

Result summary

AK2 Junction box covers with connectors (Reference product: Worst-case variant)

Attema B.V.

Calculation number:

ReTHiNK-128722

Generation on:

03-12-2025

Issue date:

03-12-2025

Valid until:

03-12-2030

Status:

verified

R<THiNK



1 General information

1.1 PRODUCT

AK2 Junction box covers with connectors (Reference product: Worst-case variant)

1.2 VALIDITY

Issue date: 03-12-2025

Valid until: 03-12-2030

1.3 OWNER OF THE DECLARATION



Declaration owner: Attema B.V.

Address: Schelluinsestraat 1, 4203 NJ Gorinchem

E-mail: info@attema.nl

Website: <https://www.attema.com>

Production location: Attema B.V.

Address production location: Schelluinsestraat 1, 4203NJ Gorinchem

1.4 VERIFICATION OF THE DECLARATION

The independent verification is in accordance with the ISO 14025:2011. The LCA is in compliance with ISO 14040:2006 and ISO 14044:2006. The EN 15804+A2:2019 serves as the core PCR.

☐ Internal ☒ External

Gert-Jan Vroege, Eco Intelligence

1.5 PRODUCT CATEGORY RULES

EN15804+A2:2019

1.6 FUNCTIONAL UNIT

Pieces (AK2 Junction box covers with connectors)

One piece of junction box cover with pre-wired connectors, manufactured by Attema BV, with a technical lifespan of 25 years. This plastic cover functions as a mounting plate for the safe installation of 1 to 8 pre-wired connectors in accordance with EN 61535. It is designed for use with a surface-mounted AK2 junction box and is available in multiple colours.

The worst-case configuration of the product group—AK2-W5 with 5 x 5 pole Adels AC166 connectors—is used as the reference product, with a weight of 243,43 g/piece.

This environmental declaration is representative for AK2 junction box covers with connectors, specifically the Attema AK2-W5 and AK2-W8 types. Connector types included are: Wieland GST18, WAGO WINSTA Midi, and Adels AC166.

The LCA calculation includes only the junction box cover and pre-wired connectors. This LCA calculation excludes the junction box, mounting plate and/or any additional fasteners.

Reference unit: piece (p)

1.7 CONVERSION FACTORS

Description	Value	Unit
Reference unit	1	p
Weight per reference unit	0.233	kg

1 General information

Description	Value	Unit
Conversion factor to 1 kg	4.295348	p

1.8 SCOPE OF DECLARATION AND SYSTEM BOUNDARIES

This is a Cradle to gate with options, modules C1-C4 and module D EPD. The life cycle stages included are as shown below:

(X = module included, ND = module not declared)

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	X	X	X	ND	ND	X	X	X	X	X	X	X

The modules of the EN 15804 contain the following:

Module A1 = Raw material supply	Module B5 = Refurbishment
Module A2 = Transport	Module B6 = Operational energy use
Module A3 = Manufacturing	Module B7 = Operational water use
Module A4 = Transport	Module C1 = De-construction / Demolition

Module A5 = Construction - Installation process	Module C2 = Transport
Module B1 = Use	Module C3 = Waste Processing
Module B2 = Maintenance	Module C4 = Disposal
Module B3 = Repair	Module D = Benefits and loads beyond the product system boundaries
Module B4 = Replacement	

1.9 COMPARABILITY

In principle, a comparison or assessment of the environmental impacts of different products is only possible if they have been prepared in accordance with EN 15804+A2:2019. For the evaluation of the comparability, the following aspects have to be considered in particular: PCR used, functional or declared unit, geographical reference, the definition of the system boundary, declared modules, data selection (primary or secondary data, background database, data quality), scenarios used for use and disposal phases, and the life cycle inventory (data collection, calculation methods, allocations, validity period). PCRs and general program instructions of different EPD program operators may differ. Comparability needs to be evaluated. For further guidance, see EN 15804+A2:2019 and ISO 14025.

2 Product

2.1 PRODUCT DESCRIPTION

One piece of junction box cover with pre-wired connectors, manufactured by Attema BV, with a technical lifespan of 25 years. This plastic cover functions as a mounting plate for the safe installation of 1 to 8 pre-wired connectors in accordance with EN 61535. It is designed for use with a surface-mounted AK2 junction box and is available in multiple colours.

The worst-case configuration of the product group—AK2-W5 with 5 x 5 pole Adels AC166 connectors—is used as the reference product, with a weight of 243,43 g/piece.

This environmental declaration is representative for AK2 junction box covers with connectors, specifically the Attema AK2-W5 and AK2-W8 types. Connector types included are: Wieland GST18, WAGO WINSTA Midi, and Adels AC166.

The LCA calculation includes only the junction box cover and pre-wired connectors. This LCA calculation excludes the junction box, mounting plate and/or any additional fasteners.



2.2 APPLICATION (INTENDED USE OF THE PRODUCT)

Throughout a 25-year operational lifespan, the device facilitates the safe plugging and unplugging of electrical loads via 1 to 8 pre-wired 3-pole to 5-pole connectors according to EN 61535.

2.3 DESCRIPTION PRODUCTION PROCESS

Production process

The plastic components of cover with connectors are injection moulded in-house at Attema B.V. Gorinchem. The plastic materials (e.g., PP, PC) are purchased externally in the form of granulates. All other components, including wires and connectors, are procured from suppliers. Final product assembly is performed manually using simple hand tools. No complex or energy-intensive machinery is used during assembly.

Energy consumption

The total energy used for injection moulding is based on generic ecoinvent data for injection moulding, allocated per kilogram of processed material. As multiple components are produced on shared machinery, it is not possible to allocate energy use per specific part using direct measurement. Therefore, standard background data from ecoinvent is applied.

Production waste

Production waste from injection moulding is minimal and typically regranulated and reintroduced into the internal process. However, due to a lack of specific measured data, no closed-loop recycling is modeled in the inventory. A generic plastic production waste rate of 2% is assumed based on internal estimates and industry practice. Metal waste during assembly is negligible, however also assumed to be 2%. Waste quantities are estimated based on mass balance and process input data.

Emissions during production

Direct emissions to air or water during production are negligible. The injection moulding process is electrically driven, with no on-site combustion. Any process emissions are considered upstream and included in the background datasets used (ecoinvent). No hazardous emissions are released during final assembly.

2.4 CONSTRUCTION DESCRIPTION

Method of application of the product

2 Product

The connector cover is installed as part of the fixed electrical installation in buildings. It is mounted onto a surface mounted junction box (Attema AK2 types) to provide safe access to power outlets. Installation typically takes place during the finishing phase of electrical work in residential, commercial, or industrial buildings.

Required equipment

Installation is carried out using basic hand tools, such as screwdrivers. No powered tools, specialized equipment, or adhesive materials are required. The process is straightforward and performed by electricians or trained installers.

Energy consumption

Energy consumption during installation is negligible. As only manual tools are used, no electricity or fuel is required during the installation phase. Therefore, no installation energy is included in the life cycle inventory.

3 Results

3.1 ENVIRONMENTAL IMPACT INDICATORS PER PIECE

CORE ENVIRONMENTAL IMPACT INDICATORS EN 15804+A2

Abbr.	Unit	A1	A2	A3	A1- A3	A4	A5	B1	B2	B3	B6	B7	C1	C2	C3	C4	D	Total
GWP-total	kg CO ₂ eq.	1.26E+0	6.31E-3	1.70E-1	1.44E+0	5.10E-3	4.08E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.64E-3	2.84E-1	2.71E-3	-1.60E-1	1.61E+0
GWP-f	kg CO ₂ eq.	1.25E+0	6.30E-3	1.98E-1	1.46E+0	5.09E-3	1.00E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.62E-3	2.84E-1	2.71E-3	-1.61E-1	1.60E+0
GWP-b	kg CO ₂ eq.	2.59E-3	2.54E-6	-2.84E-2	-2.58E-2	2.05E-6	3.08E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.18E-6	3.33E-5	1.48E-6	2.88E-4	5.27E-3
GWP-luluc	kg CO ₂ eq.	1.27E-3	2.31E-6	5.91E-4	1.86E-3	1.87E-6	1.06E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.29E-5	2.36E-5	2.34E-7	9.70E-5	2.01E-3
ODP	kg CFC 11 eq.	1.35E-8	1.39E-9	5.69E-9	2.06E-8	1.12E-9	1.87E-10	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.45E-11	6.96E-9	8.21E-12	-9.12E-9	1.98E-8
AP	mol H+ eq.	4.67E-2	3.65E-5	3.09E-3	4.98E-2	2.95E-5	2.56E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.73E-5	1.07E-4	2.44E-6	4.91E-3	5.51E-2
EP-fw	kg P eq.	1.95E-4	6.36E-8	2.00E-5	2.15E-4	5.14E-8	1.10E-6	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.60E-8	7.05E-7	4.88E-9	2.00E-5	2.37E-4
EP-m	kg N eq.	2.96E-3	1.29E-5	2.67E-4	3.24E-3	1.04E-5	1.93E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.59E-6	3.06E-5	1.98E-6	1.00E-4	3.41E-3
EP-T	mol N eq.	3.38E-2	1.42E-4	2.96E-3	3.69E-2	1.15E-4	2.17E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	7.03E-5	3.42E-4	9.75E-6	1.46E-3	3.91E-2
POCP	kg NMVOC eq.	1.01E-2	4.05E-5	1.01E-3	1.11E-2	3.28E-5	6.65E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.40E-5	9.66E-5	3.99E-6	9.38E-5	1.14E-2
ADP-mm	kg Sb-eq.	5.99E-4	1.60E-7	3.18E-5	6.31E-4	1.29E-7	3.15E-6	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.13E-8	1.14E-7	7.39E-10	7.48E-5	7.09E-4
ADP-f	MJ	1.97E+1	9.50E-2	3.67E+0	2.34E+1	7.68E-2	1.32E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	5.19E-2	1.76E-1	7.41E-3	-2.13E+0	2.17E+1
WDP	m3 world eq.	1.41E+0	3.40E-4	1.33E-1	1.54E+0	2.75E-4	7.90E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.83E-4	1.14E-2	2.65E-4	-3.50E-2	1.53E+0

GWP-total=Global Warming Potential total (GWP-total) | **GWP-f**=Global Warming Potential fossil fuels (GWP-fossil) | **GWP-b**=Global Warming Potential biogenic (GWP-biogenic) | **GWP-luluc**=Global Warming Potential land use and land use change (GWP-luluc) | **ODP**=Depletion potential of the stratospheric ozone layer (ODP) | **AP**=Acidification potential, Accumulated Exceedance (AP) | **EP-fw**=Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater) | **EP-m**=Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine) | **EP-T**=Eutrophication potential, Accumulated Exceedance (EP-terrestrial) | **POCP**=Formation potential of tropospheric ozone (POCP) | **ADP-mm**=Abiotic depletion potential for non fossil resources (ADP mm) | **ADP-f**=Abiotic depletion for fossil resources potential (ADP fossil) | **WDP**=Water (user) depreciation potential, deprivation-weighted water consumption (WDP)

3 Results

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS EN 15804+A2

Abbr.	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B6	B7	C1	C2	C3	C4	D	Total
PM	disease incidence	1.26E-7	5.67E-10	1.00E-8	1.37E-7	4.58E-10	8.16E-10	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.58E-10	9.16E-10	5.20E-11	1.75E-9	1.41E-7
IR	kBq U235 eq.	3.22E-2	3.98E-4	1.82E-2	5.08E-2	3.22E-4	2.74E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.02E-5	6.10E-4	5.24E-6	3.04E-3	5.50E-2
ETP-fw	CTUe	5.15E+1	8.48E-2	3.52E+0	5.51E+1	6.85E-2	3.09E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.83E-2	2.96E+0	6.39E-2	4.89E+0	6.35E+1
HTP-c	CTUh	7.50E-9	2.75E-12	4.87E-10	7.99E-9	2.22E-12	4.26E-11	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.92E-12	8.19E-11	2.31E-13	1.72E-9	9.84E-9
HTP-nc	CTUh	6.11E-7	9.27E-11	3.36E-8	6.44E-7	7.49E-11	3.23E-9	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	4.17E-11	5.83E-10	1.04E-11	8.70E-8	7.35E-7
SQP	Pt	1.44E+1	8.24E-2	2.54E+0	1.71E+1	6.66E-2	9.11E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	4.10E-2	5.05E-2	1.68E-2	4.13E-1	1.77E+1

PM=Potential incidence of disease due to PM emissions (PM) | **IR**=Potential Human exposure efficiency relative to U235 (IRP) | **ETP-fw**=Potential Comparative Toxic Unit for ecosystems (ETP-fw) | **HTP-c**=Potential Comparative Toxic Unit for humans (HTP-c) | **HTP-nc**=Potential Comparative Toxic Unit for humans (HTP-nc) | **SQP**=Potential soil quality index (SQP)

CLASSIFICATION OF DISCLAIMERS TO THE DECLARATION OF CORE AND ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS

ILCD classification	Indicator	Disclaimer
ILCD type / level 1	Global warming potential (GWP)	None
	Depletion potential of the stratospheric ozone layer (ODP)	None
	Potential incidence of disease due to PM emissions (PM)	None
ILCD type / level 2	Acidification potential, Accumulated Exceedance (AP)	None
	Eutrophication potential, Fraction of nutrients reaching freshwater end compartment (EP-freshwater)	None
	Eutrophication potential, Fraction of nutrients reaching marine end compartment (EP-marine)	None
	Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	None
	Formation potential of tropospheric ozone (POCP)	None
	Potential Human exposure efficiency relative to U235 (IRP)	1
ILCD type / level 3	Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	2
	Abiotic depletion potential for fossil resources (ADP-fossil)	2
	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	2
	Potential Comparative Toxic Unit for ecosystems (ETP-fw)	2

3 Results

ILCD classification	Indicator	Disclaimer
	Potential Comparative Toxic Unit for humans (HTP-c)	2
	Potential Comparative Toxic Unit for humans (HTP-nc)	2
	Potential Soil quality index (SQP)	2
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.		
Disclaimer 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.		

3.2 INDICATORS DESCRIBING RESOURCE USE AND ENVIRONMENTAL INFORMATION BASED ON LIFE CYCLE INVENTORY (LCI)

PARAMETERS DESCRIBING RESOURCE USE

Abbr.	Unit	A1	A2	A3	A1- A3	A4	A5	B1	B2	B3	B6	B7	C1	C2	C3	C4	D	Total
PERE	MJ	2.15E+0	1.19E-3	4.97E-1	2.65E+0	9.62E-4	1.38E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	7.34E-4	2.06E-2	1.99E-4	-2.21E-2	2.66E+0
PERM	MJ	0.00E+0	0.00E+0	2.41E-1	2.41E-1	0.00E+0	1.21E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.42E-1
PERT	MJ	2.15E+0	1.19E-3	7.38E-1	2.89E+0	9.62E-4	1.50E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	7.34E-4	2.06E-2	1.99E-4	-2.21E-2	2.91E+0
PENRE	MJ	1.59E+1	1.01E-1	3.60E+0	1.96E+1	8.15E-2	1.13E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	5.20E-2	1.76E-1	7.41E-3	-2.13E+0	1.79E+1
PENRM	MJ	3.74E+0	0.00E+0	7.42E-2	3.81E+0	0.00E+0	1.91E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.58E-6	3.83E+0
PENRT	MJ	1.97E+1	1.01E-1	3.67E+0	2.34E+1	8.15E-2	1.32E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	5.20E-2	1.76E-1	7.41E-3	-2.13E+0	2.18E+1
SM	Kg	1.29E-2	0.00E+0	2.85E-4	1.32E-2	0.00E+0	6.59E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.36E-3	1.46E-2
RSF	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
NRSF	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
FW	m ³	3.32E-2	1.16E-5	4.20E-3	3.74E-2	9.36E-6	1.95E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.25E-5	3.44E-4	7.87E-6	-3.88E-4	3.75E-2

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**=Net use of fresh water

3 Results

OTHER ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

Abbr.	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B6	B7	C1	C2	C3	C4	D	Total
HWD	Kg	1.56E-4	2.41E-7	9.87E-4	1.14E-3	1.95E-7	5.81E-6	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.31E-7	6.63E-7	3.61E-8	-2.04E-5	1.13E-3
NHWD	Kg	3.09E-1	6.03E-3	3.70E-2	3.52E-1	4.87E-3	7.71E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.43E-3	1.17E-1	2.91E-2	3.87E-2	5.53E-1
RWD	Kg	2.01E-5	6.24E-7	1.43E-5	3.50E-5	5.04E-7	1.92E-7	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.19E-8	4.29E-7	3.09E-9	1.88E-6	3.80E-5

HWD=Hazardous waste disposed | NHWD=Non-hazardous waste disposed | RWD=Radioactive waste disposed

ENVIRONMENTAL INFORMATION DESCRIBING OUTPUT FLOWS

Abbr.	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B6	B7	C1	C2	C3	C4	D	Total
CRU	Kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MFR	Kg	0.00E+0	0.00E+0	1.82E-3	1.82E-3	0.00E+0	1.46E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	9.06E-2	0.00E+0	0.00E+0	1.07E-1
MER	Kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EET	MJ	0.00E+0	0.00E+0	1.85E-2	1.85E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	9.51E-1	9.69E-1
EEE	MJ	0.00E+0	0.00E+0	1.08E-2	1.08E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	5.52E-1	5.63E-1

CRU=Components for re-use | MFR=Materials for recycling | MER=Materials for energy recovery | EET=Exported Energy, Thermic | EEE=Exported Energy, Electric

3 Results

3.3 INFORMATION ON BIOGENIC CARBON CONTENT PER PIECE

BIOGENIC CARBON CONTENT

The following Information describes the biogenic carbon content in (the main parts of) the product at the factory gate per piece:

Biogenic carbon content	Amount	Unit
Biogenic carbon content in the product	0	kg C
Biogenic carbon content in accompanying packaging	0.008523	kg C

UPTAKE OF BIOGENIC CARBON DIOXIDE

The following amount of carbon dioxide uptake is taken into account. Related uptake and release of carbon dioxide in downstream processes are not taken into account in this number although they do appear in the presented results. One kilogram of biogenic Carbon content is equivalent to 44/12 kg of biogenic carbon dioxide uptake.

Uptake Biogenic Carbon dioxide	Amount	Unit
Packaging	0.03125	kg CO2 (biogenic)

3 Results

3.4 ENVIRONMENTAL COST INDICATOR NL PER PIECE

Using the environmental cost indicator (ECI) method, which is presented in the NMD Determination Method (2020), the results are aggregated to the single-point score. The ECI is a relevant valuation method, especially in the Dutch construction sector. In the Netherlands, it is a prerequisite for public tenders. The aim of the indicator is to show the shadow price for environmental impacts of a product or project. The application of single-point scores is an additional assessment tool for eco-balance results. However, it must be pointed out that weightings are always based on a value maintenance and not on a scientific basis (EN 14040). The ECI results are shown in the following table.

Module EN15804	ECI NL 2024	Share in total (%)
A1 Raw Materials Supply	€ 0.39	82,5 %
A2 Transport	€ 0.00	0,3 %
A3 Manufacturing	€ 0.04	8,2 %
A4 Transport from the gate to the site	€ 0.00	0,2 %
A5 Construction - Installation process	€ 0.01	1,3 %
B1 Use	€ 0.00	0,0 %
B2 Maintenance	€ 0.00	0,0 %
B3 Repair	€ 0.00	0,0 %
B6 Operational Energy Use	€ 0.00	0,0 %
B7 Operational Water Use	€ 0.00	0,0 %
C1 De-construction / demolition	€ 0.00	0,0 %
C2 Transport	€ 0.00	0,2 %
C3 Waste processing	€ 0.03	7,3 %
C4 Disposal	€ 0.00	0,1 %
D Benefits and loads beyond the product system boundary	€ 0.00	0,0 %
ECI NL 2024 per functional unit	€ 0.47	

4 Contact information

Publisher	Operator	Owner of declaration
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