

This document refers to coated EGGER Decorative Chipboards, formerly marketed as "EGGER Eurodekor" produced at the site in Brilon, Germany. For the production of the particle boards, a certified biomass balanced (BMB) UF glue system was used. The biomass for the glue is balanced according the "mass balance model: credit method" of the ISO 22095.

This declaration refers to a virtual allocation approach, the declared product does not contain the declared biomass-content physically.

The LCA calculation included specific LCA data in accordance to ISO 14067:2018 provided by the glue manufacturer, who used an LCA tool verified by the TÜV Rheinland.

The owner of the document is liable for the underlying information and evidence; the IBU is not liable with respect to manufacturer information, life cycle assessment data and evidences. For specification of the calculation method see chapter "Mass balance approach (MBA)"

The Annex was created orienting towards the specifications of EN 15804+A2.

For the use of the verified annex please see <u>https://ibu-epd.com/umgang-des-ibu-mit-massenbilanz-ansaetzen-bei-der-berechnung-einer-produkt-oekobilanz/</u>.

#### Verification

The standard *EN 15804* serves as the core PCR Independent verification of the Annex and data according to *ISO 14025:2011* 

internally x externally

Minke

Matthias Klinlger (Independent verifier)

EN 14322:2017-03, Wood-based panels - Melamine faced boards for interior uses - Definition, requirements and classification.

The decorative pattern of a decorative chipboard is achieved by means of printed decor paper. A corresponding texture can be applied to the surface during the pressing. According to the technical standards the board types are differentiated in



application according to two criteria: according to loadbearing and non-load-bearing elements and according to use in dry or moist areas (P1-P7). The EGGER Decorative Chipboards BMB using the biomass balanced glue system is only available in P2 quality: Board for interior fittings (including furniture) for use in dry conditions.

The average product considered has a thickness of 17.6 mm. This was calculated over the total quantities produced at the Brilon plant according to volume share. The quantities of all boards thicker than 8 mm were included. The production of boards 8 mm and thinner falls into the category of thin chipboard and is not declared in this study.

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 13986:2004+A1:2015, Wood based panels for use in construction – Characteristics, evaluation of conformity and marking* and the CEmarking.

For the application and use the respective national provisions apply.

## Application

EGGER Decorative Chipboards are mainly used in decorative interior design and in furniture construction. They are also used in residential and project furnishings.

## **Technical Data**

The technical requirements for chipboard in the use class P2 produced by EGGER are specified in the standard EN 312:2010. Further definitions, requirements and classifications of decorative chipboards for interior use such as surface properties and dimensional tolerances are provided by the standard *EN 14322:2017-03.* Detailed information can be found in the technical data sheets.

Name	Value	Unit
Gross density [EN 323]	655	kg/m³
Grammage at thickness 17.6 mm	11.6	Kg/m <sup>2</sup>
E-module (longitudinal) [EN 310]	1200- 3150	N/mm <sup>2</sup>
Tensile strength right-angled	±2.0	mm/m
Water vapour diffusion resistance factor [EN 12524]	50	µ-dry
Limit deviation density relative to mean value EN 324	±10	%
Thickness tolerance sanded boards EN 324	±0.3	mm
Length and width tolerance EN 324	±5	mm
Edge straightness tolerance EN 324	±1.5	mm
Perpendicularity tolerance EN 324	±2.0	mm

Performance data of the product in accordance with the declaration of performance with respect to its essential characteristics according to *EN 13986+A1:2015-04, Wood-based panels for use in construction – Characteristics, evaluation of conformity and marking* (not part of the CE marking).

#### Base materials/Ancillary materials Preliminary products:

Raw chipboards with a thickness between 8 and 40 mm and an average density of 655 kg/m<sup>3</sup> consist of (information in weight % per 1 m<sup>3</sup> of production): - approx. 84-86 % wood weight: Fresh wood from thinning measures and sawmill residues, mainly spruce and pine, are used for the production of chipboards. Up to 30 % of the raw material is covered by recycled wood, which is materially utilised. - approx. 4-7 % water

- approx. 8-10 % biomass balanced UF glue (BMB) from renewable resources consisting of urea formaldehyde resin. The glue manufacturer confirms by a recognized third party certification system for sustainable raw materials and recycled materials that the required quantities of fossil raw materials for the biomass-balanced product are replaced with renewable raw materials in the chemical synthesis process.

Through polycondensation, the biomass balanced (BMB) aminoplastic glue hardens completely in the pressing process.

< 1 % PMDI additive (polymer diphenylmethane diisocyanate): MDI (diphenylmethane - diisocyanate), a polyurea precursor that is converted into PUR (polyurethane) and polyurea during board production is used.

#### For the coating:

- **Decor papers**: with a grammage of 60 -120 g/m<sup>2</sup> - **Melamine formaldehyde resin**: amino-plastic resin for the impregnation of decor paper for lamination; the resin hardens inside the press into a hard and wear resistant surface.

All additives and the impregnating resin used for the coating are **not** covered by biomass balance (BMB) claim.

EGGER Decorative Chipboards BMB consist of: 87,8% biogenic resources (wood and cellulose) 8,4% biomass balanced (BMB) binder and 3,8% fossil-based resources. These figures refer to the dry weight of the final product (without water content).

This product contains substances listed in the candidate list (date: 18.03.2024) exceeding 0.1 percentage by mass: no.

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.

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.

## Environment and health during use

**Environmental protection:** When the described products are used properly in accordance with the area of application, there is no risk of water, air or ground contamination according to the current state of knowledge.

**Health aspects:** According to the current state of knowledge, no health hazards or adverse effects are to



be expected from normal use of coated chipboard in accordance with its intended purpose. Natural wood constituents may be released in small quantities. With the exception of small amounts of formaldehyde that are not a hazard to health, no emissions of harmful substances are detectable.

## **Reference service life**

The service life of EGGER Decorative Chipboards depends on the area of application in the specific project, taking into account the use class according to

## LCA: Calculation rules

## **Declared Unit**

This declaration on "Mass Balance Product Information" is based on a declared unit of 1 m<sup>3</sup> EGGER Decorative Chipboard with an average raw density of 11.57 kg/m<sup>2</sup> and a delivery moisture of approximately 6 %.

#### **Declared unit**

Name	Value	Unit
Declared unit	1	m²
Thickness (average)	17.6	mm
Density	11.57	kg/m²
Moisture content at delivery	6	%

EGGER Decorative Chipboards are made at the Brilon (DE) plant. The surface weight of the product was calculated surface weighted. This is based on the averaging of raw chipboard, which was done according to dimensional weight. The average for the impregnation used for coating was based on annual production.

#### Available Masses

The biomass for the glue is balanced according the "mass balance model: credit method" of the ISO 22095. With that method a maximum amount of 500.0000 m<sup>3</sup> per year can be produced at the production site in Brilon. Additional quantities can be ordered at the plants: Rambervillers (FR) 500.000 m<sup>3</sup>, Wörgl (AT) 80.000 m<sup>3</sup>, Caorso (IT) 500.000 m<sup>3</sup> and Markt Bibart (DE) 400.000 m<sup>3</sup>. These products are not covered by this declaration.

## System boundary

The LCA of the average EGGER Decorative Chipboard includes a cradle-to-gate consideration of the occurring environmental impact with the modules C1-C4 and module D (A1-A3, +C, +D). The following life cycle phases are taken into account in the analysis:

## Module A1- A3 | Production stage

The production stage includes the upstream impact of the raw material supply (logs, scrap wood, sawdust, glue system, auxiliary materials, etc.) as well as the associated transports to the production site in Brilon. Within the plant boundaries, the log yard, wet chip preparation, drying, gluing, spreading, pressing, the sanding line up to the warehouse and shipping are taken into account.

The Decorative Chipboards are finished by applying an impregnation in the short-cycle presses and then packaged. Thermal and electrical energy, compressed air and water are provided by central suppliers at the Brilon site. The majority of the electrical energy used is obtained from the German power grid. Both internal EN 1995-1-1, DIN 68800-2 and appropriate maintenance. Resistance in use is defined by the use class P2. For general fixtures/furnishing systems, the BBSR Table "Useful lives of components for life cycle analyses according to the BNB" gives a range of 10 to 40 years (KG 371-378). These useful lives are based on empirical values and are used to develop forecast scenarios for further LCAs. No binding statements (warranties, construction contracts, expert opinions, etc.) can be derived from the data.

wood waste and scrap wood sourced externally are used in the in-house biomass power plant. The system boundary for the scrap wood used in the production is set after sorting and chopping. It is assumed that the end of the waste status has been reached. The system boundary for secondary raw materials according to *EN 15804* applies.

## Module C1 | Deconstruction and demolition

Manual dismantling was assumed for the Decorative Chipboard. The associated efforts are negligible, which means that no environmental impact from the dismantling of the products is declared.

## Module C2 | Transport to waste treatment

Module C2 includes transport to waste treatment. For this purpose, transport by lorry over a distance of 50 km is used as a representative scenario.

#### Module C3 | Waste processing

Chopping after product disassembly is considered in module C3. The wood products and with them the material-inherent properties leave the product system as secondary fuel in module C3.

## Module C4 | Disposal

The scenario used declares the energy recovery of the wood products, which means that no environmental impact from the waste treatment of the products in C4 are to be expected.

# Module D | Benefits and loads beyond the system boundary

The energy utilisation of the product at the end of its life cycle is described in Module D, including energetic substitution potentials as a European average

## Allocation

The present life cycle assessment contains a raw material (glue) with biomass allocation. The material is certified according to Redcert<sup>2</sup>. According to the supplier, the production of the glue is no multi output process, therefore no further allocations are applied.

Other applied allocation approaches do not deviate from the referring IBU-EPD of the conventional products.

## Mass balance approach (MBA)

The biomass for the glue is balanced according the "mass balance model: credit method" of the ISO 22095 and certified by Redcert<sup>2</sup>. With that method a maximum amount of 500.0000 m<sup>3</sup> per year can be produced at the production site in Brilon. Additional quantities can be ordered at the plants: Rambervillers (FR) 500.000 m<sup>3</sup>, Wörgl (AT) 80.000 m<sup>3</sup>, Caorso (IT)



500.000 m<sup>3</sup> and Markt Bibart (DE) 400.000 m<sup>3</sup>. These products are not covered by this declaration.

## Additional Information

Number of the EPD acc. To EN15804+A2 for this product: EPD-EGG-20200251-IBC1-EN Download link: <u>https://epd-</u> online.com/EmbeddedEpdList/Download?id=14659

#### Comparability

Basically, a comparison or an evaluation of Annex 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 GaBi database 2020, SP40 background database was used to calculate the LCA.

## LCA: Scenarios and additional technical information

## **Characteristic product properties**

#### Information on biogenic carbon

The biogenic carbon content quantifies the amount of biogenic carbon in the declared building product.

Name	Value	Unit
Biogenic carbon content (in the product including mass-balance)	5.2	kg/m²
Stored carbon dioxide (in the product including mass-balance)	18.1	kg/m²
Biogenic carbon content (in the packaging)	0.2	kg/m²

The allocation of bio-based feedstock for the production of the BMB-glue is based on a virtual massbalance approach. It is therefore not guaranteed that biogenic carbon is physically bound in the BMB products.

The carbon stored in the packaging was taken into account as "CO2-neutral". Thus the storage effect of the carbon bound in the packaging is not included in the calculation but is considered as emitted immediately.

## Installation in the building (A5)

The end-of-life of product packaging is not declared in module A5.

Name	Value	Unit
Packaging (PET)	0,0004	kg/dekl. Unit
Packaging (wood)	18.1	kg/dekl. Unit
Packaging (Kraftliner)	0.2	kg/dekl. Unit

## End of life (C1-C4)

Name	Value	Unit
For energy recovery [balance moisture 12%]	12.2	kg/m²

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

Name	Value	Unit
Net flow in module D [balance moisture 12%]	11.5	kg/m²
Moisture during thermal reuse	12	%
Processing rate	100	%
Efficiency of the system	61	%

The product reaches the end of the waste status after it is removed from the building, transported for preparation, and the chopping of the product. For the end of life of EGGER Eurodekor coated chipboard, energy recovery as secondary fuel is assumed. Energetic utilisation takes place in a biomass power plant. System-specific figures correspond to a European average scenario (EU28), given that the sales market of EGGER Eurodekor coated chipboard is focussed on Europe. The scenario foresees a processing rate of the coated chipboard after removal from the building of 100%. This assumption must be adapted accordingly after using the results in the context of the building. A balance moisture of 12% must be assumed at the product's end of life. This value may fluctuate significantly depending on the storage of the product prior to energetic utilisation.



## LCA: Results

The following table contains the LCA results for a declared unit of 1 m<sup>3</sup> average EGGER Decorative Chipboard with a raw density of 11.57 kg/m<sup>2</sup> (approximately 6 % moisture).

	DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; ND = MODULE OR INDICATOR NOT																
															BEN	EFITS AND	
PROE	OUCT S	STAGE ON PROCESS USE STAGE								END OF LIFE STAGE SYSTEM BOUNDARIES				LOADS YOND THE SYSTEM JNDARIES			
			he						÷	gy	er	L		бu			
v material supply	ransport	Infacturing	port from t to the site	ssembly	Use	intenance	Repair	olacement	urbishmen	tional ener	ational wat use	onstructio	ransport	e processii	Jisposal	Reuse-	ecovery- ecycling- otential
Ra	F	Mar	Trans <sub> </sub> gate	A		Ma		Rel	Refu	Opera	Opera	De-o de	F	Waste			κκ. α
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4		D
X	X	X	ND	ND	ND	ND	MNR	MNR	MNR	ND	ND	X	X	X	Х		X
Chipt	Doard	OF TH IS BME	IE LCA 3	4 - EN'	VIRON	MENI		NPACI	accor	ding	to EN 1	5804+	A2: 1	m² EG	GER I	Jec	orative
Indic	ator		C	ore Indi	cator			Unit	A1-	A3	C1	C2		C3	C4		D
GWP-	-total fossil	( Glo	Global wa bal warm	arming pote	otential - t ntial - fos	otal sil fuels	[k(	2 CO <sub>2</sub> -Eq.	-1,48E	+01	0,00E+00 0,00E+00	3,68E 3,66E	-02 1 -02 9	,90E+01 9,85E-02	0,00E- 0,00E-	⊦00 ⊦00	-9,25E+00 -9,21E+00
GW	/P- enic	Glo	obal warr	ning pote	ential - bio	ogenic	[kç	g CO <sub>2</sub> -Eq.	-1,86E	E+01	0,00E+00	-6,11E	-05 1	,89E+01	0,00E-	+00	-2,51E-02
GWP-	luluc	GWP	from land	d use an	d land us	e change	e [kç	g CO <sub>2</sub> -Eq.	5,62E	-03	0,00E+00	2,95E	-04 1	I,43E-04	0,00E-	+00	-8,13E-03
OD	P	Depletic	on potent	lai of the layer	stratospi	ieric ozo	ne (k	Eq.]	1,77E	-11	0,00E+00	6,68E	-18 2	2,17E-15	0,00E-	+00	-1,22E-13
Al Al	) )	Acidi Acidificati	ification p ion poten	otential ntial, accu	of land ar umulated	nd water exceeda	nce [m	g SO₂-Eq.] Iol H⁺-Eq.]	1,53E	-02 -05	0,00E+00 0,00E+00	1,24E 1,11E	-04 2 -07 2	2,17E-04 2,63E-07	0,00E- 0,00E-	⊦00 ⊦00	6,70E-03 -1,49E-05
EF	D		Eutro	phication	potentia		ŀ	(PO <sub>4</sub> ) <sup>3-</sup> - Ea.1	5,22E	-03	0,00E+00	5,58E	-05 4	4,83E-05	0,00E-	+00	1,70E-03
EF	D_ vator	Eutrophication, fraction of nutrients reaching				g [	kg P-Eq.]	5,08E	-02	0,00E+00	6,23E	-04 5	5,07E-04	0,00E-	+00	2,02E-02	
EP-ma	arine	Eutrophication, fraction of nutrients reaching		g [	kg N-Eq.]	1,28E-02		0,00E+00	1,10E	-04 1	1,32E-04	E-04 0,00E+00		7,17E-03			
EP-terr	estrial	Eutrop	marine phication,	, accumu	npartmer Ilated exc	it eedance	: [n	nol N-Eq.]	2,71E	-06	0,00E+00	2,94E	-09 2	2,85E-08	0,00E-	+00	-1,83E-06
POO	CP	Forma	ation pote photo	ential of ti chemica	roposphe I oxidants	ric ozone	e [k	g ethene- Eq.]	5,61E	+01	0,00E+00	4,86E	-01 1	,73E+00	0,00E-	+00	-1,72E+02
PO	CP	Forma	ation pote	ential of ti chemica	roposphe I oxidants	ric ozone	e [kį	g NMVOC- Ea.1	1,85E	-01	0,00E+00	3,55E	-04 2	2,15E-02	0,00E-	+00	-5,63E-01
AD	PE	Abio	tic deplet	ion poter	ntial for n	on-fossil	[k	g Sb-Eq.]	-1,48E	E+01	0,00E+00	3,68E	-02 1	,82E+01	0,00E-	+00	-9,25E+00
ADI	PF	Abiotic	depletion	potentia	l for fossi	l resourc	es ,	[MJ]	3,79E	+00	0,00E+00	3,66E	-02 9	9,85E-02	0,00E-	+00	-9,21E+00
WE	P	Water (u wei	iser) dep ighted wa	rivation p ater cons	otential, umption	deprivatio (WDP)	on- [m	<sup>3</sup> world-Ec deprived]	-1,86E	E+01	0,00E+00	-6,11E	-05 1	,81E+01	0,00E-	+00	-2,51E-02
Captio	GW Eut	P = Globa rophicatic	al warmir on potenti fossil r	ng potent ial; POCI	tial; ODP P = Form s: ADPF	= Deplet ation pot = Abiotic	ion pote ential o depleti	ential of the f troposphe	e stratos eric ozon	oheric o e photo sil resou	ozone layer ochemical o urces: WDF	; $AP = Ac$ oxidants; P = Wate	cidificati ADPE :	on potenti = Abiotic d deprivatio	al of lanc epletion	and poter	water; EP = ntial for non-
RESU	ILTS	OF TH	IE LCA	A - IND			D DE	SCRIBE	RES	OUR	CE USE	acco	ding	to EN	15804	+A2	: 1 m²
EGGE	ER De	ecorati	ive Ch	ipboa	rds BN	1B		L los it						00			
Indic	ator	Renewa	ble prim	Indicat		erav car	rior	IMII	A1-/	A3		2.81E	-02 1	04E±02	0.00E	L00	D
PEF	RM	Renev	vable pri	mary en	ergy res	ources a	s	[MJ]	1,97E	+02	0,00E+00	0,00E	+00 -1	1,93E+02	0,00E-	+00	0,00E+00
PE	RT	Total	use of re	enewabl resourc	e primar es	y energy		[MJ]	2,96E	+02	0,00E+00	2,81E	-02 7	7,67E-01	0,00E-	+00	-4,33E+01
PEN	IRE	Non-re	newable	primary	energy	as enerç	JY	[MJ]	5,44E	+01	0,00E+00	4,88E	-01 3	3,51E+00	0,00E-	+00	-1,72E+02
PEN	RM	Non-rer	newable	primary utilizati	energy a	as mater	ial	[MJ]	1,78E	+00	0,00E+00	0,00E-	+00 -′	1,78E+00	0,00E-	+00	0,00E+00
PEN	IRT	Total us	se of non	resourc	able prim es	ary ener	gy	[MJ]	5,62E	+01	0,00E+00	4,88E	-01 1	,73E+00	0,00E-	+00	-1,72E+02
SN	N	Use of secondary material [kg] 4,75E+00 (		0,00E+00	0,00E	+00 0	),00E+00	0,00E-	+00	0,00E+00							
NR	SF	Use Use c	e or rene of non-re	newable s	econdar e second	ary fuels		[IVIJ] [MJ]	0,00E	+00	0,00E+00 0,00E+00	0,00E	+00 0	,00E+00 ),00E+00	0,00E	+00	1,63E+02
F۷	V		Use c	of net fre	sh water			[m <sup>3</sup> ]	1,79E	-02	0,00E+00	3,27E	-05 8	3,87E-04	0,00E	+00	-3,50E-02
Caption Caption PERE = Use of renewable primary energy resources used as raw materials; PERM = Use of non-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 non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh																	
RESL				) – W/	STE		ORU	S AND		r PI IT-	FLOWS	accor	dina	to EN_1	5804-	Δ2	
NL3U				₹— VV <i>F</i>					-001		FEONS	accor	anny		-50041	772	



Indicate	or Indicator	Unit	A1-A3	C1	C2	C3	C4	D
HWD	Hazardous waste disposed	[kg]	2,66E-06	0,00E+00	2,25E-08	7,16E-10	0,00E+00	-5,82E-08
NHWD	Non-hazardous waste disposed	[kg]	8,82E-02	0,00E+00	7,73E-05	1,23E-03	0,00E+00	6,29E-03
RWD	Radioactive waste disposed	[kg]	1,64E-03	0,00E+00	8,99E-07	2,63E-04	0,00E+00	-1,48E-02
CRU	Components for re-use	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	Materials for recycling	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	Materials for energy recovery	[kg]	0,00E+00	0,00E+00	0,00E+00	1,22E+01	0,00E+00	0,00E+00
EEE	Exported electrical energy	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	Exported thermal energy	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption RESUL	Caption for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy							
1 m² E0	GGER Decorative Chipboards BMB							
Indicate	or Indicator	Unit	A1-A3	C1	C2	C3	C4	D
PM	Potential incidence of disease due to PM emissions	[Disease Incidence]	1,45E-07	0,00E+00	6,99E-10	1,82E-09	0,00E+00	-3,62E-08
IRP	Potential Human exposure efficiency relative to U235	[kBq U235- Eq.]	1,62E-01	0,00E+00	1,33E-04	4,31E-02	0,00E+00	-2,43E+00
ETP-fw	v Potential comparative toxic unit for ecosystems	[CTUe]	2,09E+01	0,00E+00	3,63E-01	7,41E-01	0,00E+00	-4,21E+01
HTP-c	Potential comparative toxic unit for humans - cancerogenic	[CTUh]	3,74E-09	0,00E+00	7,51E-12	2,05E-11	0,00E+00	-1,67E-10
HTP-c HTP-no	c Potential comparative toxic unit for humans - cancerogenic Potential comparative toxic unit for humans - not cancerogenic	[CTUh] [CTUh]	3,74E-09 3,76E-08	0,00E+00 0,00E+00	7,51E-12 4,33E-10	2,05E-11 7,54E-10	0,00E+00 0,00E+00	-1,67E-10 4,87E-08
HTP-c HTP-no SQP	c Potential comparative toxic unit for humans - cancerogenic cancerogenic comparative toxic unit for humans - not cancerogenic cancerog	[CTUh] [CTUh] [-]	3,74E-09 3,76E-08 4,88E+02	0,00E+00 0,00E+00 0,00E+00	7,51E-12 4,33E-10 1,70E-01	2,05E-11 7,54E-10 5,51E-01	0,00E+00 0,00E+00 0,00E+00	-1,67E-10 4,87E-08 -3,16E+01

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 nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from 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 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 or as there is limited experienced with the indicator.

Disclaimer 3 – Mass Balance Approach in the sense of a virtual allocation is not allowed within EN15804+A2. The underlying calculation is oriented on the EN15804 but uses allocation methods described in the chapter "Mass balance approach (MBA)". IBU cannot guarantee that this document will be accepted as evidence by third parties.

## References

## Standards

## DIN 68800-2

DIN 68800-2:2012-02, Wood preservation - Part 2: Preventive constructional measures in buildings.

## EN 310

DIN EN 310:1993, Wood-based panels - Determination of modulus of elasticity in bending and of bending strength.

## EN 312

DIN EN 312:2010-12, Particleboards - Specifications.

## EN 323

DIN EN 323:2005, Wood-based panels - Determination of density.

## EN 324

DIN EN 324 -1:2005, Wood-based panels; determination of dimensions of boards; Part 1: determination of thickness, width and length.

## EN 13986

DIN EN 13986:2004+A1:2015, Wood-based panels for use in construction - Characteristics, evaluation of conformity and marking.

## EN 14322

DIN EN 14322:2017-03, Wood-based panels Melamine faced board for interior uses - Definition, requirements and classification.

#### EN 15804

EN 15804:2012+A2:2019+AC:2021, Sustainability of construction works — Annex — Core rules for the product category of construction products.

## EN 1995



DIN EN 1995-1-1:2010-12, Eurocode 5: Design of timber structures - Part 1-1: General - Common rules and rules for buildings

## ISO 14025

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

## ISO 22095

ISO 22095:2020, Chain of custody General terminology and models

## **Further References**

## **BBSR Table**

BBSR 2017, Useful lives of building components for life cycle analyses according to the Sustainable Building Assessment System, 2017, BBSR Germany 2017.

## GaBi

GaBi 9, Software-System and Database for Life Cycle

Engineering. DB v8.7 SP 40. Stuttgart, Echterdingen: thinkstep AG, 1992-2020.

## IBU 2024

Institut Bauen und Umwelt e.V.: General Instructions for the Annex programme of Institut Bauen und Umwelt e.V., Version 2.1, Berlin: Institut Bauen und Umwelt e.V., 2024 www.ibu-epd.com

## PCR Part A

Product category rules for building-related products and services. PART A: Calculation rules for the ecological balancing and requirements towards the project report according to EN 15804+A2:2019. Version 1.3. Berlin: Institut Bauen und Umwelt e.V. (eds.), 2022.

## PCR: Wood-based panels

Product category rules for building-related products and services. Part B: Requirements on the EPD for Wood-based panels. Version 5. Berlin: Institut Bauen und Umwelt e.V., 10/07/2023

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