

Environmental Product Declaration



Global Program Operator

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In accordance with ISO 14025 and Product Category Rules for Furniture

MOOD FABRIC MOBILE

from

LINTEX

| | |
|--------------------------|---|
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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.



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> |
|-------------------|--|

| |
|---|
| 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>Bureau Veritas Certification Sverige AB</i> Accredited by: <i>SWEDAC (accreditation number 1236)</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

Owner of the EPD:

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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 subsidiary's, 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 2020 the production in Nybro is self-sufficient with respect to 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: The Lintex MOOD FABRIC MOBILE is a mobile writing board with a fabric-covered, sound absorbent back. A wooden frame with a sound absorbent filling is covered in a steel sheet under a glass board. The board stands on a pair of feet and wheels. It comes in a variety of colours and in two different sizes, a small model (1000x1960 mm) with a full glass front and a large model (1500x1960 mm) with a glass and textile front, both of which are represented in this EPD.

Furthermore, the wool fabric comes in two different types and the feet come in three materials (oak, walnut, aluminium) but for this report only one fabric (Blazer Light) and one foot (Aluminium) are included. MOOD FABRIC MOBILE is suited for use in environments such as schools, offices and conference premises.

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. Vacuum and dry wipe textile products for daily cleaning. If the fabric is stained, use a damp cloth. For heavily stained fabrics combine with a dedicated soap solution.

When the mobile writing board 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: MOOD FABRIC MOBILE is tested and approved according to EN 14434:2010 "Writing boards for educational institutions – Ergonomic, technical and safety requirements and their test methods". For product certifications see www.lintex.se.

LCA information

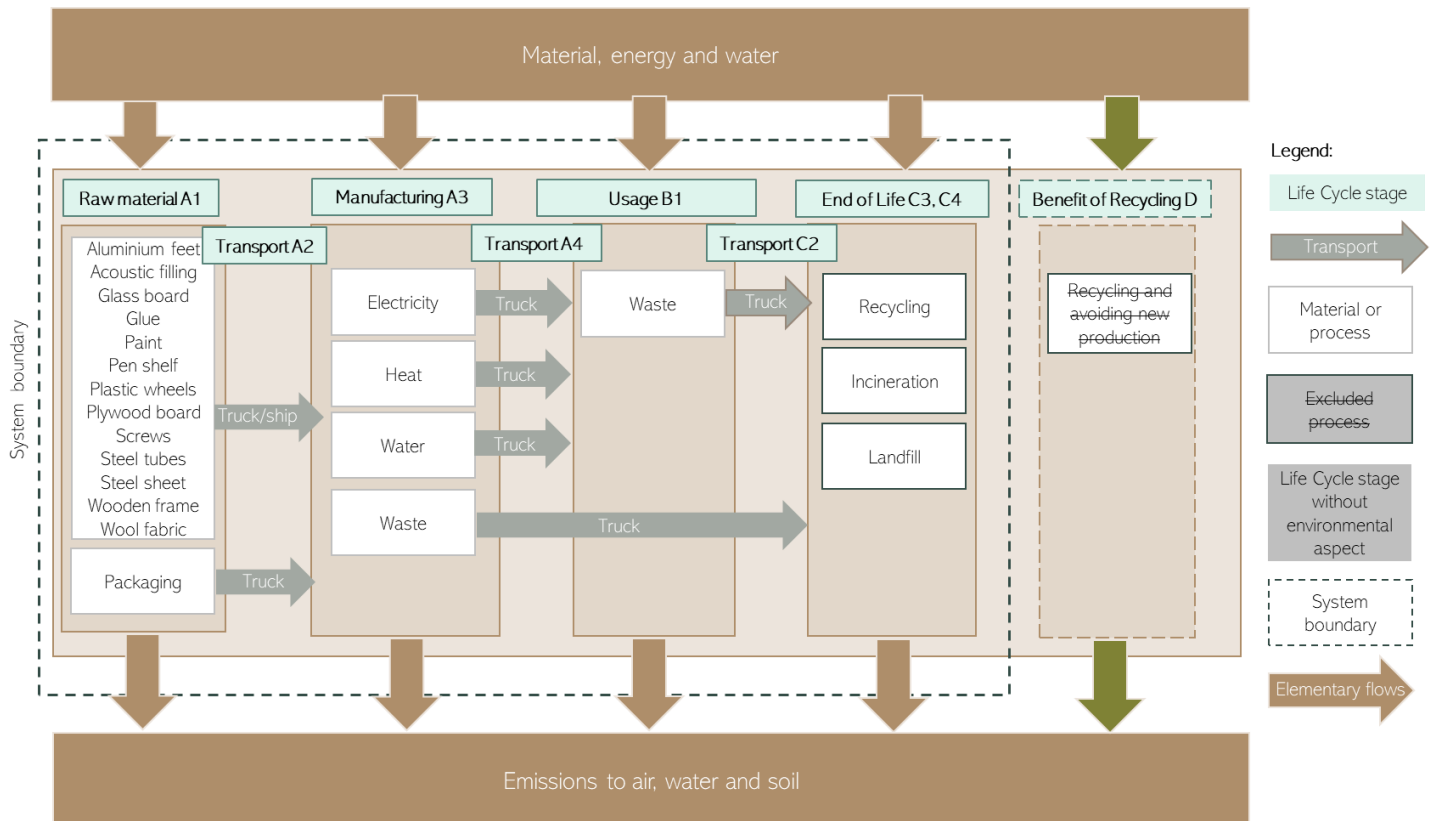
| | |
|-------------------------------------|--|
| Declared Unit | The declared unit is 1 MOOD FABRIC MOBILE writing board. The large model is 1500x1960 mm and weighs 45,1 kg, the small model is 1000x1960 mm and weighs 38,8 kg. |
| Product group classification | UN CPC 3812 |
| Goal and Scope | <p>The 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 | Global |
| 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: 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> <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 generic ecoinvent data.</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 3.7.1 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 | <p>Potential environmental impacts are calculated with Environmental Footprint 3.0 method as implemented in SimaPro 9.2</p> <p>Resource use values are calculated from Cumulative Energy Demand V1.11.</p> |
| Based on LCA Report | Miljögiraff LCA Report 955 Lintex AIR. |
| LCA Practitioner | Daniel Böckin, Miljögiraff AB |
| Software | SimaPro 9.2 |

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 table shows the **material content** of the large and small mobile writing boards and the percentage of recycled and renewable material in the product. The feet, pen shelf and steel sheet and tubes come from Lintex China, while other components and materials come from external suppliers.

| Components | Main material | Weight large (kg) | Weight small (kg) | Recycled material (wt%) | | Renewable material (wt%) |
|---|------------------|--------------------------|--------------------------|----------------------------------|--------------------|--------------------------|
| | | | | Pre-cons. | Post-cons. | |
| Feet | Aluminium | 2,28 | 2,28 | 0 | 90 | 0 |
| Fabric | Wool | 1,4 | 0,95 | 0 | 0 | 100 |
| Glass board | Glass | 18 | 17,5 | 0 | 0 | 0 |
| Glue | Glue | 0,27 | 0,17 | 0 | 0 | 0 |
| Paint | Paint | 0,67 | 0,65 | 0 | 0 | 0 |
| Pen shelf | Aluminium | 0,15 | 0 | 0 | 0 | 0 |
| Plywood board | Wood | 1,96 | 0 | 0 | 0 | 100 |
| Screws | Steel | 0,04 | 0,04 | 0 | 0 | 0 |
| Sound absorbent filling | PET | 2,77 | 1,78 | 0 | 42,5 | 0 |
| Steel sheet with tape | Steel | 4,18 | 4,07 | 0 | 0 | 0 |
| Steel tubes | Steel | 1,48 | 1,48 | 0 | 0 | 0 |
| Wheels | Rubber | 1,40 | 1,40 | 0 | 0 | 0 |
| Frame | Wood | 10,5 | 8,5 | 0 | 0 | 100 |
| Total | | 45,1 | 38,8 | 0% | L: 7,1% S: 7,2% | L: 31% S: 24% |
| Packaging | | | | | | |
| Cellplast U-profile | EPS | 0,5 | 0,43 | 0 | 0 | 0 |
| Well packaging | Corrugated board | 11,4 | 7,8 | 0 | 75 | 100 |
| Plastic band | PP | 0,04 | 0,03 | 0 | 0 | 0 |
| Manual | Paper | 0,005 | 0,005 | 0 | 100 | 100 |
| Wooden stands | Wood | 6,7 | 5,9 | 0 | 0 | 100 |
| Substances of Very High Concern (SVHC) | - | Weight large (kg) | Weight small (kg) | Weight-% (vs the product) | | exceeds 0.1% |
| (No SVHC reported) | - | - | - | - | | - |

The majority of the product weight comes from the glass board, delivered from Poland, and the wooden frame, produced in Sweden. Other relevant components include the steel sheet, with a significant weight, and the wool fabric which represents a large share of total environmental impacts.

Manufacturing takes place in Nybro, Sweden and includes gluing, painting and assembling. The energy consumption for manufacturing was estimated based on yearly energy use and total production of writing screens 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 racks and pallets 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 scenario of Dutch waste management as an approximation for European waste management, where Lintex main markets are located.

Environmental performance

Potential environmental impact

| PARAMETER | | UNIT | Large model | | | | Small model | | | |
|--|----------------------------------|--------------------------------------|-------------|----------|-------------|----------|-------------|----------|-------------|----------|
| | | | Up-stream | Core | Down-stream | TOTAL | Up-stream | Core | Down-stream | TOTAL |
| Global warming potential (GWP) | Fossil | kg CO ₂ eq. | 119,42 | 7,42 | 15,98 | 142,83 | 96,02 | 6,67 | 13,74 | 116,43 |
| | Biogenic | kg CO ₂ eq. | -5,98 | 0,22 | 77,60 | 71,84 | -5,47 | 0,21 | 56,69 | 51,43 |
| | Land use and land transformation | kg CO ₂ eq. | 9,71 | 0,00 | 0,00 | 9,72 | 7,16 | 0,00 | 0,00 | 7,16 |
| | TOTAL | kg CO ₂ eq. | 124,28 | 7,64 | 93,59 | 225,51 | 98,67 | 6,89 | 70,44 | 176,00 |
| Depletion potential of the stratospheric ozone layer (ODP) | | kg CFC 11 eq. | 3,15E-05 | 1,46E-06 | 1,96E-06 | 3,49E-05 | 2,43E-05 | 2,11E-05 | 1,32E-06 | 1,84E-06 |
| Acidification potential (AP) | | kg SO ₂ eq. | 2,00 | 0,05 | 0,03 | 2,08 | 1,56 | 1,48 | 0,05 | 0,03 |
| Eutrophication potential (EP) | | kg PO ₄ ³⁻ eq. | 0,14 | 0,00 | 0,00 | 0,14 | 0,10 | 0,10 | 0,00 | 0,00 |
| Photochemical oxidant formation potential (POFP) | | kg NMVOC eq. | 0,28 | 0,03 | 0,03 | 0,34 | 0,26 | 0,21 | 0,03 | 0,02 |
| Abiotic depletion potential – Elements | | kg Sb eq. | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 | 0,00 |
| Abiotic depletion potential – Fossil resources | | MJ, net calorific value | 1397,03 | 100,99 | 132,46 | 1630,47 | 1304,82 | 1089,85 | 90,75 | 124,23 |
| Water scarcity potential | | m ³ eq. | 51,45 | 1,15 | 0,74 | 53,35 | 36,68 | 35,11 | 0,96 | 0,60 |

Global warming potential IPCC 2013

| PARAMETER | | UNIT | Large model | | | | Small model | | | |
|-----------|--|------------------------|-------------|------|-------------|--------|-------------|------|-------------|--------|
| | | | Up-stream | Core | Down-stream | TOTAL | Up-stream | Core | Down-stream | TOTAL |
| GWP-GHG | | kg CO ₂ eq. | 170,77 | 7,35 | 25,10 | 203,23 | 133,26 | 6,61 | 19,97 | 159,84 |

Use of resources

| PARAMETER | UNIT | Large model | | | | Small model | | | | |
|--|-------------------------|-------------------------|--------|-------------|-------------|---------------|--------|-------------|------------|---------------|
| | | Up-stream | Core | Down-stream | TOTAL | Up-stream | Core | Down-stream | TOTAL | |
| Primary energy resources – Renewable | Used as energy carrier | MJ, net calorific value | 1264,3 | 51,6 | 2,0 | 1318,0 | 764,3 | 42,2 | 1,9 | 808,3 |
| | Used as raw materials | MJ, net calorific value | 329,3 | 0,0 | 0,0 | 329,3 | 247,0 | 0,0 | 0,0 | 247,0 |
| | TOTAL | MJ, net calorific value | 1593,6 | 51,6 | 2,0 | 1647,2 | 1011,3 | 42,2 | 1,9 | 1055,3 |
| Primary energy resources – Non-renewable | Used as energy carrier | MJ, net calorific value | 1350,2 | 107,3 | 140,8 | 1598,2 | 1049,7 | 96,4 | 132,0 | 1278,1 |
| | Used as raw materials | MJ, net calorific value | 204,0 | 21,6 | 0,0 | 225,6 | 158,8 | 0,0 | 0,0 | 158,8 |
| | TOTAL | MJ, net calorific value | 1554,2 | 128,9 | 140,8 | 1823,8 | 1161,0 | 95,6 | 132,6 | 1436,9 |
| Secondary material | kg | 4,3 | 0,0 | 0,0 | 4,3 | 3,5 | 0,0 | 0,0 | 3,5 | |
| Renewable secondary fuels | MJ, net calorific value | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | |
| Non-renewable secondary fuels | MJ, net calorific value | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | |
| Net use of fresh water | m ³ | 9,55 | 0,38 | 0,32 | 10,2 | 8,29 | 0,32 | 0,28 | 8,9 | |

Waste production and output flows

Waste production

| PARAMETER | UNIT | Large model | | | | Small model | | | |
|------------------------------|------|-------------|------|-------------|---------------|-------------|------|-------------|---------------|
| | | Up-stream | Core | Down-stream | TOTAL | Up-stream | Core | Down-stream | TOTAL |
| Hazardous waste disposed | kg | 0,0004 | 0 | 0 | 0,0004 | 0,0003 | 0 | 0 | 0,0003 |
| Non-hazardous waste disposed | kg | 0,02 | 0 | 0 | 0,02 | 0,02 | 0 | 0 | 0,02 |
| Radioactive waste disposed | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Output flows

| PARAMETER | UNIT | Large model | | | | Small model | | | |
|-------------------------------|------|-------------|------|-------------|-------|-------------|------|-------------|-------|
| | | 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 | 21,19 | 21,19 | 0 | 0 | 21,07 | 21,07 |
| Materials for energy recovery | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | Large model | | | | Small model | | | |
|------------------------------------|--------------------|-------------|---------|-------------|---------|-------------|---------|-------------|---------|
| | | Up-stream | Core | Down-stream | TOTAL | Up-stream | Core | Down-stream | TOTAL |
| Human toxicity, cancer impacts | cases | 1,2E-07 | 4,6E-09 | 1,9E-08 | 1,5E-07 | 5,9E-08 | 4,0E-09 | 1,5E-08 | 7,8E-08 |
| Human toxicity, non-cancer impacts | cases | 1,8E-06 | 9,4E-08 | 2,0E-07 | 2,1E-06 | 1,4E-06 | 8,2E-08 | 1,7E-07 | 1,6E-06 |
| Fresh water ecotoxicity | PAF .m3 .day | 3,2E+03 | 1,0E+02 | 1,7E+02 | 3,5E+03 | 2,4E+03 | 9,0E+01 | 1,5E+02 | 2,6E+03 |
| Land use | species .yr | 1,6E+04 | 2,0E+02 | 9,4E+01 | 1,6E+04 | 1,1E+04 | 1,7E+02 | 8,8E+01 | 1,1E+04 |

Differences Versus Previous Versions

2022-01-10 Version 1

2023-01-13 Version 1.1

Editorial change: Illustration under System Boundary showing division of modules between Upstream, Core and Upstream corrected so that A4 is included in Downstream

Editorial change: Added the following text on the front page: “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.”

References

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- Ecoinvent 3.7.1, '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 4.0
- Gripstrand, Sara, Sustainability Manager, Lintex AB
- ILCD International guide for life-cycle data system. General guide for life cycle assessment – Detailed guidance, 2010
- Product Category Rules Furniture, Except seats and mattresses 2012:19 version 2.01 valid until 2023-06-17
- PRé Consultants, "SimaPro 9.2" (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 CO₂eqv/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 _____