Environmental Product Declaration





In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

EVT II Stainless U Brackets

from

RJ Facades Systems Ltd

EPD for multiple products based on representative product

Programme:

The International EPD® System,

Programme operator:

www.environdec.com
EPD International AB

EPD registration

number: Publication date: EPD-IES-0024074

Valid until:

2025-06-13 2030-06-12







General information

Programme information

Programme:	The International EPD® System						
	EPD International AB						
Address	Box 210 60						
Address:	SE-100 31 Stockholm						
	Sweden						
Website: www.environdec.com							
E-mail:	info@environdec.com						

Accountabilities for PCR, LCA and independent, third-party verification									
Product Category Rules (PCR)									
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)									
Product Category Rules (PCR): Product Category Rules (PCR): PCR 2019:14 Construction products, version 1.3.4., Construction EN 15804:2012+A2:2019/AC:2021 Sustainability of Construction Works.									
PCR review was conducted by: Technical Committee of the International EPD® System. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact.									
Life Cycle Assessment (LCA)									
LCA accountability: Stephen Forson, ViridisPride Ltd, s.forson@viridispride.com									
Third-party verification									
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:									
□ EPD verification by individual verifier									
Third-party verifier: Vijay Thakur									
Approved by: The International EPD® System									
Procedure for follow-up of data during EPD validity involves third party verifier:									
□ Yes ⊠ No									

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.





Company information

RJ Facade Systems design and supply support systems for all the facade materials partnering with architects, designers and contractors. We have designed, manufactured and supplied support systems for all the facade materials used in ventilated facades, partnered with the market leading facade contractors, and worked on award winning projects.

RJ stainless bracket range is, designed, engineered & manufactured in UK. The stainless EVT II range is designed to complement our aluminium profiles also made in the UK from Hydro low carbon 4.0 aluminium in 6060T6 grade.

Stainless brackets benefit ventilated façade substructure due to improved thermal behaviour, increased load capacity and superior resistance to corrosion when compared to aluminium equivalents.

RJ were the first UK manufacturer and suppliers of facade systems to successfully complete the UKAS accredited, NHBC accepted UL certification, formerly Winmark by Wintech. The approval covers all elements of the facade system, including elements such as material specification, facade design to relevant Eurocode, and traceability through the RJ manufacturers and relevant supply chain.

Our mission is to support all projects from the initial facade calculation in the design office, through to supporting the site team with on site training. Support services include; structural facade calculations, wind load calculations, thermal calculations, CAD support, site testing, site training & CPD seminars.

All calculations provided by RJ are designed to the relevant Eurocode, available with PI Cover. Calculations are often prepared for submission to the project Engineering consultancy, or where required we partner with Engineering practices. RJ final calculations are supported with a £5M PI cover.





Product information

Product name EVT II Stainless U Brackets

Product identification UKAS certification number R40530-1



Product description

Sample for EPD purposes analyses EVT II U Bracket A2 80 X 160mm Stainless Steel.

The brackets are designed into a ventilated façade system. Stainless brackets for rainscreen are designed in accordance with BS EN 1090-3:2008 and / or Euro code 9 – Part 1.

The EVT II stainless steel brackets have a superior thermal performance due to the low thermal conductivity of stainless steel.

Typical bracket configuration uses the Fixed-Point bracket at the highest position on the vertical rail to support the façade vertical dead loads. The Sliding Point bracket is typically used on all other positions of the vertical rail to absorb the project wind loading.

The brackets base has fixing slots suitable for concrete, steel and timber, it also includes slots and holes for Fixed- and Sliding-Point brackets.

Brackets are available with thermal pad options to improve overall thermal performance.

UN CPC code 42190 other parts of steel

Geographical scope Manufacturing is in United Kingdom (A1- A3, A4, A5, C1-C4 and D)









Technical Specification

The technical specifications for this product based on BS EN 10903:2008 and Euro code 3 – Part 1. The EVT II U Bracket A2 - 80 x 160mm is used as a representative sample from the below range of similar products.

		Desian Re	sistance (kN)	
Code	Description	Vertical	Horizontal	
	-			_
300529	EVT II U Bracket A2 - 80 x 40mm	6.82	4.63	
300530	EVT II U Bracket A2 - 80 x 60mm	4.10	4.63	
300531	EVT II U Bracket A2 - 80 x 80mm	2.92	4.58	
300532	EVT II U Bracket A2 - 80 x 100mm	2.26	4.58	
300533	EVT II U Bracket A2 - 80 x 120mm	1.84	4.58	
300534	EVT II U Bracket A2 - 80 x 140mm	1.57	4.58	4
300535	EVT II U Bracket A2 - 80 x 160mm	1.35	4.58	
300536	EVT II U Bracket A2 - 80 x 180mm	1.19	4.58	
300537	EVT II U Bracket A2 - 80 x 200mm	1.08	4.58	7
300538	EVT II U Bracket A2 - 80 x 220mm	0.98	4.58	
300539	EVT II U Bracket A2 - 80 x 240mm	0.87	4.58	
300540	EVT II U Bracket A2 - 80 x 260mm	0.81	4.58	
300541	EVT II U Bracket A2 - 80 x 280mm	0.75	4.58	
300542	EVT II U Bracket A2 - 80 x 300mm	0.70	4.58	
300543	EVT II U Bracket A2 - 80 x 320mm	0.65	4.58	
0000.0	277 11 0 21431101712 00 % 020111111	0.00		
300546	EVT II U Bracket A2 - 160 x 40mm	27.67	9.37	
300547	EVT II U Bracket A2 - 160 x 60mm	16.62	9.37	
300548	EVT II U Bracket A2 - 160 x 80mm	11.82	9.37	
300549	EVT II U Bracket A2 - 160 x 100mm	9.23	9.37	
300550	EVT II U Bracket A2 - 160 x 160mm	7.59	9.37	
300551	EVT II U Bracket A2 - 160 x 140mm	6.46	9.37	
300552	EVT II U Bracket A2 - 160 x 160mm	5.61	9.37	
300553	EVT II U Bracket A2 - 160 x 180mm	5.14	9.37	
300554	EVT II U Bracket A2 - 160 x 200mm	4.42	9.37	
300555	EVT II U Bracket A2 - 160 x 220mm	4.01	9.37	
300556	EVT II U Bracket A2 - 160 x 240mm	3.68	9.37	i !
300557	EVT II U Bracket A2 - 160 x 260mm	3.42	9.37	
300558	EVT II U Bracket A2 - 160 x 280mm	3.09	9.37	
300559	EVT II U Bracket A2 - 160 x 300mm	2.93	9.26	
300560	EVT II U Bracket A2 - 160 x 320mm	2.73	9.26	
00000	27.1.0 2.46.67.2 100 / 020		0.20	
300563	EVT II U Bracket Combi A2 - 160 x 40mm	27.67	9.37	
300564	EVT II U Bracket Combi A2 - 160 x 60mm	16.62	9.37	
300565	EVT II U Bracket Combi A2 - 160 x 80mm	11.82	9.37	
300566	EVT II U Bracket Combi A2 - 160 x 100mm	9.23	9.37	
300567	EVT II U Bracket Combi A2 - 160 x 120mm	7.59	9.37	1
300568	EVT II U Bracket Combi A2 - 160 x 140mm	6.46	9.37	
300569	EVT II U Bracket Combi A2 - 160 x 160mm	5.61	9.37	
300570	EVT II U Bracket Combi A2 - 160 x 180mm	5.14	9.37	
300571	EVT II U Bracket Combi A2 - 160 x 200mm	4.42	9.37	
300572	EVT II U Bracket Combi A2 - 160 x 220mm	4.01	9.37	,
300573	EVT II U Bracket Combi A2 - 160 x 240mm	3.68	9.37	
300574	EVT II U Bracket Combi A2 - 160 x 240mm	3.42	9.37	
300575	EVT II U Bracket Combi A2 - 160 x 280mm	3.09	9.37	
300576	EVT II U Bracket Combi A2 - 160 x 300mm	2.93	9.26	
5000.0	= 1 1 1 3 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1		U.=U	

Available in A2 and A4 stainless





System Boundaries & Description

A1 Raw Materials Supply

The raw material stage (A1) involves the extraction, processing, and transportation of the primary materials used in the production of bracket. The primary materials used are stainless steel, thermal pad, and packaging materials.

A2 Transportation

The transportation stage (A2) covers the movement of raw materials from their extraction or production sites to the manufacturing facility. This includes the transportation of the raw materials. The environmental impact of this stage is influenced by the mode of transportation used (e.g., truck, sea), the distance travelled, and the fuel efficiency of the transport vehicles.

Transportation Mode	Туре
Road	Vehicle: Lorry
	Size class: 16>32 metric ton
	Emission Standard: Euro6
	Fuel Type: Diesel

Table 2: Transportation Information

A3 Manufacturing

At RJ fabrication site, the manufacturing process starts with laser cutting, hole fabrication and attachment of thermal pad to the brackets before they are packed for delivery to RJ facade warehouse.

Electricity Information	Description
Geographical representativeness	Energy split for GB
description	Coal 1.17%
	Oil 1.17%
	Hydro 1.89.5%
	Biomass 10.90%
	Solar PV 5.06%
	Wind 30.01%
	Nuclear 13.55%
	Gas 35.08%
	Oil 0.79%
	Unspecified 1.54%
Type of dataset	Cradle to gate, Ecoinvent
Source	AIB (Association of Issuing Bodies) 2023
CO2 emission kg CO2 eq./kWh	0.435

Table 3: Source of Electricity





A4 Transportation

The finished products from RJ fabrication are sent to RJ facade distribution warehouse before distributed locally. See below for more information. The impacts for transportation were modelled based on the share of impacts from both local and exported products using a distance-based allocation method for all products.

Transportation Mode	Туре
Road	Vehicle: Lorry
	Size class: 16>32 metric ton
	Emission Standard: Euro5
	Fuel Type: Diesel
Distance/km	366km
Capacity Utilisation %	61% Dataset default value

Table 4: Distribution Information

A5 Packaging Disposal

A5 Packaging Disposal:

The construction phase includes the disposal of the packaging materials and Installation of the products. This account for 100% landfill of packaging materials. The average energy required during installation is 1.4Wh.

Transportation Mode (Disposal)	Туре
Road	Vehicle: Lorry
	Size class: 16>32 metric ton
	Emission Standard: Euro6
	Fuel Type: Diesel
Distance	50km
Mass of packaging (kg)	2.41E-02 kg
Disposal Route	100% Landfill

Table 5: End-of-Life Packaging





C1 Deconstruction

This stage includes the deconstruction of the products using a battery powered drill at 1.4Wh.

C2 Transportation

This represents the transportation of the product to waste processing and disposal site. The assumption used for this stage is 50km.

Transportation Mode	Туре
Road	Vehicle: Lorry
	Size class: 16>32 metric ton
	Emission Standard: Euro6
	Fuel Type: Diesel

Table 6: Transportation Information

C3 Waste Processing

This represents the scenario for treatment of the stainless steel and thermal pads. For the thermal pads, 100% incineration has been chosen for the plastics. And for the Stainless Steel, a collection rate of 96% has been assumed with 95% of collected products recycled and 5% lost.

Transportation Mode (Disposal)	Туре
Road	Vehicle: Lorry
	Size class: 16>32 metric ton
	Emission Standard: Euro6
	Fuel Type: Diesel
Distance	50km
Mass of product (kg)	6.93E-01kg (Stainless)
Disposal Route	Recycling

Table 7: End of Life of Product

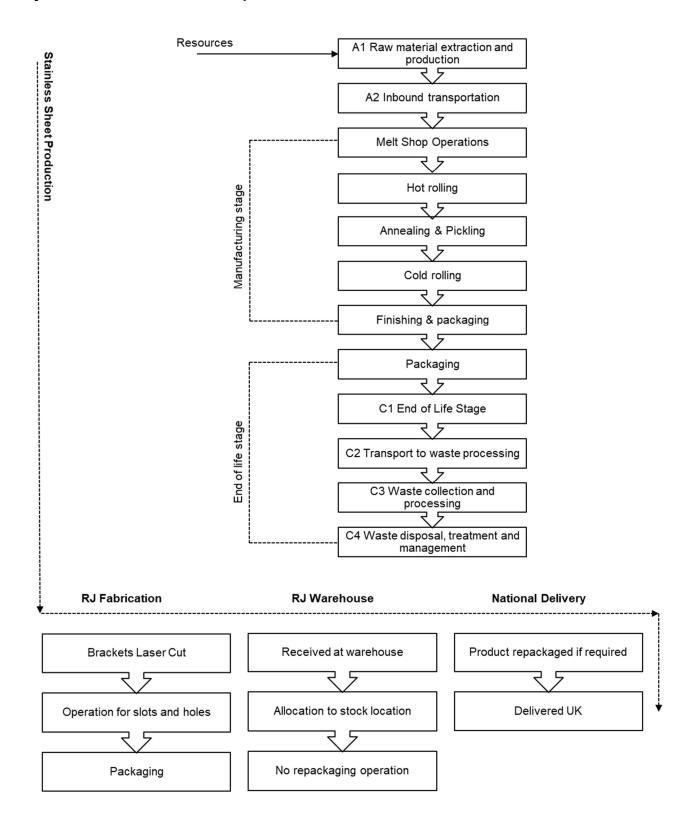
D Benefit and Load

The benefits of the recycling of stainless steel is accounted for in module D





System Boundaries & Description







LCA information

Functional unit / declared unit 1 pcs of EVT II U Bracket A2 160 X 80mm Stainless Steel

(0.76kg)

Technical Lifespan Expected 60 years

Time representativeness 2024-01-01 to 2024-12-31

Database(s) and LCA software used Ecoinvent 3.10, 2023 and SimaPro 9.6.1, with

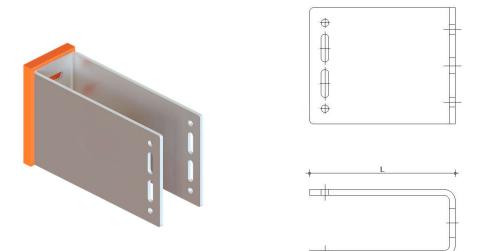
characterisation factor of EN 15804+A2 reference

package based on EF 3.1 utilised

Description of system boundaries Cradle to gate (A1-A3) with optional modules (A4 and A5)

and C1-C4 and module D

System diagram



EVT II U Bracket A2 60 x 180mm Stainless Steel





Allocation

All data were from raw material; energy consumption and transportation were weighted according to 2024 production figures.

Cut-off Criteria

1% cut-off was applied in the background LCA report. Flows contributing to a minimum of 99% of the declared environmental impacts are included.

REACH Regulations

No substances included in the Candidate List of Substances of Very High Concern for authorisation under the REACH regulations are present in this product either above the threshold for registration with the European Chemicals Agency or above 0.1% (wt/wt).

Background information

For this study impacts of infrastructure and capital goods are excluded from the life cycle stages.

Product Composition

EVT II L Bracket A2 80 x 180mm Stainless are packaged and sent to customers. See table below:

Product Composition	Mass, Kg	Post-consumer recycled material, weight %	Biogenic Carbon, kg/c
Stainless Steel	0.76	0%	0.00E+00
Thermal Pad	2.11E-03	0%	0.00E+00

Packaging Composition	Mass, Kg	Post-consumer recycled material, weight %	Biogenic Carbon, kg/c		
Cardboard Box	2.46E-03	0%	1.11E-03		
Parcel Tape	2.12E-06	0%	0.00E+00		
Euro Pallet	2.17E-02	0%	1.02E-02		
Shrink Wrap	1.02E-05	0%	0.00E+00		





Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Pro	duct st	age	prod	ruction cess ige	Use stage					End of life stage			Resource recovery stage			
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling- potential
Module	A 1	A2	А3	A4	A 5	В1	В2	В3	В4	В5	В6	В7	C1	C2	СЗ	C4	D
Modules declared	х	х	х	х	х	ND	ND	ND	ND	ND	ND	ND	х	х	х	х	х
Geography	UK	UK	UK	UK	UK	-	-	-	-	-	-	-	UK	UK	UK	UK	UK
Specific data used		40%				-	-	-	-	-	-	-	-	-	-	-	-
Variation – products		<10%				-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites		0%				-	-	-	-	-	-	-	-	-	-	-	-

Description of the system boundary (X = Included in LCA, ND=Not Declared)





Results of the environmental performance indicators

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks. The results declared in A1-A5 should not be used without considering the results in module C.

Mandatory impact category indicators according to EN 15804

Results per functional or declared unit									
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-fossil	kg CO ₂ eq.	2.11E+00	3.86E-02	1.23E-03	6.27E-04	5.15E-03	5.00E-03	0.00E+00	-5.07E-01
GWP-biogenic	kg CO ₂ eq.	-4.15E-02	1.62E-06	5.83E-02	1.19E-08	2.76E-06	7.06E-03	0.00E+00	-4.28E-04
GWP- luluc	kg CO ₂ eq.	1.60E-03	1.59E-05	3.45E-07	4.17E-08	1.83E-06	6.49E-08	0.00E+00	-2.58E-04
GWP- total	kg CO ₂ eq.	2.07E+00	3.86E-02	5.95E-02	6.27E-04	5.16E-03	1.21E-02	0.00E+00	-5.08E-01
ODP	kg CFC 11 eq.	1.69E-05	6.24E-10	8.26E-12	3.20E-11	1.07E-10	5.95E-12	0.00E+00	-2.71E-09
AP	mol H⁺ eq.	6.66E-03	9.80E-05	4.13E-06	1.31E-06	1.22E-05	2.68E-06	0.00E+00	-2.09E-03
EP-freshwater	kg P eq.	4.46E-04	3.61E-07	3.21E-07	4.14E-09	4.16E-08	4.29E-09	0.00E+00	-2.72E-05
EP- marine	kg N eq.	1.37E-03	2.43E-05	2.21E-05	3.28E-07	3.12E-06	1.26E-06	0.00E+00	-4.43E-04
EP-terrestrial	mol N eq.	1.50E-02	2.69E-04	1.28E-05	3.54E-06	3.45E-05	1.29E-05	0.00E+00	-4.87E-03
POCP	kg NMVOC eq.	6.69E-03	1.48E-04	8.12E-06	1.18E-06	2.11E-05	3.37E-06	0.00E+00	-1.72E-03
ADP- minerals& metals*	kg Sb eq.	3.35E-05	1.08E-07	8.50E-10	8.53E-10	1.44E-08	5.55E-10	0.00E+00	-3.10E-06
ADP-fossil*	MJ	2.86E+01	5.85E-01	7.78E-03	1.44E-02	7.74E-02	3.01E-03	0.00E+00	-5.34E+00
WDP*	m³	9.74E-01	2.93E-03	0.00E+00	1.47E-05	3.68E-04	7.10E-05	0.00E+00	-1.58E-01
GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption									

^{*} Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.





Additional mandatory and voluntary impact category indicators

Results per functional or declared unit									
Indicator	Unit	A1-A3	A4	A5	C1	C2	С3	C4	D
GWP-GHG*	kg CO ₂ eq.	2.11E+00	3.86E-02	1.23E-03	6.27E-04	5.15E-03	5.00E-03	0.00E+00	-5.08E-01

^{*}GWP-GHG = Global Warming Potential total excluding biogenic carbon. GWP-GHG indicator is similar to GWP-Total except that the characterisation factor (CF) for biogenic CO2 is set to zero.

Additional environmental indicators

Results per functional or declared unit									
Indicator	Unit	A1-A3	A4	A 5	C1	C2	C3	C4	D
PM	Disease inc	2.16E-08	3.72E-09	5.47E-11	4.59E-12	5.00E-10	2.25E-11	0.00E+00	-4.48E-08
IR ¹	kBq U- 235 eg	3.40E-02	4.04E-04	7.34E-06	2.08E-04	3.41E-05	2.50E-06	0.00E+00	-6.49E-03
ETP-FW ¹	CTUe	1.44E+01	3.93E-02	3.99E-03	2.95E-04	3.94E-03	2.45E-04	0.00E+00	-5.41E-01
HTP-c ²	CTUh	7.13E-08	1.96E-10	2.51E-12	7.15E-13	3.30E-11	2.70E-12	0.00E+00	-4.82E-08
HTP-nc ²	CTUh	2.61E-08	3.46E-10	9.27E-11	1.46E-12	4.66E-11	5.55E-11	0.00E+00	-8.49E-09
SQP ²	Pt	6.87E+00	5.75E-01	1.45E-02	6.61E-04	7.78E-02	1.63E-03	0.00E+00	-1.61E+00

Disclaimer:

^{1.} 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.

^{2.} 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.





Resource use indicators

Results per functional or declared unit									
Indicator	Unit	A1-A3	A4	A 5	C1	C2	C3	C4	D
PERE	MJ	1.38E+00	7.39E-03	2.34E-04	1.58E-04	1.19E-03	9.72E-05	0.00E+00	-4.47E-01
PERM	MJ	7.30E+00	0.00E+00	-7.30E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	8.68E+00	7.39E-03	-7.30E+00	1.58E-04	1.19E-03	9.72E-05	0.00E+00	-4.47E-01
PENRE	MJ	2.17E+01	5.85E-01	7.78E-03	1.44E-02	7.74E-02	3.01E-03	0.00E+00	-5.34E+00
PENRM	MJ	6.92E+00	0.00E+00	-6.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	2.86E+01	5.85E-01	-6.91E+00	1.44E-02	7.74E-02	3.01E-03	0.00E+00	-5.34E+00
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m ³	1.51E-01	8.87E-05	0.00E+00	2.18E-06	1.16E-05	1.02E-05	0.00E+00	-5.00E-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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water									





Waste indicators

Results per functional or declared unit									
Indicator	Unit	A1-A3	A4	A 5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2.59E-01	3.89E-06	4.84E-08	4.26E-08	5.08E-07	3.15E-08	0.00E+00	-3.58E-05
Non-hazardous waste disposed	kg	3.28E-01	4.85E-02	2.43E-02	6.56E-06	6.61E-03	2.19E-04	6.68E-02	-4.33E-02
Radioactive waste disposed	kg	5.70E-05	2.07E-07	4.70E-09	8.41E-08	2.32E-08	1.87E-09	0.00E+00	-4.32E-06

Output flow indicators

Results per functional or declared unit									
Indicator	Unit	A1-A3	A4	A 5	C1	C2	C3	C4	D
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	2.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.93E-01	0.00E+00	0.00E+00
Materials for energy recovery	kg	5.11E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-02	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-02	0.00E+00	0.00E+00





Additional environmental information

Conversion

The impacts for the product can calculated by upscaling the impact of the representative product to 1kg then multiply by the weight of products below.

Conversion factor $=\frac{1}{0.971}=1.0298$,

therefore impact of representative product $\times 1.0298 = impacts for 1kg$

Product List

The impacts for the product can calculated by upscaling the impact of the representative product to 1kg then multiply by the weight of products below.

rkg then multiply by the weight of products below.		
Description	Code	Weight Each [Kg]
EVT II U Bracket A2 - 80 x 40mm	300529	0.227
EVT II U Bracket A2 - 80 x 60mm	300530	0.303
EVT II U Bracket A2 - 80 x 80mm	300531	0.380
EVT II U Bracket A2 - 80 x 100mm	300532	0.457
EVT II U Bracket A2 - 80 x 120mm	300533	0.534
EVT II U Bracket A2 - 80 x 140mm	300534	0.611
EVT II U Bracket A2 - 80 x 160mm	300535	0.687
EVT II U Bracket A2 - 80 x 180mm	300536	0.764
EVT II U Bracket A2 - 80 x 200mm	300537	0.841
EVT II U Bracket A2 - 80 x 220mm	300538	0.918
EVT II U Bracket A2 - 80 x 240mm	300539	0.995
EVT II U Bracket A2 - 80 x 260mm	300540	1.071
EVT II U Bracket A2 - 80 x 280mm	300541	1.148
EVT II U Bracket A2 - 80 x 300mm	300542	1.225
EVT II U Bracket A2 - 80 x 320mm	300543	1.302
EVT II U Bracket A2 - 160 x 40mm	300546	0.453
EVT II U Bracket A2 - 160 x 60mm	300547	0.607
EVT II U Bracket A2 - 160 x 80mm	300548	0.760
EVT II U Bracket A2 - 160 x 100mm	300549	0.914
EVT II U Bracket A2 - 160 x 120mm	300550	1.068
EVT II U Bracket A2 - 160 x 140mm	300551	1.221
EVT II U Bracket A2 - 160 x 160mm	300552	1.375
EVT II U Bracket A2 - 160 x 180mm	300553	1.528
EVT II U Bracket A2 - 160 x 200mm	300554	1.682
EVT II U Bracket A2 - 160 x 220mm	300555	1.836
EVT II U Bracket A2 - 160 x 240mm	300556	1.989
EVT II U Bracket A2 - 160 x 260mm	300557	2.143
EVT II U Bracket A2 - 160 x 280mm	300558	2.296
EVT II U Bracket A2 - 160 x 300mm	300559	2.450
EVT II U Bracket A2 - 160 x 320mm	300560	2.604





References

General Program Instructions of the International EPD® System. Version 4.0.

EN 15804

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

PCR 2019:14 Version 1.3.4

PCR 2019:14, Construction Products, version 1.3.4. www.environdec.com.

ISO 14044

ISO 14044:2006, Environmental management — Life cycle assessment

ISO 14040

ISO 14040:2006, Environmental management — Life cycle assessment — Principles and framework.

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AIB (Association of Issuing Bodies), 2023

ISO 14025

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

GP

EPD International. (2021). General Programme Instructions for the International EPD® System. Version 4.0.

Ecoinvent

Ecoinvent dataset, developed by the Swiss Centre for Life Cycle inventories, Technoparkstrasse 1,8005 Zurich, Switzerland https://ecoinvent.org/, Version 3.10, 2023

Sea Distance Calculator

https://sea-distances.org

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