

# Environmental Product Declaration



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

## Usu<sup>®</sup> Fold

from

**HOWE a/s**



Programme:	The International EPD <sup>®</sup> System, <a href="http://www.environdec.com">www.environdec.com</a>
Programme operator:	EPD International AB
EPD registration number:	EPD-IES-0019482
Publication date:	2025-02-05
Valid until:	2030-02-04
EPD type:	<b>Single product EPD</b>

*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](http://www.environdec.com)*



## General information

### Programme information

<b>Programme:</b>	The International EPD <sup>®</sup> System
<b>Address:</b>	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
<b>Website:</b>	<a href="http://www.environdec.com">www.environdec.com</a>
<b>E-mail:</b>	<a href="mailto:info@environdec.com">info@environdec.com</a>

<b>Accountabilities for PCR, LCA and independent, third-party verification</b>
<b>Product Category Rules (PCR)</b>
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): PCR 2019:14 Construction products (EN 15804+A2) (1.3.4) PCR 2019:14-c-PCR-021 c-PCR-021 Furniture and components of furniture (c-PCR to PCR 2019:14) (2.0.0) adapted from EPD Norway UN CPC code 38119: Furniture; other seats
PCR review was conducted by: The Technical Committee of the International EPD System. See <a href="http://www.environdec.com">www.environdec.com</a> for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat <a href="http://www.environdec.com/contact">www.environdec.com/contact</a> .
<b>Life Cycle Assessment (LCA)</b>
LCA accountability: <i>Joanna Zhuravlova, Anna Banach, Bureau Veritas Polska</i>
<b>Third-party verification</b>
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:  <input checked="" type="checkbox"/> EPD verification by individual verifier  Third-party verifier: Vladimír Kočí, LCA.cz  Approved by: The International EPD <sup>®</sup> System
<b>OR</b>
Procedure for follow-up of data during EPD validity involves third party verifier:  <input type="checkbox"/> Yes <input checked="" 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: HOWE a/s

Contact: Agnieszka Rafalska-Zięba; [arz@howe.com](mailto:arz@howe.com)

Description of the organisation: HOWE a/s is a strong international brand and a pioneer in designing and selling multi-functional, space-saving furniture for the contract market. For over 90 years, HOWE has collaborated closely with architects and designers to create beautiful, functional environments that optimize interior spaces wherever people work, study, and communicate. Headquartered in Odense, Denmark, HOWE also operates wholly owned subsidiaries in the US, UK, France, and Poland.

Product-related or management system-related certifications: ISO 9001:2015, ISO 14001:2015, testing according to the required EN and BIFMA standards

Name and location of production site(s): Denmark, the Netherlands, Lithuania

## Product information

Product name: Usu<sup>®</sup> Fold table

Product identification: 4-legged stackable folding table designed for versatile use in education, training, conferences, dining, corporate, and healthcare settings. It folds flat to a height of just 72 mm (2.8").

Product description: Solid and practical, Usu<sup>®</sup> is quick and intuitive to fold. A single person can easily fold and handle the table with minimal effort. It folds flat and stacks neatly on a transporter, making it ideal for quick and easy refurbishing. Its simple, elegant design ensures compatibility with various furniture styles. Built for heavy-duty contract use, Usu<sup>®</sup> comes with a 5-year warranty from HOWE.

UN CPC code: 38140

Geographical scope:

Modules A1-A2: GLO

Module A3: EUR

Modules A4-A5: GLO

Module B and Module C: GLO

## LCA information

Functional unit: 1 unit of Usu<sup>®</sup> table

Conversion to mass: 1 unit weighs 19,09 kg.

Reference service life: 15 years

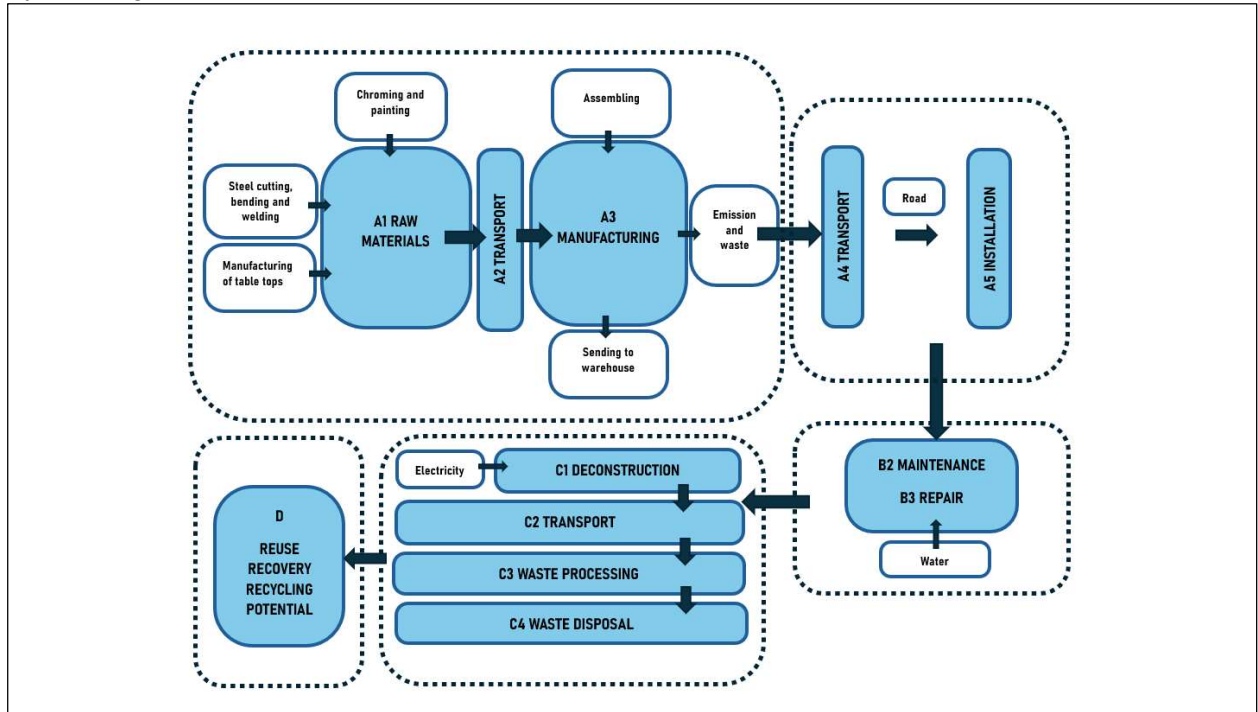
Time representativeness: 2023-01-01 to 2023-12-31

Database(s) and LCA software used: SimaPro 9.6.1 with Ecoinvent 3.10 database. "EN 15804 reference package" based on EF 3.1 has been used for impact calculations.

Description of system boundaries:

Cradle to gate with options, modules C1–C4, module D and with optional modules B2–B3 (A1–A3 + B2-B3 + C + D).

System diagram:



Information about scenarios

A1-A3:

Raw materials were modelled using primary data from the manufacturer, specifying the product composition and material type. Material losses are included in the calculations. They were calculated based on the total manufacturing waste per product.

Transport of raw materials was calculated based on distance and transport mode information from the manufacturer and using own assumptions where necessary.

Transport mode	Transport dataset
Road	Transport, freight, lorry 16-32 metric ton, EURO6 {RER} transport, freight, lorry 16-32 metric ton, EURO6

Manufacturing activities take place in three locations: Denmark, the Netherlands and Lithuania. Primary data was used to model energy (electricity and heat) and water use. Manufacturing waste was provided for one unit of product. As a conservative assumption and due to lack of more accurate data, the production waste was assumed to be incinerated and landfilled, according to the stated in PEF Annex C for the EU average scenario. The scenario assumes split 55% for landfill and 45% for incineration.

*Energy source of the electricity used in manufacturing processes of module A3*

The climate impact of electricity for each location based on residual mix dataset is as follows:

<b>Manufacturing location</b>	<b>Electricity dataset</b>	<b>GWP-GHG impact (kg CO2e/kWh)</b>
Denmark	Electricity, medium voltage {DK} electricity, medium voltage, residual mix	0,63
Netherlands	MJ Electricity, medium voltage {NL} electricity, medium voltage, residual mix	0,69
Lithuania	MJ Electricity, medium voltage {LT} electricity, medium voltage, residual mix	0,60

A4–A5:

Transport from the assembly site to the HOWE warehouse was estimated based on data from the distributor and own calculations using Google Maps. Due to the lack of specific data, distances were estimated from the storage location of the products to the customer based on the stated countries to which HOWE ships its products. Distances were estimated as follows:

- Average distance by ship from Poland to the capital of the specified country: determined using Google Maps.
- Average distance from HOWE’s product storage location to the European capitals: road transport was assumed, calculated using distance to site.

Since only manual labour is used to assemble the chairs, this element was not included in the calculations of module A5. However, packaging materials waste treatment was included in the calculations. Due to the global distribution of the chairs, it was not possible to determine the exact distance to the waste management site, so the transport distance to the waste treatment facility was assumed as 100 km.

B2-B3:

In module B2 it is stated that products do not require special maintenance. Cleaning and wet wiping is advised accordingly. Therefore, one scenario was assumed:

- Scenario A: It was assumed that water consumption per wash is about 0.2 liters and that the table is washed once a week. Hence, assuming that the table is washed with a microfiber cloth once a week and using about 0,2 litres of water each time, the estimated annual water consumption will be about 0,0104 m3.

In module B3, in case of repairing, one scenario was assumed:

- Scenario A: It is assumed that the table may need a minor repair once a year, for this repair a small set of electric tools with a total power of 500 watts is used, running for about an hour. In that case, annual electricity consumption would be: 0,5 kWh.

#### C1-C4 End of life stage

In C1 module, it was assessed that dismantling process assumes 50% of manual dismantling and 50% of power tool dismantling, with the tool dismantling consuming 0,05 kWh of electricity.

Since HOWE's products are sold worldwide, the distance to the disposal/waste management site in C2 module was assumed to be 100 km.

A conservative approach has been assumed that the product will not be recycled, hence emissions from preparing the waste for sorting or recycling are not considered in module C3.

In module C4 for the product itself, municipal waste is assumed to be incinerated and landfilled, according to the EU average scenario stated in PEF Annex C. The scenario assumes split 55% for landfill and 45% for incineration. The amount of waste collected separately is the entire weight of the representative product.

#### D Benefits and loads outside of system boundary

Due to the lack of recyclable materials leaving the system, environmental loads and benefits of recycling are 0 in module D.





## Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Steel	8,22	0	0
Particleboard	8,12	0	0,44 kgC/kg 21,8% per DU
Laminate panel	1,47	0	0
Polymers	1,20	0	0
Adhesive	0,04	0	0
Powder Coating	0,03	0	0
Chrome	0,004	0	0
<b>TOTAL</b>	19,09	0	21,8%
Packaging materials	Weight, kg	Weight-% (versus the product)	Weight biogenic carbon, kg C/kg
Cardboard	1,53	7,99%	0,43
Plastic foil	0,09	0,46%	0
<b>TOTAL</b>	1,61	-	

### Dangerous substances from the candidate list of SVHC for Authorisation

There are no dangerous substances used from the candidate list of SVHC.

## 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 use of the results of modules A1-A3 without considering the results of module C is discouraged.

### Mandatory impact category indicators according to EN 15804

Results per functional unit											
Indicator	Unit	A1-A3	A4	A5	B2	B3	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	5,34E+01	8,28E+00	5,27E-01	1,08E-08	1,64E-01	1,64E-01	3,63E-01	0,00E+00	5,88E+00	0,00E+00
GWP-biogenic	kg CO <sub>2</sub> eq.	1,56E+00	1,50E-03	3,96E-01	2,29E-11	4,01E-04	4,01E-04	6,57E-05	0,00E+00	4,69E+00	0,00E+00
GWP-luluc	kg CO <sub>2</sub> eq.	1,77E-02	2,76E-03	9,53E-05	2,08E-11	4,99E-04	4,99E-04	1,20E-04	0,00E+00	1,01E-03	0,00E+00
GWP-total	kg CO <sub>2</sub> eq.	5,18E+01	8,29E+00	9,24E-01	1,09E-08	1,65E-01	1,65E-01	3,63E-01	0,00E+00	1,06E+01	0,00E+00
ODP	kg CFC11 eq.	8,47E-07	1,65E-07	1,29E-09	1,55E-16	3,02E-09	3,02E-09	7,21E-09	0,00E+00	8,11E-09	0,00E+00
AP	mol H <sup>+</sup> eq.	1,95E-01	1,83E-02	4,58E-04	5,79E-11	9,63E-04	9,63E-04	7,55E-04	0,00E+00	4,67E-03	0,00E+00
EP-freshwater	kg P eq.	2,27E-03	6,45E-05	1,04E-05	7,17E-13	1,58E-05	1,58E-05	2,83E-06	0,00E+00	1,21E-04	0,00E+00
EP-marine	kg N eq.	4,76E-02	4,30E-03	7,99E-04	9,50E-12	1,18E-04	1,18E-04	1,77E-04	0,00E+00	9,28E-03	0,00E+00
EP-terrestrial	mol N eq.	4,73E-01	4,77E-02	1,80E-03	1,07E-10	1,35E-03	1,35E-03	1,96E-03	0,00E+00	1,93E-02	0,00E+00
POCP	kg NMVOC eq.	1,75E-01	2,94E-02	6,74E-04	3,55E-11	4,46E-04	4,46E-04	1,26E-03	0,00E+00	6,73E-03	0,00E+00
ADP-minerals&metals*	kg Sb eq.	1,46E-04	2,69E-05	1,92E-07	5,90E-14	2,20E-06	2,20E-06	1,18E-06	0,00E+00	1,09E-06	0,00E+00
ADP-fossil*	MJ	7,23E+02	1,16E+02	9,53E-01	1,93E-07	3,81E+00	3,81E+00	5,10E+00	0,00E+00	6,18E+00	0,00E+00
WDP*	m <sup>3</sup>	2,03E+01	4,83E-01	-8,13E-02	1,55E-06	4,72E-02	4,72E-02	2,12E-02	0,00E+00	-9,83E-01	0,00E+00
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 unit											
Indicator	Unit	A1-A3	A4	A5	B2	B3	C1	C2	C3	C4	D
GWP-GHG*	kg CO <sub>2</sub> eq.	5,41E+01	8,28E+00	5,27E-01	1,08E-08	1,64E-01	1,64E-01	3,63E-01	0,00E+00	5,88E+00	0,00E+00

*\*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 unit											
Indicator	Unit	A1-A3	A4	A5	B2	B3	C1	C2	C3	C4	D
PERE	MJ	9,11E+01	5,23E-01	5,81E-03	1,43E-08	5,31E-01	5,31E-01	2,30E-02	0,00E+00	4,59E-02	0,00E+00
PERM	MJ	9,30E+00	0,00E+00	1,96E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,00E+02	5,23E-01	1,96E+01	1,43E-08	5,31E-01	5,31E-01	2,30E-02	0,00E+00	4,59E-02	0,00E+00
PENRE	MJ	8,05E+01	1,16E+02	9,53E-01	1,93E-07	3,81E+00	3,81E+00	5,10E+00	0,00E+00	6,18E+00	0,00E+00
PENRM	MJ	2,04E+02	0,00E+00	3,70E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,87E+02	0,00E+00	0,00E+00
PENRT	MJ	2,85E+02	1,16E+02	2,75E+00	1,93E-07	3,81E+00	3,81E+00	5,10E+00	1,87E+02	6,18E+00	0,00E+00
SM	kg	3,62E-01	0,00E+00	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	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	0,00E+00	0,00E+00
FW	m <sup>3</sup>	8,04E-01	1,61E-02	-1,70E-03	3,61E-08	3,29E-03	3,29E-03	7,07E-04	0,00E+00	-2,08E-02	0,00E+00
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 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										



## References

- 1) ISO 14040:2006 Environmental management – Life cycle assessment – Principles and Framework
- 2) ISO 14044:2006 Environmental management - Life cycle assessment - Principles and guidelines
- 3) ISO 14025:2006, Environmental labels and declarations – Type III Environmental declarations - Principles and procedures
- 4) EN 15804:2012+A2:2019/AC:2021, Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products
- 5) General Programme Instructions of the International EPD<sup>®</sup> System. Version 4.0
- 6) PCR 2019:14 Construction products (EN 15804+A2) (1.3.4)
- 7) NPCR 026, Part B for Furniture and components of furniture (references to EN 150804+A2), version 3,0.
- 8) Pre Sustainability. SimaPro LCA software. <http://www.pre.nl/content/simapro-lca-software>
- 9) Wernet, G., Bauer, C., Steubing, B., Reinhard, J., Moreno-Ruiz, E., and Weidema, B., 2016. The ecoinvent database version 3 (part I): overview and methodology. The International Journal of Life Cycle Assessment, [online] 21(9), pp.1218–1230. Available at: <<http://link.springer.com/10.1007/s11367-016-1087-8>>
- 10) Bureau Veritas Polska Sp. z o.o. LCA report EPD HOWE. Version 1. 2025

