



Seglarjacka

Raincoat “Seglarjacka” by Farmerrain

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 for:

Svenska Regnkläds Aktiebolaget, Käsämäla 106, 36192 Emmaboda, Sweden

Fibre used in jacket: 100% recycled polyester

Programme:

Programme operator:

EPD registration number:

Publication date:

Valid until:

The International EPD® System, www.environdec.com

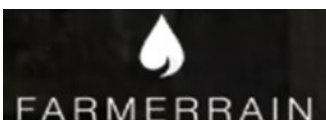
EPD International AB

S-P-05125

2022-01-10

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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
E-mail:	info@environdec.com

<p>Product category rules (PCR): PCR 2019:04. Jackets, coats and other similar outdoor garments, version 1.02, the International EPD System, Date 2020-03-04</p>
<p>PCR review was conducted by: The Technical Committee of the International EPD® System. Chair: Hüdai Kara. Contact via info@environdec.com</p>
<p>Independent third-party verification of the declaration and data, according to ISO 14025:2006:</p> <p><input type="checkbox"/> EPD process certification <input checked="" type="checkbox"/> EPD verification</p>
<p>Third party verifier: Martyna Mikusinska, Sweco Environment AB, Martyna.Mikusinska@sweco.se, +46 (0)19-168178</p> <p>Approved by: The International EPD® System</p>
<p>Procedure for follow-up of data during EPD validity involves third party verifier:</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>LCA practitioner: Annie Johansson, Miljögiraff AB</p> 

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but from different programs may not be comparable.

Company information

Owner of the EPD:

Farmerrain / Svenska Regnkläds Aktiebolaget

Contact:

Jonas Carlsson

Email: info@farmerrain.com

Phone: +46 471-22 065

Description of the organisation:

Farmerrain is a traditional family-owned company which has made high quality specialist rainwear since 1992. We combine our skill, experience, sense of functionality and style in order to create timeless rainwear garments for work and leisure. Quality is the most important criterion for Farmerrains Rainwear in general and is the trademark's DNA.

Product information

Product name:

Seglarjacka

Product description:

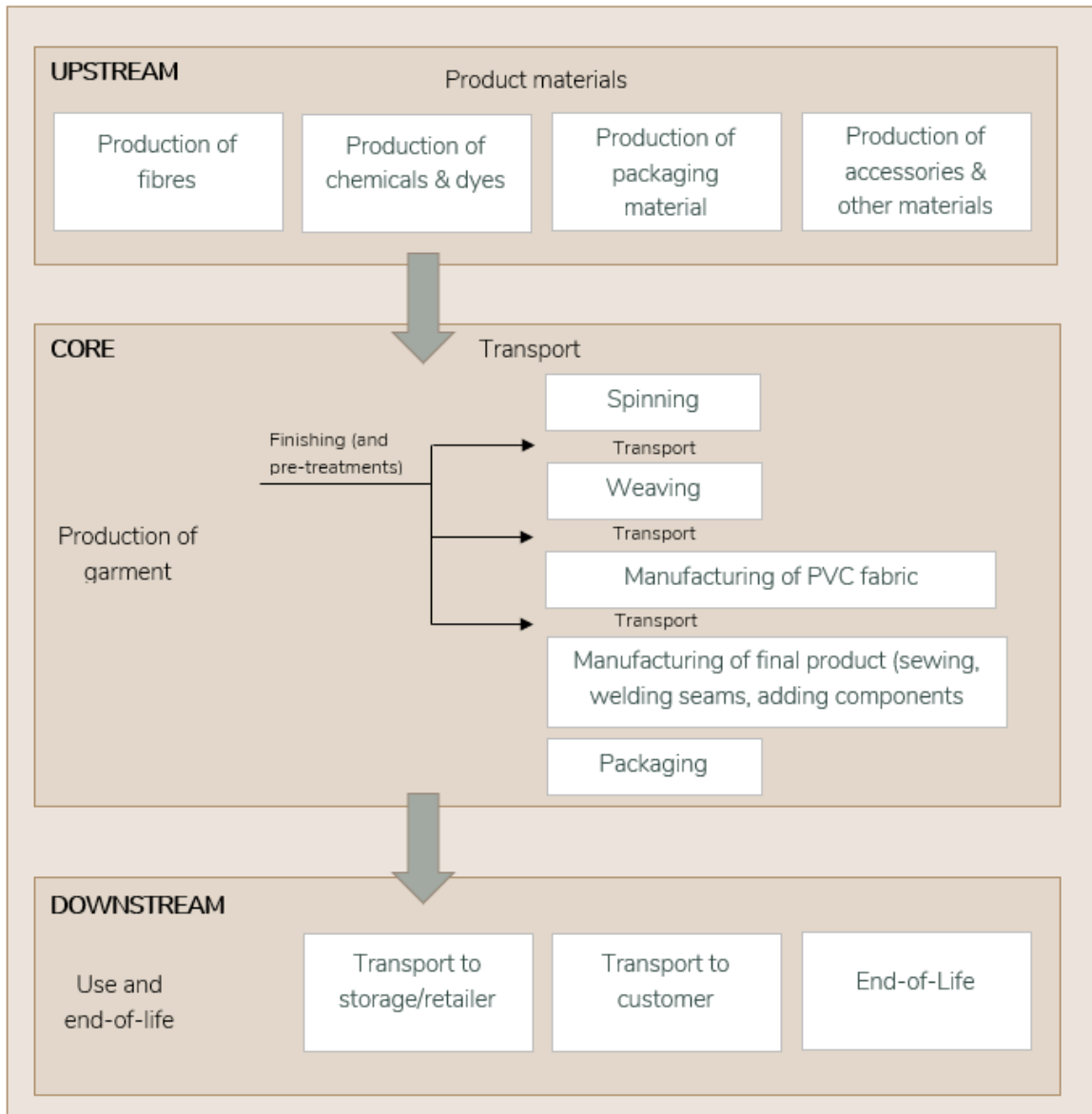
The raincoat "Seglarjacka" from Farmerrain is made from recycled polyester backing and biobased PVC. The biobased PVC does not contain any phthalates, which are commonly used as plasticizers in PVC. The fabric is unique with a high standard and it is oil resistant. The water pillar is over 20 000mm and the fabric is tested for Oekotex. The raincoats are distributed to customers in Europe.

LCA information

Declared Unit	One raincoat
Reference Service Life (RSL)	The raincoat is estimated to have a lifetime of 30 years ¹ .
Product category classification	UN CPC 282
Goal	The result will be used to understand the environmental impact of the product from a cradle to gate perspective (excluding usage). The purpose is to use the results to find opportunities for improving the environmental performance of the product through product development. The result are to be communicated externally to customers.
Scope	Cradle to grave (excluding usage phase)
Time representativeness	Data represent the year 2020
Garment manufacturer (location)	Garda Rainwear of Poland, ul.Przechodnia 5 06-100 Pultusk, Poland
Geographical Area	Europe
Compliant with	This EPD follows the "Book-keeping" LCA approach which is defined as an attributional LCA in the ISO 14040 standard. In accordance with ISO 14025, ISO 14040 – ISO 14044 This EPD follows the Product Category Rules Jackets, coats and other similar outdoor garments
Cut-Off Rules	The procedure below is followed for the exclusion of inputs and outputs according to the ISO14044 standard and PCR 2019:04: - In the case of insufficient input data or data gaps for a unit process, the cutoff criterion is 1 % of renewable and non-renewable primary energy usage and 1 % of the total mass input to that unit process. - The maximum neglected input flows per declared module is 1 % of energy usage and mass. Packaging of incoming raw materials used for making the components is not modelled in accordance with the PCR. Capital goods are not included (Machines and facilities) as per PCR specifications.
Allocation	Polluter Pays / Allocation by Classification 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 manufacturing is allocated in kWh by total production of the declared unit
Background Data	The background data is from ecoinvent 3.6
Electricity data	Electricity consumption in the core module is average Swedish medium voltage market mix, Swedish renewable energy from hydro power and average Polish medium voltage market mix
LCA software	SimaPro 9.1
Average or specific EPD	Specific

¹ Estimated by Farmerrain (Carlsson, 2021). Farmerrain has a museum of old products of similar material with a lifetime exceeding 50 years. The technical specifications Farmerrain has on the materials fulfil 30 years.

System diagram:



The raincoat can be washed with just water but also with soap. It difficult to assess how and how many times a raincoat is washed since it is highly dependent on how and where it is used. It can be washed as a minimum of 1-2 times during 30 years and an estimated maximum of once a month during the 30 years. In this study the usage phase is excluded, which is in accordance with the PCR.

Content information

The content declaration for the product Seglarjacka from Farmerrain.

Product components	Unit (kg)	Material composition
Bio vinyl	1,05	88% bio PVC, 12% polyester fabric (100% recycled PET, from PET bottles, post-consumer)
Buttons	0,021	100% brass
String	0,003	100% polyester
Elastic string	0,005	100% polyester

The product does not contain any Substances of Very High Concern (SVHC). SVHC and the Candidate List of SVHC are available via the European Chemicals Agency. Additionally, the bio vinyl does not contain any phthalates, which are commonly used as plasticizers in PVC.

Packaging

Distribution packaging: PE packaging film, Euro pallet and steel stripes are used for transports of product to Emmaboda.

Consumer packaging: PE packaging film is used for packaging of the end products.

Recycled material

Provenience of recycled materials (pre-consumer or post-consumer) in the product:

The polyester used in the polyester fabric is recycled from PET bottles.

Environmental Information

Potential environmental impact – mandatory indicators according to EN 15804

Some numbers are presented in scientific notation, example: 5,2E-03 equals 0,0052

Impact category		Unit	Upstream	Core	Downstream	TOTAL
Global Warming potential (GWP)	Fossil	kg CO2 eq.	2,97	0,955	1,93	5,86
	Biogenic	kg CO2 eq.	-0,642	0,0420	0,554	-0,0462
	Land use and land transformation	kg CO2 eq.	0,00179	0,00861	0,000284	0,0107
	TOTAL	kg CO2 eq.	2,33	1,01	2,49	5,82
Depletion potential of the stratospheric ozone layer (ODP)		kg CFC 11 eq.	9,76E-07	7,6E-08	1,24E-07	1,18E-06
Acidification potential (AP)		kg SO2 eq.	0,0192	0,00425	0,00328	0,0268
Eutrophication potential (EP)		kg PO43- eq.	0,00748	0,00205	0,000794016	0,0103
Photochemical oxidant formation potential (POCP)		kg NMVOC eq.	0,0100	0,00299	0,00283	0,0158
Abiotic depletion potential – Elements		kg Sb eq.	0,00332	9,85319E-06	1,17377E-05	0,00334
Abiotic depletion potential – Fossil resources		MJ, net calorific value	50,1	10,6	7,16	67,8
Water scarcity potential		m3 eq.	1,24	0,134	0,217	1,59

Use of resources

The consumption of resources in terms of energy is measured as primary energy demand with the method CED 1.11.

Parameter		Unit	Upstream	Core	Downstream	TOTAL
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value	5,43	2,35	0,435	8,22
	Used as raw materials	MJ, net calorific value	11,2	0,00717	0,00	11,2
	TOTAL	MJ, net calorific value	16,6	2,36	0,435	19,4
Primary energy resources – Non-renewable	Use as energy carrier	MJ, net calorific value	63,6	12,2	8,06	83,8
	Used as raw materials	MJ, net calorific value	0,00	0,0653	0,00	0,0653

	TOTAL	MJ, net calorific value	63,6	12,2	8,06	83,9
Secondary material		kg	0,519	0,00	0,00	0,519
Renewable secondary fuels		MJ, net calorific value	2,54	0,135	0,00	2,67
Non-renewable secondary fuels		MJ, net calorific value	0,00	0,00	0,00	0,00
Net use of fresh water		m ³	0,0816	0,00760	0,0995	0,189

Waste production and output flows

The production of waste in terms of final waste and the output of materials for recycling, is measured from the calculation of selected inventory results. Final waste and output flows, refers to flows that are leaving the system of the LCA.

Waste production:

Indicator	Unit	Upstream	Core	Downstream	TOTAL
Hazardous waste	Kg	0,02	0,00	0,00	0,02
Non-Hazardous waste	Kg	0,0158	0,00	0,00	0,0158
Radioactive waste	Kg	0,00007	0,00	0,00	0,00007

Output flows:

Indicator	Unit	Upstream	Core	Downstream	TOTAL
Components for reuse	kg	0,00	0,00	0,00	0,00
Material for recycling	kg	0,0104	0,00	0,021	0,0314
Materials for energy recovery	kg	0,00028	0,00	0,00	0,00028
Exported energy, electricity	MJ	0,00	0,00	0,00	0,00
Exported energy, thermal	MJ	0,00	0,00	0,00	0,00

References

Carlsson, J. (Farmerrain). (2021) jonas@farmerrain.com

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