

Environmental Product Declaration



In accordance with ISO 14025:2006 for:

Trevira CS – GRAIN & SALT

from

AB Ludvig Svensson



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



Programme information

Programme:	The International EPD® System EPD International AB Box 210 60 SE-100 31 Stockholm Sweden www.environdec.com info@environdec.com
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Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
PCR: Fabrics 2022:04 (1.01), UN CPC code 267
PCR review was conducted by: <i>The Technical Committee of the International EPD® System. A full list of members is available at www.environdec.com. The review panel may be contacted via info@environdec.com. Members of the Technical Committee were requested to state any potential conflict of interest with the PCR Committee, and if there were conflicts of interest they were excused from the review</i>
Life Cycle Assessment (LCA)
LCA accountability: Erica Delersjö, AB Ludvig Svensson
Third-party verification
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: <i>Martyna Mikusinska, Sweco</i> Approved by: The International EPD® System
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 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 ISO 14025.

Company information

Owner of the EPD: AB Ludvig Svensson
Bangatan 8
511 54 Kinna
Sweden

Contact: Erica Delersjö, Project Manager, +46320209200 info@ludvigsvensson.com

Description of the organisation:

AB Ludvig Svensson, Svensson, was founded in 1887 and has operations in seven countries and 400 employees around the world. It is a textile manufacturer that produces solutions for a better climate for people and plants. Svensson has two business areas; Climate screens which specializes in climate solutions to greenhouses all over the world and Interior textiles that specializes in solutions that will create a better working climate for people regarding light and sound. Interior textiles produce curtains, upholstery, and solar control. Ludvig Svensson is a B2B company.

Product-related or management system-related certifications:

ISO 9001:2015, ISO 14001:2015, Oeko-tex 100 class II-IV and EU ecolabel

Name and location of production site:

AB Ludvig Svensson, Kinna, Sweden.

Product information

Product name: Fabric made of Trevira CS polyester.

Product identification: Grain and Salt are the articles covered in this EPD. Values are representative for Grain in the calculations due to sales volumes.

UN CPC code: 267

Geographical scope: Sweden

Product description:

The fabrics are used for curtains and the upholstering furniture in the public areas such as meeting rooms, hotels, hospitals, and transport (both marine and on the road). All products are flame retardant. Technical specifications as below. More details can be found at:

<https://www.ludvigsvensson.com/sv/interior-textiles/produkter/haengande-textil/>

Technical specification

Please use the QR code below for the latest information.

GRAIN Hanging fabrics

Design by: Inger Högberg
Width: 300 cm
Weight: 190 g/m²
Material: Trevira CS 100%
Shrinkage: 2 %

Color fastness:
Against light according to EN ISO 105-B02
 - ≥ 5-7 (Scale 1-8)
Against washing according to EN ISO 105-C06
 - ≥ 5 (Scale 1-5)

Flame retardancy:
 - BS 5867:
 - DIN 4102-1 class B1
 - IMO FTP Code Part 7
 - UNI 9177, Class 1
 - EN 13773, Class 1
 - EN 13501-1, B-s1, d0
 - NFPA 701
 - UNI 8456/8457

Acoustics:
 Measurement of sound absorption in a reverberation room: EN ISO 354:2003. Ration of sound absorption EN ISO 11654:1997: w = 0,60, Class C

Care instructions:



Certificates:



For further information:

Svensson
 511 82 Kinna, Sweden
 T: +46 320 20 92 00
 F: +46 320 21 10 10
 E: info@ludvigsvensson.com



SALT Hanging fabrics

Width: 300 cm
Weight: 190 g/m²
Material: Trevira CS 100%
Shrinkage: 2 %

Color fastness:
Against light according to EN ISO 105-B02
 - ≥ 5 - 7 (Scale 1-8)
Against washing according to EN ISO 105-C06
 - ≥ 5 (Scale 1-5)

Flame retardancy:
 - BS 5867-2 Type B 2019 - DIN 4102-1 B1 2019 - IMO FTP Code 2010:
 - DIN 4102-1 B1 2019
 - IMO FTP Code 2010: Part 7 2019
 - NF P 92-503-507, M1 2019
 - EN 13773, Class 1 2019
 - EN 13501-1, Class B-s1, d0 2019
 - UNI 8456/8457

Care instructions:



For further information:

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LCA information

Declared unit: 1 m²
Reference service life: N/A
Time representativeness: Eco invent 3.8 for generic data and 2022 for specific data.

Database(s) and LCA software used:
 Ecoinvent 3.8 and SimaPro version 9.4

Data quality: 100% of the raw materials used in the product is modelled using specific data received from the supplier. This data refers to the production of staple fibres. For products containing filament fibres, staple fibre data is used as a proxy.

System diagram:
 According to PCR.

Description of system boundaries:
 cradle-to-gate with module C1-C3

Upstream, A1: In this stage the raw material is included with specific data from Svensson suppliers. **Core A2+A3 (Manufacturing Sweden):** This stage includes transport of raw yarn to Kinna Sweden. The raw yarn is then treated according to Svenssons internal manufacturing process in the factory in Kinna, Sweden. Specific data has been used. **Downstream C1-C3:** The waste of fabric is assumed to be incinerated in Sweden to produce electricity and heat.

Excluded lifecycle stages:
 Forming stage (A4 - A5) and use stage (B1- B2) are excluded due to very low emissions and uncertainty how the fabric is used.

More information:
 According to PCR, residual mix of electricity has been used both for all suppliers. This gives a higher environmental impact than if country specific data was used.

Generally, the LCA data should be used with precaution if interpreted for any other purpose than this EPD.

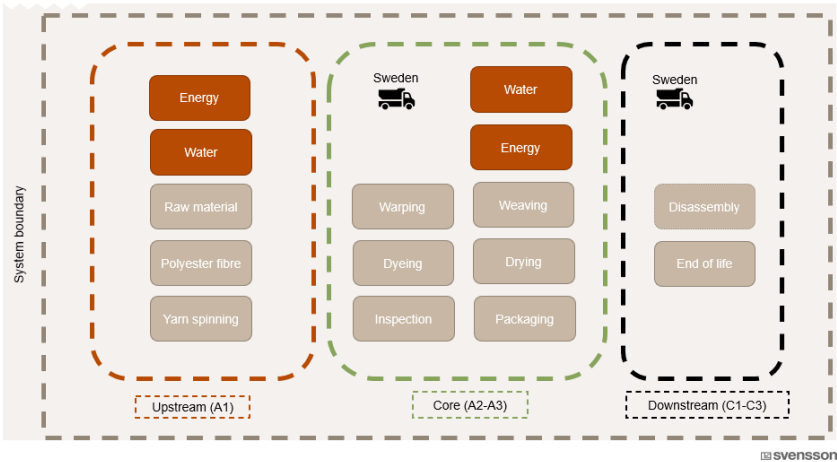
Emissions from wastewater is from entire production site in Kinna, dyeing and finishing of textiles of wool and polyester yarn and fabrics.

Waste from core process is allocated from all production.

Cut-off rules:
 Less than 1% environmental relevance.

Allocation rules: In this assessment physical allocation is done as far as possible. When other allocations are used, it is expressed if it may be significant to the results.

LCA practitioner: Erica Delersjö
erica.delersjo@ludvigsvensson.com



Content declaration

Product

Product components	Weight [g/m2]	Post-consumer material [weight %]	Renewable material [weight %]	Environmental/hazardous properties [weigh %]
Polyester yarn*	190	0	0	0

* 2 % of dyestuff is the highest amount dye stuff used. 98-100% stays in the fabric. The calculation is 2 % as a worst-case scenario

Packaging

Distribution packaging: The finished fabric is either folded or rolled. 70% folding, folded into a cardboard box, 30% on paper roll with plastic wrapping.

Consumer packaging: N/A

Recycled material: 100% of the cardboard is recycled. 10% of the plastic wrapping comes from recycled source. Paper tubes are reused three times with Svensson customer.

The raw materials and packaging do not contain substances that are regulated in the Reach legislation and SVHC and the Candidate List of SVHC



Results of the environmental performance indicators

Impact category indicators for GRAIN

PARAMETER		UNIT	Upstream	Core			Downstream			TOTAL
			A1 Raw material	A2 Transport	A3 Manufacturing	C1 Disassembling	C2 Transport to final disposal	C3 Final disposal		
Global warming potential (GWP)	Fossil	kg CO ₂ eq.	1,72E+00	6,87E-02	5,43E-01	0,00E+00	1,76E-03	4,35E-01	2,77E+00	
	Biogenic	kg CO ₂ eq.	8,98E-03	5,91E-05	9,33E-03	0,00E+00	1,61E-06	1,65E-02	3,49E-02	
	Land use and land transformation	kg CO ₂ eq.	1,20E-03	3,39E-05	1,16E-04	0,00E+00	8,67E-07	1,50E-06	1,35E-03	
	TOTAL	kg CO ₂ eq.	1,73E+00	6,88E-02	5,52E-01	0,00E+00	1,76E-03	4,51E-01	2,80E+00	
Acidification potential (AP)		kg mol H ⁺ eq.	5,64E-03	2,99E-04	9,72E-04	0,00E+00	3,84E-06	1,17E-04	7,03E-03	
Eutrophication potential (EP)	Aquatic freshwater	kg P eq.	3,60E-04	4,70E-06	3,55E-05	0,00E+00	1,25E-07	6,05E-07	4,01E-04	
	Aquatic marine	kg N eq.	1,25E-03	9,52E-05	2,85E-04	0,00E+00	9,68E-07	7,00E-05	1,70E-03	
	Aquatic terrestrial	mol N eq.	1,16E-02	1,02E-03	2,27E-03	0,00E+00	9,84E-06	6,29E-04	1,55E-02	
Photochemical oxidant creation potential (POCP)		kg NMVOC eq.	6,42E-03	3,84E-04	1,19E-03	0,00E+00	5,96E-06	1,76E-04	8,18E-03	
Ozone layer depletion (ODP)		kg CFC 11 eq.	3,26E-06	1,48E-09	1,38E-08	0,00E+00	3,82E-11	3,07E-10	3,28E-06	
Abiotic depletion potential (ADP)	Metals and minerals	kg Sb eq.	6,97E-06	2,14E-07	1,77E-06	0,00E+00	5,74E-09	9,92E-09	8,97E-06	
	Fossil resources	MJ net calorific value	3,25E+01	9,69E-01	2,93E+01	0,00E+00	2,49E-02	7,11E-02	6,28E+01	
Water deprivation potential (WDP)		m ³ world eq.	5,98E-01	3,88E-03	-1,12E-01	0,00E+00	1,03E-04	9,73E-04	4,92E-01	

* 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 voluntary parameters

PARAMETER	UNIT	Upstream	Core			Downstream			TOTAL
		A1 Raw material	A2 Transport	A3 Manufacturing	C1 Disassembling	C2 Transport to final disposal	C3 Final disposal		
Particulate matter	disease inc.	4,05E-08	5,33E-09	1,34E-08	0,00E+00	1,31E-10	1,07E-09	6,04E-08	
Ionising radiation	kBq U-235 eq	1,61E-01	1,27E-03	1,71E+00	0,00E+00	3,37E-05	1,18E-04	1,88E+00	
Ecotoxicity, freshwater - part 1	CTUe	2,79E+00	3,53E-01	1,06E+00	0,00E+00	9,09E-03	2,54E-01	4,46E+00	
Human toxicity, cancer	CTUh	5,29E-10	3,11E-11	1,75E-10	0,00E+00	8,00E-13	7,46E-11	8,11E-10	
Human toxicity, non-cancer	CTUh	1,21E-08	6,68E-10	2,92E-09	0,00E+00	1,77E-11	9,14E-10	1,67E-08	
Land use	Pt	4,71E+00	5,59E-01	4,90E-01	0,00E+00	1,51E-02	1,28E-02	5,78E+00	



Resource use indicators

CED method

PARAMETER		UNIT	Upstream	Core		Downstream			TOTAL
			A1 Raw material	A2 Transport	A3 Manufacturing	C1 Disassembling	C2 Transport to final disposal	C3 Final disposal	
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value	7,78E-01	1,47E-02	1,75E-01	0,00E+00	3,92E-04	1,69E-03	9,70E-01
	Used as raw materials	MJ, net calorific value	6,87E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,87E-01
	TOTAL	MJ, net calorific value	1,47E+00	1,47E-02	1,75E-01	0,00E+00	3,92E-04	1,69E-03	1,66E+00
Primary energy resources – Non-renewable	Use as energy carrier	MJ, net calorific value	2,83E+01	9,69E-01	2,93E+01	0,00E+00	2,49E-02	7,11E-02	5,86E+01
	Used as raw materials	MJ, net calorific value	4,20E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,20E+00
	TOTAL	MJ, net calorific value	3,25E+01	9,69E-01	2,93E+01	0,00E+00	2,49E-02	7,11E-02	6,28E+01

Other environmental performance indicators

Waste is included in the LCA model. There are no waste output flows outside the boundary system.



References

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

PCR 2022:04. Fabrics 1.01

Life cycle assessment of Trevira CS fabrics by AB Ludvig Svensson, 2024-01 -26



