ENVIRONMENTAL PRODUCT DECLARATION

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

Owner of the Declaration	Blocotelha Steel Constructions S.A.
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-BLO-20230405-IBA1-EN
Issue date	20.11.2023
Valid to	19.11.2028

SKINZIP
Blocotelha

Institut Bauen und Umwelt e.V.

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BLOCOTELHA

1. General Information

Blocotelha

Programme holder

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

Declaration number

EPD-BLO-20230405-IBA1-EN

This declaration is based on the product category rules:

Aluminium roofing and cladding systems, 01.08.2021
(PCR checked and approved by the SVR)

Issue date

20.11.2023

Valid to

19.11.2028

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

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

SKINZIP

Owner of the declaration

Blocotelha Steel Constructions S.A.
EC Porto de Mós Apt. 39
2481-917 Porto de Mós
Portugal

Declared product / declared unit

1 m^2 of SKINZIP® - aluminium standing seam roofing and wall cladding system.

Scope:

This EPD refers to the manufacture, transport and disposal of environmental impacts of SKINZIP®, in one industrial unit of Blocotelha in Portugal (Porto de Mós) and is referred to the year of 2022. Data were estimated based on background research and Blocotelha supply chain downstream activities.
It involves a representative EPD for a SKINZIP® product for year 2022 - SKINZIP® SZ 400.
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

Dr. Matthew Fishwick,
(Independent verifier)

2. Product

2.1 Product description/Product definition

The aluminium standing seam sheet system is a metal roofing and cladding system that can be either factory or via mobile roll forming produced on site.
A number of sheet widths and heights are available to meet various design specifications and load span requirements.
The system under review (sheet aluminium with lacquered surface) represents the representative product's environmental impacts.
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 14782:2006 Self-supporting metal sheet for roofing, external cladding and internal lining - Product specification and requirements, and the CE-marking.
For the application and use the respective national provisions apply.

2.2 Application

The aluminium profiled roof sheets are profiled sheets which are joined by mechanically crimping the standing seams and used as external cladding for roofing and walls.
As warm or cold roof designs, the profiled sheets are suitable for all roof shapes as well as for all supporting constructions and support structures. They can be used for both new and refurbishment projects. The constructive design is aligned towards the respective application and can be adapted to building requirements by choosing the suitable SKINZIP®. Roll-formed profiled sheets are used in a variety of construction applications. Typical applications include building shells and interior linings.

2.3 Technical Data

Relevant technical construction data for the product is referred to in the following table. SKINZIP® CE marking is according to the norm EN 1090-2 Execution of steel structures and aluminium structures.

Constructional data

Name	Value	Unit
Used alloys for the skin	EN AW/3004/3005/6025	-
Thickness	1	mm
Minimum pitch	18	°
Thermal conductivity	0.19	W/(mK)
Spot-related heat transition coefficient (Chi value) (Clips)	0.09	W/K

SKINZIP® should be considered noisy under the effect of wind, hail and rapid temperature variations.

Performance data of the product in accordance with the declaration of performance with respect to its essential characteristics according to EN 14782:2006, Self-supporting metal sheet for roofing, external cladding and internal lining - Product specification and requirements.

2.4 Delivery status

The declared standing seam profiled sheet is supplied as long sheets in project-based dimensions in lengths over 30 meters, widths of up to 500 mm, and usually with a thickness of 1 mm.

2.5 Base materials/Ancillary materials

The primary product components and materials of the product are indicated as a percentage mass in the following table.

Name	Value	Unit
Rock wool	36.12	%
Aluminium	60.51	%
Bitumen	0.03	%
Steel	2.17	%
Polypropylene	0.72	%
Polyester	0.44	%

This product/article/at least one partial article contains substances listed in the candidate list (date: 10.07.2023) exceeding 0.1 percentage by mass: no.
This product/article/at least one partial article 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.
Biocidal products were added to this construction product or it has been treated with biocide products (it is thus a treated product in the sense of the Biocidal Products Regulation (EU) No. 528/2012): no.

2.6 Manufacture

The aluminium sheets are profiled in the installation at the production facility in Portugal (electronically-controlled process). Aluminium clips are produced in the installation. The polypropylene bases of the clip are produced near Blocotelha. The produced SKINZIP® components and insulation materials are bought in and assembled on the construction site.

2.7 Environment and health during manufacturing

Blocotelha company is certified in accordance with ISO 9001, ISO 14001, ISO 45001. Blocotelha also has certification for fusion welding of metallic materials.

2.8 Product processing/Installation

The standing seam profiled sheets are installed by a network of qualified installation companies in accordance with the Assembly Directive. The standing seam profiled sheets are positively joined using a crimping machine.

2.9 Packaging

The SKINZIP® aluminium profiled sheets are transported in reusable and durable metal structure, using waste expanded polystyrene (EPS) to accommodate the aluminium sheets. Rock wool is packed in plastic foil of polyethylene and wood pallets. The bitumen has no packaging. Clips based in propylene are packed in plastic foil of polyethylene and in wood pallets. Screws are packed in cardboard boxes and wood pallets. Aluminium clips are also packed in carboard boxes and wood pallets. The pallets, plastic foil, and cardboard are all recycled.

2.10 Condition of use

No changes during the use phase compared to the manufacturing state.

2.11 Environment and health during use

No changes during the use phase compared to the manufacturing state.

2.12 Reference service life

The roofing system has an assumed reference service life of 50 years. A reference service life (RSL) taking consideration of ISO 15686 could not be established with the result that a useful life was applied from the BBSR Table ‘Useful lives of components for life cycle assessments in accordance with the Sustainable Building assessment system (BNB)’. There are no influences of

ageing of the product when applied in accordance with the rules of technology.

2.13 Extraordinary effects

Fire

Information on the fire performance according to *EN 13501:1* or established national standards. According to *EN 13501:1*:

- The classes of building products regarding their fire performance are predefined as: A1, A2, B, C, D, E, and F;
- The classes of flaming droplets/particles are pre-defined as: d0, d1, or d2;
- The classes for smoke density are pre-defined as: s1, s2, or s3

Fire protection

The SKINZIP® aluminium standing seam roofing system is non-flammable.

Name	Value
Building material class	A1

L 235/19 Profiled sheets made of aluminium or aluminium alloys are classified by the European Commission as products which satisfy the requirements of **"**external fire performance**"** without further analysis.

Water

Water does not have any negative impacts on the product system.

Mechanical destruction

Owing to its lightweight design, there is no risk in the event of an earthquake.
SKINZIP® can be installed on buildings of category I, II, III, and IV, located in seismic zone 1 (very low) to 4 (medium), on class A, B, C, D, and E Soils (French regulation).

2.14 Re-use phase

The following possibilities arise in terms of material composition:

Material recycling
The product system can be partially recycled. The materials suitable for material recycling involve the aluminium from sheets and clips. Packaging materials are recyclable (plastic foil, cardboard and wood pallets).

Energy recovery
There is no energy recovery for the materials.

Landfilling
The rock wool and bitumen are landfilled.

2.15 Disposal

The waste key codes in accordance with the European Waste Catalogue and the List of Wastes Directive/AVV/are listed below for the individual product components.

EWC 15 01 02 Plastic packaging
EWC 15 01 03 Wooden packaging
EWC 17 02 03 Plastic
EWC 17 04 02 Aluminium
EWC 19 10 01 Iron and steel waste
EWC 17 03 02 Bituminous mixtures, other than those mentioned in 17 03 01
EWC 17 06 04 Insulation materials and construction materials other than those mentioned in 17 06 01 and 17 06 03

2.16 Further information

Other information can be found on the Blocotelha website or website of SKINZIP®.
www.blocotelha.com
www.skinzip-system.com/

3. LCA: Calculation rules

3.1 Declared Unit

This EPD refers to 1 m^2 aluminium standing seam roofing and wall cladding system, being SZ 400 the representative SKINZIP® product. For a precautionary approach, the product with highest impact should be the one presented. From the most sold types in 2022, the SZ 400 type was selected as representative because it was the one with the highest environmental impact.

Declared unit and mass reference

Name	Value	Unit
Declared unit	1	m^2
Heat transfer coefficient (U-value)	0.594	$W/(m^2K)$
conversion factor	-	-
Weight unpacked	9.97	kg
Packaging	0.14	kg
Total weight	10.11	kg

The study covers the reporting of modules A1-A5, C1-C4 and module D. Type of EPD: Cradle to gate – with options (A1-A5, C1-C4, and D).

3.2 System boundary

Type of EPD: Cradle to gate - with options

Modules A1-A3

The product stage involves production of the requisite raw materials including all the upstream chains as well as the requisite procurement transport. Production of the declared unit also took consideration of the requisite auxiliaries and consumables as well as their upstream chains.
For the product, this means that the environmental impacts of lacquered aluminium, aluminium for clips, polypropylene for clips, stainless steel for screws, bitumen and rock wool are attributed to the declared product. The electricity production (Portuguese power mix) and lubricants for in-plant production are also included. Packaging was also considered.

Module A4

This module considers the ecological impact of transporting the declared unit from the plant gate to the construction site.

Module A5

Efforts associated with the installation were taken into consideration, namely electrical energy and diesel for the building equipment. Electricity is a Portuguese power mix.

Module C1

It was assumed that the de-construction is made in the same mode as module A5 - assembly at the site, with exception of the crimping machine.

Module C2

Includes transportation to waste treatment and disposal. It also includes the transport of waste packaging for waste treatment.

Module C3

This module includes the environmental impacts of waste treatment (recycling) of the product at the End of Life. Aluminium and steel are melted and reused.

Module C4
This module includes the environmental impacts of landfilling the EPS, rock wool, bitumen, cardboard, wood, and plastic foil.

Module D
This module comprises the efforts associated with recycling and the avoidable environmental impacts of aluminium contained in the product.

3.3 Estimates and assumptions

The effort associated with lacquering the aluminium (energy and chemicals) was covered by assessing the energy effort and added to the environmental impacts of the requisite volume of polyester. Instead of steel screws, the volume of unprocessed steel used was assessed and the machining as well.
The polyester from the lacquered aluminium and the plastic contained in the clips are not recovered but rather melted along with the aluminium, as well the screws, during the recycling process. No credits were considered from polyester in module D.
The generic data set used for bitumen roofing does not indicate whether it involves a self-adhesive product. It can be assumed that this is not the case which is why this process is simplified on account of the lack of adhesive. For aluminium in the SKINZIP®, the aluminium provided by the supplier has 70 % of recycled content. The aluminium clips have a recycled content of 92.9 %.

3.4 Cut-off criteria

All input and output flows have been considered at 100 %, including all available data associated directly to the manufacture of the product included in the LCA (i.e., all raw materials, electric energy and thermal power consumed, transports). Hence, the study complies with the cut-off criteria of 1 % of renewable and non-renewable primary energy usage and 1 % of the total mass of that unit process. The cumulative cut-off criteria of 5 % was used.
The declaration for Module B was excluded as the product does not cause any environmental impacts during its service life.

3.5 Background data

For processes in which the producer has no influence of specific information, like the extraction of raw materials, end-of-life treatment, and generic data from the following main sources were considered: ecoinvent 3.8 and PRé- Consultants (SimaPro 9.5).

3.6 Data quality

Primary data is referred to the production of 2022 and was made available by Blocotelha. Data sets of processes from the ecoinvent database are less than 4 years old. Data sets are based on literature and average data from specific industrial units.
Regarding geographical coverage, average European data and Portugal specific energy mix were used. In cases where no average European data was available, it was used as the most approximate dataset. Considering these aspects, the data used in this study is considered of high quality.

3.7 Period under review

The specific data collected from the manufacturer refer to the year 2022.

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: Portugal

3.9 Allocation

Energy, raw materials, water, waste, wastewater and air emissions were allocated to this product using mass allocation.

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. Background data are taken from the SimaPro software (version 9.5) and from the ecoinvent 3.8 database, 2023.

4. LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon
The mass of packaging containing biogenic carbon is related to the wood pallet and the cardboard boxes. The SKINZIP® product has no biogenic carbon.
Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO_2.

Information on describing the biogenic carbon content at factory gate

Name	Value	Unit
Biogenic carbon content in accompanying packaging	0.056	kg C

The following information refers to the declared modules and is the basis for the calculations or can be used for further calculations. the indicated values refer to the declared unit.

Transport to the building site (A4)

Name	Value	Unit
Transport, freight, lorry 16-32	67	km

Installation into the building (A5)

Name	Value	Unit
Electricity consumption	0.00103	kWh
Output substances following waste treatment on site	0.14	kg
Machine operation, diesel	0.0605	hr

Packaging waste is considered to be recycled and there is no installation waste.

In case a **reference service life** according to applicable ISO standards is declared then the assumptions and in-use conditions underlying the determined RSL shall be declared. In addition, it shall be stated that the RSL applies to the reference conditions only.

The same holds for a service life declared by the manufacturer. Corresponding information related to in-use conditions needs not be provided if a service life taken from the list of service life by *BNB* is declared.

Reference service life

Name	Value	Unit
Life Span (according to BBSR)	50	a

End of life (C1-C4)

In resume, the destinations of SKINZIP® SZ 400 is landfill and recycling. It was assumed that 61 % of SKINZIP® SZ 400 goes to recycling, and 39 % is send for landfilling.

Name	Value	Unit
Recycling	6.18	kg
Landfilling	3.93	kg
Transport from the construction site for waste treatment facility - by lorry 16-32 metric tons for C2	67	km
Electric energy for C1	0.29	kWh
Machine operation, diesel for C1	1.45	hr

5. LCA: Results

The environmental impacts were calculated using EN 15804+A2 from SimaPro.

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	MND	MNR	MNR	MNR	MND	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m² of SKINZIP® aluminium standing seam roofing and wall cladding system

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq	2.62E+01	1.12E-01	1.33E+00	1.28E+00	1.11E-01	5.36E+00	3.84E-02	-1.17E-01
GWP-fossil	kg CO_2 eq	2.56E+01	1.12E-01	1.31E+00	1.27E+00	1.11E-01	5.24E+00	2.52E-02	-1.14E+00
GWP-biogenic	kg CO_2 eq	2.4E-01	9.55E-05	1.2E-03	1.16E-03	9.52E-05	1.05E-01	2.35E-02	-6.34E-03
GWP-luluc	kg CO_2 eq	3.21E-01	4.4E-05	1.4E-02	1.36E-02	4.38E-05	7E-03	1.95E-05	-2.74E-02
ODP	kg CFC11 eq	2.5E-06	2.59E-06	8.14E-08	7.7E-08	2.58E-08	4.11E-07	8.54E-09	-1.2E-07
AP	mol H^+ eq	3.04E-01	4.55E-04	1.03E-02	9.96E-03	5.61E-04	2.62E-02	2E-04	-7.51E-03
EP-freshwater	kg P eq	1.3E-02	7.21E-06	4.68E-04	4.56E-04	7.19E-06	2.09E-03	2.08E-06	-6.66E-04
EP-marine	kg N eq	2.5E-02	1.37E-04	1.57E-03	1.47E-03	1.93E-04	4.89E-03	1.37E-04	-1.01E-03
EP-terrestrial	mol N eq	2.66E-01	1.5E-03	1.68E-02	1.57E-02	2.11E-03	5.38E-02	7.61E-04	-9.19E-03
POCP	kg NMVOC eq	1E-01	4.58E-04	4.61E-03	4.3E-03	6.02E-04	1.48E-02	2.28E-04	-3.44E-03
ADPE	kg Sb eq	3.77E-04	3.89E-07	1.03E-05	1E-05	3.88E-07	6.11E-04	5.02E-08	-2.6E-06
ADPF	MJ	3.85E+02	1.69E+00	1.72E+01	1.66E+01	1.69E+00	5.7E+01	5.92E-01	-1.77E+01
WDP	m^3 world eq deprived	9.41E+00	5.07E-03	5.54E-01	5.4E-01	5.06E-03	5.86E+00	2.55E-02	8.37E-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 of SKINZIP® aluminium standing seam roofing and wall cladding system

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	1.06E+02	1.77E-02	6.86E+00	6.69E+00	1.77E-02	4.03E+00	4.25E-03	-7.09E+00
PERM	MJ	8.37E+00	6.19E-03	6.3E-01	6.15E-01	6.17E-03	2.19E+00	1.62E-03	-7.97E-02
PERT	MJ	1.15E+02	2.39E-02	7.49E+00	7.31E+00	2.39E-02	6.23E+00	5.87E-03	-7.17E+00
PENRE	MJ	8.3E+01	5.9E-02	-3.2E-01	-3.17E-01	5.87E-02	2.12E-01	1.9E-02	-5.31E+00
PENRM	MJ	3.02E+02	1.63E+00	1.75E+01	1.69E+01	1.63E+00	3.58E+01	5.81E-01	-1.24E+01
PENRT	MJ	3.85E+02	1.69E+00	1.72E+01	1.66E+01	1.69E+00	5.7E+01	6E-01	-1.77E+01
SM	kg	6.1E-01	0	0	0	0	0	0	-1.65E-01
RSF	MJ	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0
FW	m^3	2.51E+02	9.74E-02	1.96E-01	1.4E-01	9.74E-02	1.18E+01	2.75E-02	-1.62E-01

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 of SKINZIP® aluminium standing seam roofing and wall cladding system

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	2.84E-02	4.42E-06	1.69E-05	1.61E-05	4.41E-06	4.54E-02	9.02E-07	-1.1E-05
NHWD	kg	8.03E+00	8.71E-02	7.4E-02	7.2E-02	8.68E-02	9.55E-01	4.02E+00	-3.48E-01
RWD	kg	1.98E-03	1.15E-05	3.84E-05	3.63E-05	1.14E-05	1.84E-04	3.92E-06	-1.13E-04
CRU	kg	0	0	0	0	0	0	0	0
MFR	kg	1.23E-01	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0

EET	MJ	0	0	0	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 of SKINZIP® aluminium standing seam roofing and wall cladding system

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Disease incidence	1.79E-06	9.67E-09	3.43E-08	3.03E-08	9.87E-09	2.39E-07	4.03E-09	-8.63E-08
IR	kBq U235 eq	5.49E+00	8.7E-03	9.61E-02	9.3E-02	8.67E-03	4.57E-01	2.68E-03	-3.29E-01
ETP-fw	CTUe	6.27E+02	1.32E+00	2.07E+01	2.01E+01	1.32E+00	2.84E+02	4.06E-01	-2.07E+01
HTP-c	CTUh	1.02E-07	4.28E-11	5.59E-10	5.06E-10	4.26E-11	8.06E-09	1E-11	-3.68E-09
HTP-nc	CTUh	8.63E-07	1.39E-09	1.52E-08	1.46E-08	1.38E-09	2.34E-07	2.86E-10	-5.01E-08
SQP	SQP	1.05E+02	1.16E+00	4.3E+00	4.17E+00	1.16E+00	3.62E+01	1.26E+00	-1.44E+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.

6. LCA: Interpretation

This section contains an interpretation of the LCIA categories. The modules A1-A3 of SKINZIP® has the highest impacts for all impact categories assessed, while Transport and Disposal have the lowest impacts.
The high impacts of the product stage of SKINZIP® show the relevance of upstream processes. This is mostly related to aluminium which displays the highest absolute and relative share in all impact categories while the other materials have a comparably low impact. The dominance analysis shows that the main contribution is the aluminium primary used in the production of aluminium for SKINZIP® and its transformation in sheet rolling. The production of stainless steel is also the main contributor for AP and WDP. The transport (A2) and manufacturing (A3) have a low contribution compared with raw materials (A1).

7. Requisite evidence

No further evidence is of reference for this product.

8. References

CEN/TR 15941
CEN/TR 15941, Sustainability of construction works - Environmental product declarations - Methodology for selection and use of generic data (CEN/TR 15941:2010)

EN 1090-2
EN 1090-2, Execution of steel structures and aluminium structures - Part 2: Technical requirements for steel structures

ISO 9001
EN ISO 9001:2015, Quality management systems - Requirements

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

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

EN 14782
EN 14782:2006, Self-supporting metal sheet for roofing, external cladding and internal lining - Product specification and requirements

EN 15804
EN 15804:2012-04+A2 2019, Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

ISO 45001
EN ISO 14001:2015, Environmental management systems — Requirements with guidance for use

Further references

BBSR Reference Service Life
Useful lives of building components for life cycle analyses according to the Sustainable Building Assessment System (BNB) Version: 24.02.2017

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