

Environmental Product Declaration



EPD of multiple products, based on worst-case results.
In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

Classic coated/chrome, coated/coated

From

Essem Design

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
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An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com



General information

Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
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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): <i>Construction products, PCR 2019:14, version 1.3.1</i>
PCR review was conducted by: <i>The Technical Committee of the International EPD® System.</i> Contact via info@environdec.com
Life Cycle Assessment (LCA)
LCA accountability: <i>Sofia Lindroth, Miljögiraff</i>
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006 via: Third-party verifier is accredited by: prof. Ing. Vladimír Kočí, Ph.D., MBA, www.LCA.cz , Šárecká 5, 16000 Prague 6 - Czech Republic Approved by: The International EPD® System Technical Committee, supported by the Secretariat
*For EPD Process Certification, an accredited certification body certifies and reviews the management process and verifies EPDs published on a regular basis. For details about third-party verification procedure of the EPDs, see GPI.
Procedure for follow-up of data during EPD validity involves third party verifier: <input type="checkbox"/> Yes <input type="checkbox"/> 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

Owner of the EPD:

Essem Design AB
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334 33 Anderstorp

Contact information:

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Description of the organisation:

Essem Design is a personal company which aims to develop, manufacture, and market sustainable, functional and well-designed hallway furnishings.

One of the great challenges of our age is that we have to start taking care of our planet. At Essem Design we believe that the best way of caring for our environment is to create products that are designed and made to last. We believe in sustainability throughout the process, from design to delivery and warranty.

Our first product, Nostalg, was designed back in the 1930s and has always been made of recycled aluminium. For us, aluminium is the obvious material for hooks and brackets for our hat racks. This metal is one of few materials that can be reused over and over without any loss of quality. In developing new products, we always use materials that work and have the least possible impact on the environment.

But it is not only the material in the products that matters from an environmental perspective. The way the products are made is also important, and our production facilities use 100% green electricity and meet the requirements set out in ISO 9001:2015 and ISO 14001:2015. Our premises in Anderstorp use geothermal heating and solar panels. To save journeys and contribute to our local environment, we use Swedish and local suppliers wherever possible.

Product-related or management system-related certifications:

Byggvarubedömningen, ISO 9001- and 14001-certificates.

Name and location of production site(s):

Essem Design AB, Nennesmovägen 9, 334 33 Anderstorp.

See the GPI and the PCR for other required company information.

Product information

Product name:

Classic hat rack

Product description:

Gunnar Bolin designed the Classic hat rack in the late 1950s. Its rounded form broke new ground and saved a lot of heads from sharp edges. A very functional and durable hat rack which is very flexible with different widths to fit your hallway. Shelf and brackets are made of steel with hooks, wall-pieces, end plugs and tube sleeves in plastic. Hanging rail in plastic-covered steel tube. Powder coated shelves and brackets in chrome or powder coated.

Product variations:

This EPD covers product variations for Classic hat rack. The declared product is the worst-case for any variation of the product. More specifically the declared product is an 1m Classic hat rack chromed brackets. The product variations are mainly:

- Coated or chromed brackets
- Length of the rack, longer than 1 meter

Maintenance:

Chrome is repellent from dirt and liquids, but beware of water, which can lead to stains and rust. Wipe the surface with a soft, damp cloth in mild detergent. For dirtier and patched metal, use a damp cloth in pure alcohol. Never use solvent on lacquered or treated metal. Powder coated surfaces are completely covered with paint. Powder coating colours in white can be extra sensitive to pigments in food, sodas, red wine and coffee. Stains should be washed off as soon as possible.

End-of-life:

Essem Design offers accessories and spare parts to keep your Classic hat rack going for several decades. We also encourage to sell it on the second-hand market. However, when the product's end-of-life is finally reached, it is important to leave it at a professional waste plant to ensure best possible material recycling.

UN CPC code: 42999

Geographical scope: A1-A2 modules is modelled mainly with a Swedish scope part from some steel components that are modelled on a European/Global scope. A3-C4 modules are modelled with a Swedish scope.

LCA information

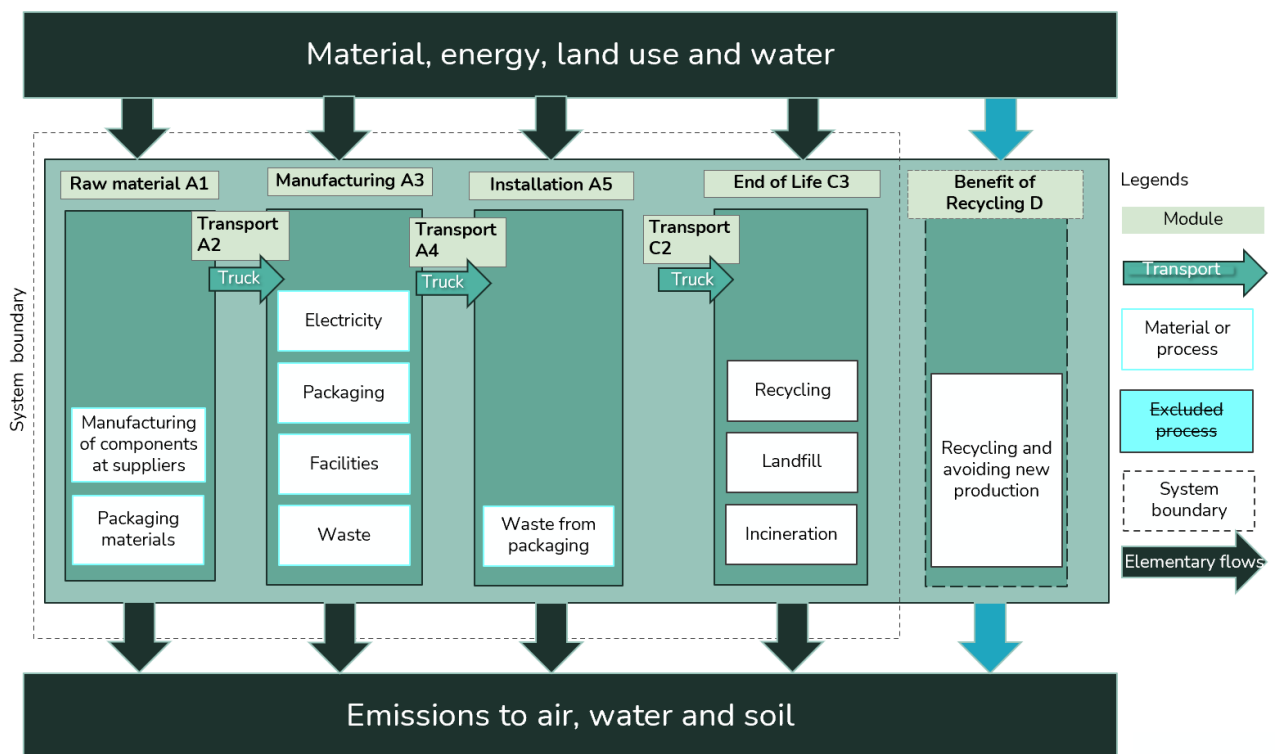
Functional unit / declared unit: 1 meter hat rack Classic

Time representativeness: Data for the results were collected in 2023.

Database(s) and LCA software used: ecoinvent 3.9.1, SimaPro

Description of system boundaries: The system boundary for this EPD is cradle to gate with options (A1-A3), modules C1-C4, module D and additional modules (A4 and/or A5 and/or B1-B7). More specifically, modules A1-A5, C1-C4, and D are considered. The PCR for Construction Products requires that benefits and loads outside of the system boundary is calculated (D module). However, as it is outside of the system boundary, it is reported separately and shall not be summed up with the rest of the results.

System diagram:



More information: Essem buys components from Swedish and local suppliers wherever possible. At Essem's facility the product is assembled and packaged before sent to customers. A Swedish distribution and end-of-life scenario has been applied since most of the customers are on the Swedish market.

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

	Product stage			Construction process stage		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	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	GLO/SE	SE	SE	SE	SE								SE	SE	SE	SE	SE
Specific data used	>90%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	Worst-case result, according to PCR.					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	No variation.					-	-	-	-	-	-	-	-	-	-	-	-

Disclaimers about results for the environmental impact.

1. Note that the LCIA results are relative expressions, which means that they do not predict impacts on category endpoints or the exceeding of thresholds, safety margins or risk.
2. “Ionising Radiation” – 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.
3. Abiotic resources (elements and fossil fuels) 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.

Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Steel tube rack	1,672		
Grid net	0,788	80%	
Steel tube bracket	0,666		
Plastic coated steel tube	0,257		
Plastic tube sleeve	0,002		
Plastic anchor hook	0,016		
Plastic wall bracket	0,028		
Plastic end plug	0,002		
Chrome coating	0,004		
Screw	0,016		
TOTAL	3,451		
Packaging materials	Weight, kg	Weight-% (versus the product)	Weight biogenic carbon, kg C/kg
Cardboard	0,456	91%	100%
TOTAL	0,456		

The product does not exceed 0,1% of the weight of the product for any dangerous substances from the candidate list of SVHC for Authorisation

Information on biogenic carbon content

Results per functional or declared unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	0,00
Biogenic carbon content in packaging	kg C	0,21

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂.

Results of the environmental performance indicators

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.	1,06E+01	2,88E-01	6,12E-02	0,00E+00	6,37E-02	1,37E-01	0,00E+00	- 3,41E+00
GWP-biogenic	kg CO ₂ eq.	-1,88E-01	2,64E-04	2,06E-01	0,00E+00	5,83E-05	5,61E-02	0,00E+00	7,72E-02
GWP-luluc	kg CO ₂ eq.	1,19E-01	1,42E-04	1,24E-04	0,00E+00	3,14E-05	4,98E-06	0,00E+00	-2,80E-03
GWP-total	kg CO ₂ eq.	1,05E+01	2,89E-01	2,67E-01	0,00E+00	6,38E-02	1,93E-01	0,00E+00	- 3,34E+00
ODP	kg CFC 11 eq.	2,21E-07	6,28E-09	3,33E-09	0,00E+00	1,39E-09	4,21E-10	0,00E+00	-8,28E-08
AP	mol H ⁺ eq.	4,47E-02	6,31E-04	4,43E-04	0,00E+00	1,39E-04	6,55E-05	0,00E+00	-1,27E-02
EP-freshwater	kg P eq.	4,64E-03	2,05E-05	1,88E-05	0,00E+00	4,53E-06	7,67E-06	0,00E+00	-1,38E-03
EP-marine	kg N eq.	1,13E-02	1,59E-04	1,40E-04	0,00E+00	3,51E-05	2,94E-05	0,00E+00	-3,14E-03
EP-terrestrial	mol N eq.	1,04E-01	1,62E-03	1,42E-03	0,00E+00	3,57E-04	2,88E-04	0,00E+00	-3,26E-02
POCP	kg NMVOC eq.	4,46E-02	9,79E-04	4,23E-04	0,00E+00	2,16E-04	8,93E-05	0,00E+00	-1,82E-02
ADP-minerals&metals*	kg Sb eq.	7,31E-05	9,43E-07	1,11E-06	0,00E+00	2,08E-07	2,27E-08	0,00E+00	-1,86E-06
ADP-fossil*	MJ	1,68E+02	4,10E+00	6,84E-01	0,00E+00	9,05E-01	1,19E-01	0,00E+00	- 3,78E+01
WDP*	m ³	3,53E+00	1,69E-02	1,88E-02	0,00E+00	3,73E-03	-4,89E-03	0,00E+00	-2,05E-01
Acronyms	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	C3	C4	D
GWP-GHG ¹	kg CO ₂ eq.	1,08E+01	2,89E-01	6,15E-02	0,00E+00	6,37E-02	1,37E-01	0,00E+00	- 3,42E+00
PM	disease inc.	8,05E-07	2,15E-08	5,40E-09	0,00E+00	4,75E-09	1,65E-09	0,00E+00	-2,35E-07
IR	kBq U-235 eq	4,32E+00	5,55E-03	3,46E-03	0,00E+00	1,22E-03	2,13E-04	0,00E+00	-1,79E-01
ETP – FW	CTUe	7,24E+01	2,02E+00	1,25E+00	0,00E+00	4,47E-01	3,19E-01	0,00E+00	- 9,87E+00
HTP - C	CTUh	8,43E-08	1,31E-10	4,27E-10	0,00E+00	2,90E-11	4,59E-11	0,00E+00	-1,88E-08
HTP - NC	CTUh	2,35E-07	2,91E-09	1,80E-09	0,00E+00	6,42E-10	3,05E-10	0,00E+00	-1,29E-08
Land use, SQP	Pt	5,14E+01	2,48E+00	3,25E-01	0,00E+00	5,47E-01	1,35E-01	0,00E+00	- 2,21E+00

Additional voluntary indicators e.g. the voluntary indicators from EN 15804 or the global indicators according to ISO 21930:2017

¹ This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO₂ is set to zero.

Resource use indicators

Results per functional or declared unit									
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	22,90	0,06	0,12	0,00	0,01	0,00	0,00	-0,47
PERM	MJ	7,14	0,00	-7,14	0,00	0,00	0,00	0,00	0,00
PERT	MJ	30,04	0,06	-7,02	0,00	0,01	0,00	0,00	-0,47
PENRE	MJ	172,66	4,35	0,73	0,00	0,96	0,13	0,00	-39,71
PENRM	MJ	3,17	0,00	0,00	0,00	0,00	-3,17	0,00	0,00
PENRT	MJ	175,82	4,35	0,73	0,00	0,96	-3,04	0,00	-39,71
SM	kg	1,05	0,00	0,00	0,00	0,00	0,00	0,00	0,00
RSF	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
NRSF	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
FW	m ³	0,15	0,001	0,001	0,000	0,000	0,000	0,000	-0,012
Acronyms	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								

Waste indicators

Results per functional or declared unit									
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Non-hazardous waste disposed	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Radioactive waste disposed	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

Output flow indicators

Results per functional or declared unit									
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Components for re-use	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Material for recycling	kg	0,00	0,00	0,34	0,00	0,00	2,87	0,00	0,00
Materials for energy recovery	kg	0,00	0,00	0,11	0,00	0,00	0,61	0,00	0,00
Exported energy, electricity	MJ	0,00	0,00	0,43	0,00	0,00	0,76	0,00	0,00
Exported energy, thermal	MJ	0,00	0,00	1,00	0,00	0,00	1,77	0,00	0,00

References

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

PCR 2019:14. Construction products. 1.3.1

ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures.

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

ISO 14044:2006, Environmental management – Life cycle assessment – Requirements and guidelines (pp. 1–54).

Life Cycle Assessment of Classic, Mama & Nostalg by Essem, Miljögiraff, 2023.

