

Environmental Product Declaration



Global Program Operator

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In accordance with ISO 14025 and Product Category Rules for Furniture

ONE Wall and ONE Mobile

from

LINTEX

Programme:	The International EPD® System, www.environdec.com
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Programme information

Programme:	<p>The International EPD[®] System</p> <p>EPD International AB Box 210 60 SE-100 31 Stockholm Sweden</p> <p>www.environdec.com info@environdec.com</p>
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Product category rules (PCR): <i>Furniture, Except seats and mattresses 2012:19 version 2.01 valid until 2023-06-17</i>
PCR review was conducted by: <i>PCR Committee: Arper PsA Srl Moderator: Leo Breedveld, 2B Srl</i>
Independent third-party verification of the declaration and data, according to ISO 14025:2006: <input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification
Third party verifier: <i>David Althoff Palm, Ramboll Sweden AB, david@dalemarken.se</i> <i>Approved by: The International EPD[®] System</i>
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 from different programmes may not be comparable.

Company information

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Description of the organisation: LINTEX is a Swedish producer of innovative writing boards and sound absorbing office screens, designed to inspire people to do great work, in offices, schools and institutions all over the world. Together with some of Scandinavia's leading designers and by using durable materials, such as tempered glass, high end textiles, solid wood, and enamelled steel, LINTEX creates well designed, functional products, made to last for a long time

LINTEX is a family business founded in 1983. Head office and factory are located in the town of Nybro in southern Sweden. LINTEX have subsidiaries, sales offices and agents elsewhere in Scandinavia, Europe and various parts of the world.

Working sustainably is a key element of LINTEX's strategy, culture and day-to-day operations. LINTEX understands that sustainability requires transformation. This means finding new ways of thinking and new innovative solutions. LINTEX has started the journey towards circular products with net zero climate impact. As of 2022 the production in Nybro is a net producer of renewable energy, thanks to geothermal heating and over 4200 solar panels on the factory roof.

Management system-related certifications: LINTEX has been certified according to ISO 14001 since 2009. The company is also certified according to the FSC-STD-40-004 Chain of Custody Certification standard, certificate code DNV-COC-002282.

LINTEX Supplier Code of Conduct sets the scope for the company's supply chain management. LINTEX China is a member of the organization Sedex and use their third party SMETA-audits to verify social compliance.

Product information

Product name and description: Lintex's ONE series consist of whiteboards with a ceramic steel writing surface combined with characteristic black or white frame. ONE Wall is a wall mounted whiteboard, whereas ONE Mobile is a ONE Wall whiteboard mounted on a movable steel stand.

The ONE series is suited for use in environments such as schools, offices and conference premises. ONE comes in different whiteboard sizes, ranging from 707x1207 mm to 2007x1207 mm. For this EPD, the modelled whiteboard is 1507x1207 mm. Tables 2 and 3 below shows other ONE Wall and ONE Mobile sizes and how to convert the EPD results from the baseline size by multiplying with a conversion factor. The conversion factors for ONE Wall have been calculated by scaling the board material according to difference in surface area and scaling the frame according to difference in circumference. The result is calculated and a conversion factor is chosen that represents all impact categories within a 5% difference.

For ONE Mobile, the conversion factors are based on results calculated by scaling the components weights according to surface area and circumference of the board (for all aspects related to the board and frame) and according to specific weights of the steel stands. The result is calculated and a conversion factor is chosen that represents all impact categories, except climate change – biogenic, within a 7% (707x1960) and 5% (2007x1960) difference.

Table 1: Surface area and conversion factors to convert baseline results into results for other sizes of ONE Wall.

Width (mm)	Height (mm)	Area (m2)	Conversion factor	Comment
1007	1207	1.22	0.71*	ONE Wall
1507	1207	1.82	1	Baseline (ONE Wall)
2007	1207	2.42	1.29*	ONE Wall

*Representative within +-5 % for all impact categories

Table 2: Dimensions and conversion factors to convert baseline results into results for other sizes of ONE Mobile.

Width (mm)	Height board/including stand (mm)	Board area (m2)	Conversion factor	Comment
707	1207/1960	0.85	0.59**	ONE Mobile
1507	1207/1960	1.82	1	Baseline. ONE Mobile
2007	1207/1960	2.42	1.25***	ONE Mobile

**Representative within +-7 % for all impact categories except climate change biogenic, where the conversion factor is 0,49

***Representative within +-5 % for all impact categories except climate change biogenic, where the conversion factor is 1,36

Additional information on use, reuse and end-of-life: For daily cleaning, a whiteboard eraser or similar shall be used. For deep cleaning it is normally sufficient with water on a microfibre cloth. If the board is unusually dirty and stained, a designated alcohol-based cleaning solution may be used. Soap-based cleaning solution shall always be avoided, since this is the most common cause of erasing problems and smearing ink.

When the whiteboard is no longer needed, LINTEX encourages the owner/holder to put the product on the market again, to enable reuse. When the product's end-of life is finally reached, the product shall be handled by a professional waste management company to enable material recycling.

Product-related certifications: ONE Wall and ONE Mobile are certified according to the Swedish labelling system Möbelfakta, ID 0320210323 and ID 0220210323. At the time of publication of the EPD, the ONE series is certified with FSC Mix®.

ONE Wall and ONE Mobile are tested and approved according to EN 14434:2010 “Writing boards for educational institutions – Ergonomic, technical and safety requirements and their test methods”.

The ceramic steel whiteboard surface has a lifetime guarantee and is Cradle to Cradle Certified. For up-to-date information on product certifications, see www.lintex.se.

This EPD covers the following article numbers:

- 91126S
- 91126V
- 91127S
- 91127V
- 91128S
- 91128V
- 91027S
- 91028S
- 91095S
- 91027V
- 91028V
- 91095V

LCA information

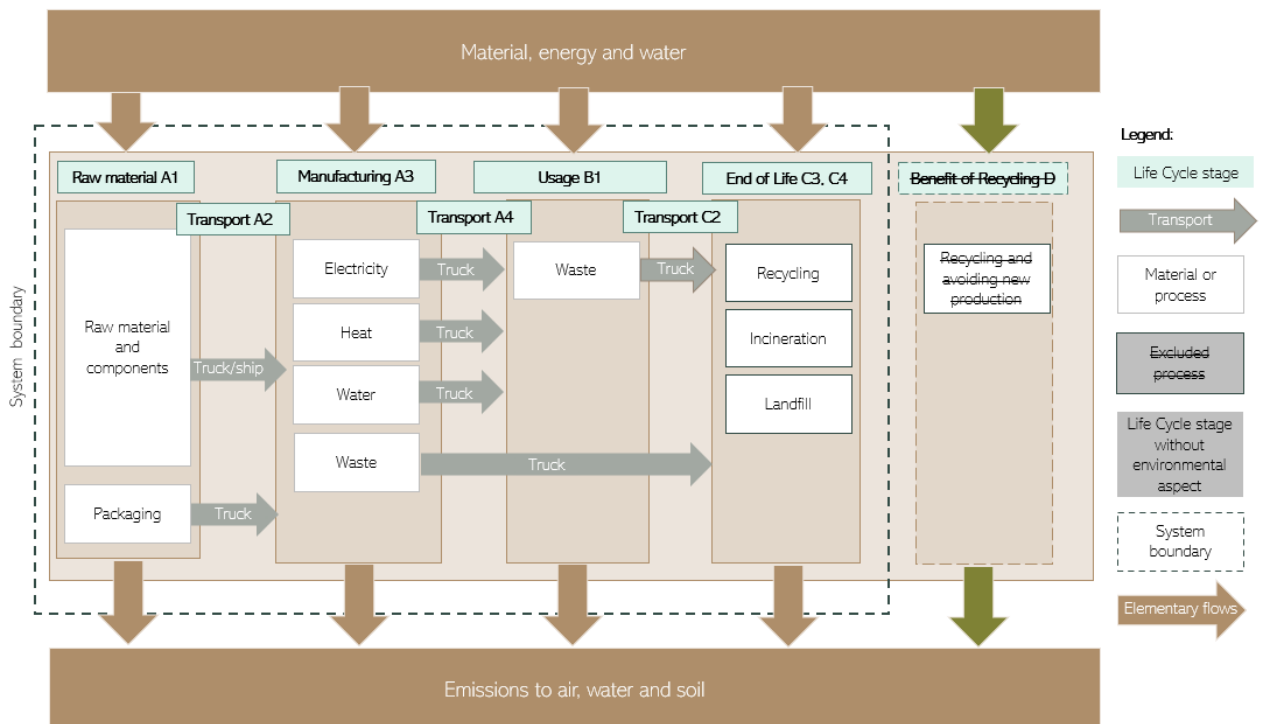
Declared Unit	The declared unit is 1 ONE Wall 1507x1207mm, weighing 19,8 kg, and 1 ONE Mobile 1507x1960mm (board 1507x1207), weighing 37,2 kg.
Product group classification	UN CPC 3812
Goal and Scope	<p>The result will be used to understand where the environmental burden for the products occurs during the life cycle and aims to lay a road map for development to decrease this burden. The result will be communicated by the International EPD system.</p> <p>The audience includes resellers and end-clients.</p>
Manufacturing Site	Nybro, Sweden.
Geographical Area	The product is globally available, but the model for transports and waste is based on Europe, which is Lintex' main market.
Compliant with	<p>This EPD follows the "Book-keeping" LCA approach which is defined as attributional LCA in the ISO 14040 standard.</p> <p>In accordance with ISO 14025, ISO 14040 – ISO 140 44.</p> <p>This EPD follows the Product Category Rules Furniture, Except seats and mattresses 2012:19 version 2.01 valid until 2023-06-17</p>
Cut-Off Rules	<p>The following procedure is followed for the exclusion of inputs and output:</p> <ul style="list-style-type: none"> - Data for elementary flows to and from the product system contributing to a minimum of 99% of the declared environmental impacts shall be included <p>A screening and expert judgement showed that the following aspects contribute less than 1% and could be cut-off:</p> <ul style="list-style-type: none"> - Various supplier packaging - Potential transports from retailer to installation site - Energy and material use in installation - Cleaning and maintenance during use
Background data	<p>The data quality is considered good. All site-specific data for raw materials, auxiliary materials as well as energy and emissions in the manufacturing process is from 2020 and have been represented with ecoinvent datasets. All other relevant environmental aspects have been represented by specific data from suppliers and selected generic data and generic data from ecoinvent.</p> <p>ecoinvent is the world's biggest LCI (Life cycle inventory) data library and the latest and most updated version was used. ecoinvent contains data for the specific geographical regions relevant for this study. The background data from ecoinvent 3.8 are from 2016-2020.</p>
Electricity data	Electricity consumption in the A3 module comes from Lintex own production from installed solar cells and geothermal heat pumps.
Allocations	<p>Polluter Pays / Allocation by Classification</p> <p>Two allocation rules are applied: 1) the raw material necessary for the manufacture is allocated by mass of the declared unit; 2) the energy necessary for the manufacture is allocated in MJ by production of the declared unit</p>
Impact Assessment methods	Potential environmental impacts and resource use values are calculated according to the GPI and PCR using the SimaPro 9.3 software.
Based on LCA Report	Miljögraff Lintex ONE Wall and ONE Mobile LCA report 1184ONE
LCA Practitioner	Daniel Böckin, Karin Lagercrantz - Miljögraff AB
Software	SimaPro 9.4

System boundary

The EPD follows Cradle to grave (A1–C4) boundaries. A1 is defined as upstream, A2 and A3 as core and the remaining modules (A4–C4) as downstream. See the system diagram below for information about included modules.

Up-stream	Core		Downstream													
Raw materials	Transport	Manufacturing	Transport	Construction-Installation	Use stage	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction	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	NR	NR	NR	NR	NR	NR	NR	NR	X	X	X	MND

X= included in the LCA, NR = module without environmental aspects MND= Module Not Declared.



Content and life cycle information

The following tables shows the **material content** of the whiteboard and the percentage of recycled and renewable material in the product.

Table 3 Content information ONE Wall

Components	Main material	Weight (kg)	Recycled material (wt%)		Renewable material (wt%)
			Pre-cons.	Post-cons.	
Particle board	Wood	11.90	84	0	84
Ceramic steel	Steel	5.70	13.9	3.41	0
Aluminium profile	Aluminium	1.09	0	0	0
Aluminium foil	Aluminium	0.48	0	40	0
Aluminium brackets	Aluminium	0.44	0	0	0
Glue	Adhesive	0.21	0	0	0
Screws	Steel	0.02	0	0	0
TOTAL		19.8	4%	52%	50%
Packaging					
Cardboard	Cardboard	3.72	0	50	100
Wooden stands	Wood	0.67	0	0	100
Expanded polystyrene foam	Plastic (EPS)	0.30	0	30	0
Plastic band	Plastic (PP)	0.03	0	0	0
Substances of Very High Concern (SVHC)	-	Weight (mg)	Weight-% (versus the product)		exceeds 0.1%
(No SVHC exceeding 0,1 wt% in product)					

Table 4 Content information ONE Mobile

Components	Main material	Weight (kg)	Recycled material (wt%)		Renewable material (wt%)
			Pre-cons.	Post-cons.	
Whiteboard					
Particle board	Wood	11.9	84	0	84
Ceramic steel	Steel	5.7	13.9	3.41	0
Black steel sheet	Steel	3.9	0	0	0
Aluminium profile	Aluminium	1.09	0	0	0
Wheels	Plastic	0.8	0	0	0
Glue	Adhesive	0.21	0	0	0
Screws	Steel	0.206	0	0	0
Steel brackets	Steel	0.1	0	0	0
Stand					
Steel tubes	Steel	12.75	0	0	0
Steel components	Steel	0.37	0	0	0
ABS components	Plastic (ABS)	0.045	0	0	0
Aluminium components	Aluminium	0.042	0	0	0
TOTAL		37.20	2%	27%	27%
Packaging					
Cardboard	Cardboard	6.22	0	50	100
Wooden stands	Wood	0.67	0	0	100
Expanded polystyrene foam	Plastic (EPS)	0.47	0	30	0
Plastic band	Plastic (PP)	0.07	0	0	0
Substances of Very High Concern (SVHC)	-	Weight (mg)	Weight-% (versus the product)		exceeds 0.1%
(No SVHC exceeding 0.1 wt% in product)					

The majority of the product weight comes from the particle board, the steel stand (ONE Mobile only) and the ceramic steel. The ceramic steel makes up the writing surface and consists of 88% steel and 12% enamel.

Manufacturing takes place in Nybro, Sweden and includes laminating, cutting and assembling. The energy consumption for manufacturing was estimated based on yearly energy use and total production of whiteboards compared to LINTEX total production. It is, on a yearly basis, covered by LINTEX own production from their rooftop solar cells and their geothermal heat pump.

Packaging is shown in the table above, including wooden stands for transportation.

It is assumed that there are no environmental aspects during **installation** or **use** of the product, except the waste management of packaging after installation.

End of life is based on a generic European waste scenario where LINTEX main markets are located.

Environmental performance

Potential environmental impact

PARAMETER		UNIT	ONE Wall				ONE Mobile			
			Up-stream	Core	Down-stream	TOTAL	Up-stream	Core	Down-stream	TOTAL
Global warming potential (GWP)	Fossil	kg CO ₂ eq.	6.32E+01	2.88E+00	6.43E+00	7.25E+01	1.11E+02	7.40E+00	1.14E+01	1.29E+02
	Biogenic	kg CO ₂ eq.	-2.18E+01	5.19E-04	2.70E+01	5.14E+00	-2.39E+01	1.43E-03	3.18E+01	7.96E+00
	Land use and land transformation	kg CO ₂ eq.	1.30E-01	1.52E-03	1.76E-03	1.34E-01	1.63E-01	4.49E-03	3.24E-03	1.71E-01
	TOTAL	kg CO ₂ eq.	4.38E+01	2.88E+00	3.38E+01	8.05E+01	8.81E+01	7.41E+00	4.38E+01	1.39E+02
Ozone depletion		kg CFC11 eq.	2.60E-06	6.33E-07	1.07E-06	4.31E-06	3.43E-06	1.57E-06	1.98E-06	6.98E-06
Acidification		mol H ⁺ eq.	3.72E-01	1.82E-02	1.88E-02	4.09E-01	4.82E-01	1.28E-01	3.27E-02	6.42E-01
Eutrophication, freshwater		kg P eq.	1.84E-02	2.59E-04	3.49E-04	1.90E-02	2.71E-02	4.73E-04	6.04E-04	2.82E-02
Eutrophication, marine		kg N eq.	7.28E-02	4.11E-03	1.07E-02	8.76E-02	1.06E-01	3.09E-02	1.65E-02	1.53E-01
Eutrophication, terrestrial		mol N eq.	6.99E-01	4.52E-02	5.92E-02	8.04E-01	1.01E+00	3.42E-01	9.89E-02	1.45E+00
Photochemical oxidant formation potential (POFP)		kg NMVO C eq.	2.17E-01	1.37E-02	2.13E-02	2.52E-01	3.42E-01	9.17E-02	3.64E-02	4.71E-01
Abiotic depletion potential – Elements		kg Sb eq.	1.85E-04	1.85E-05	1.54E-05	2.19E-04	1.81E-04	9.50E-05	2.82E-05	3.04E-04
Abiotic depletion potential – Fossil resources		MJ, net calorific value	6.78E+02	4.21E+01	7.04E+01	7.90E+02	1.21E+03	9.99E+01	1.30E+02	1.44E+03
Water scarcity potential		m ³ eq.	1.60E+01	2.81E-01	3.12E-01	1.66E+01	1.92E+01	4.60E-01	5.25E-01	2.02E+01

Global warming potential IPCC 2021

PARAMETER	UNIT	ONE Wall				ONE Mobile			
		Up-stream	Core	Down-stream	TOTAL	Up-stream	Core	Down-stream	TOTAL
GWP-GHG	kg CO ₂ eq.	65.5	2.85	10.2	78.5	112	7.35	17.0	136

Use of resources

PARAMETER	UNIT	ONE Wall				ONE Mobile				
		Up-stream	Core	Down-stream	TOTAL	Up-stream	Core	Down-stream	TOTAL	
Primary energy resources – Renewable	Used as energy carrier	MJ, net calorific value	7.15E+01	9.40E+00	1.05E+00	8.19E+01	4.91E+01	1.28E+01	1.88E+00	6.37E+01
	Used as raw materials	MJ, net calorific value	1.92E+02	0.00E+00	0.00E+00	1.92E+02	2.32E+02	0.00E+00	0.00E+00	2.32E+02
	TOTAL	MJ, net calorific value	2.63E+02	9.40E+00	1.05E+00	2.74E+02	2.81E+02	1.28E+01	1.88E+00	2.95E+02
Primary energy resources – Non-renewable	Used as energy carrier	MJ, net calorific value	7.02E+02	4.47E+01	7.48E+01	8.22E+02	1.23E+03	1.09E+02	1.38E+02	1.48E+03
	Used as raw materials	MJ, net calorific value	1.74E+01	0.00E+00	0.00E+00	1.74E+01	4.36E+01	0.00E+00	0.00E+00	4.36E+01
	TOTAL	MJ, net calorific value	7.19E+02	4.47E+01	7.48E+01	8.39E+02	1.28E+03	1.09E+02	1.38E+02	1.53E+03
Secondary material	kg	2.51E+01	0.00E+00	0.00E+00	2.51E+01	2.47E+01	0.00E+00	0.00E+00	2.47E+01	
Renewable secondary fuels	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Non-renewable secondary fuels	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Net use of fresh water	m ³	5.61E-01	7.69E-03	2.50E-02	5.94E-01	8.84E-01	1.51E-02	3.85E-02	9.38E-01	

Waste production and output flows

Waste production

PARAMETER	UNIT	ONE Wall				ONE Mobile			
		Up-stream	Core	Down-stream	TOTAL	Up-stream	Core	Down-stream	TOTAL
Hazardous waste disposed	kg	0	0	0	0	0	0	0	0
Non-hazardous waste disposed	kg	0	0	0	0	0	0	0	0
Radioactive waste disposed	kg	0	0	0	0	0	0	0	0

Output flows

PARAMETER	UNIT	ONE Wall				ONE Mobile			
		Up-stream	Core	Down-stream	TOTAL	Up-stream	Core	Down-stream	TOTAL
Components for reuse	kg	0	0	0	0	0	0	0	0
Material for recycling	kg	0	0	5.26E+00	5.39E+00	0	0	1.67E+01	1.67E+01
Materials for energy recovery	kg	0	0	1.68E+01	1.68E+01	0	0	2.12E+01	2.12E+01
Exported energy, electricity	MJ	0	0	0	0	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0	0	0	0	0

Other environmental indicators

Impact category	UNIT	ONE Wall				ONE Mobile			
		Up-stream	Core	Down-stream	TOTAL	Up-stream	Core	Down-stream	TOTAL
Human toxicity, cancer impacts	cases	1.74E-05	1.91E-07	4.76E-07	1.81E-05	2.99E-05	4.51E-07	8.22E-07	3.12E-05
Human toxicity, non-cancer impacts	cases	1.20E-05	4.20E-07	1.35E-06	1.38E-05	1.42E-05	7.51E-07	2.20E-06	1.71E-05
Fresh water ecotoxicity	PAF .m3 .day	3.73E+05	7.64E+03	2.63E+05	6.44E+05	3.61E+05	1.24E+04	1.57E+06	1.94E+06
Land use	species .yr	1.09E+03	5.17E+01	4.87E+01	1.19E+03	1.35E+03	7.85E+01	8.84E+01	1.52E+03

Share of biogenic carbon	Unit	ONE Wall	ONE Mobile
Biogenic carbon in the product	kg C	4.25	4.25
Biogenic carbon in the packaging	kg C	1.96	3.08

Additional information.

Overall, most of the environmental impact of ONE Wall and ONE Mobile can be attributed to the emission of greenhouse gases and particulate matter, as well as the use of fossil resources. Most of these (about 80%) occur in the production of raw materials (module A1). For ONE Wall, the aluminium profile and the ceramic steel are the components with the highest environmental impact. For ONE Mobile, the aluminium profile, the steel stand and the ceramic steel are causing the highest environmental impact.

Differences Versus Previous Versions

2023-01-11 Version 1

2023-01-16 Version 1.1

Editorial change: System boundary figure corrected to show which modules are included in the LCA

References

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- Ecoinvent 3.8, 'Ecoinvent' <https://www.ecoinvent.org/database/database.html>
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- EN ISO 14040:2006 Environmental management - Life cycle assessment - Principles and framework, 2006
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- General Programme Instructions of the International EPD® System. Version 3.01
- Gripstrand, Sara, Sustainability Manager, Lintex AB
- ILCD International guide for life-cycle data system. General guide for life cycle assessment – Detailed guidance, 2010
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- PRé Consultants, “SimaPro 9.4” (PRé Consultants, 2019), <http://www.pre-sustainability.com/simapro>

Appendix II

Self-declaration from EPD owner, specific Norwegian requirements

1 Applied electricity data set used in the manufacturing phase

The electricity mix for the electricity used in manufacturing (A3) is the electricity grid mix

We use electric energy from our own solar panels. We cancel the guarantees of origin for this electricity. We produce more than we use on a yearly basis.

For heating we use thermal heating also powered by electricity from the solar panels.

<xxxxxx CO₂ eqv/MJ>

2 Content of dangerous substances

X The product contains no substances given by the REACH Candidate list or the Norwegian priority list.

- The product contains substances that are less than 0.1% by weight given by the REACH Candidate or the Norwegian priority list.
- The product contains dangerous substances more than 0.1% by weight given in the REACH candidate list or the [Norwegian Priority List](#), concentrations is given in the EPD:

Dangerous substances from the REACH candidate list or the Norwegian Priority List	CAS No.	Quantity (concentration, wt%/FU(DU)).
Substance 1		
Substance n		

3 Transport from the place of manufacture to a central warehouse

Transport distance, and CO₂-eqv./DU from transport of the product from factory gate to central warehouse in Oslo shall be given. The following table shall be included in the EPD:

Type	Capacity utilisation (incl. return) %	Type of vehicle	Distance km	Fuel/Energy use	Unit	Value (l/t)	Kg CO ₂ -eqv./DU
Boat							
Truck	We have done extensive Life Cycle Analyses, and published verified EPD:s at EPD International. A4 varies depending on where in our market the product is sold. Calculations on transports with truck (Euro 6) from the factory in Nybro to our warehouse/production in Jevnaker and then to Oslo is 736 km. This generates approximately 0,13 kg CO ₂ per kg product.						
Railway							
Rail							
Air							
Total							

4 Impact on the indoor environment

- Indoor air emission testing has been performed; specify test method and reference; M1, ___

Yes, we test our products according to ISO 16000-9:2006 and/or M1. See www.lintex.se for more information.

- No test has being performed

- Not relevant; specify _____