

EPD – ENVIRONMENTAL PRODUCT DECLARATION

**IN ACCORDANCE WITH ISO 14025 FOR:
GREEN SHORTS 2690 GRN AND SHORTS 2137 DCS**

GENERAL INFORMATION

OWNER OF THE EPD:

Fristads AB Prognosgatan 24, 501 11 Borås, Sweden
Contact person: Lene Jul, Product Management Director,
lene.jul@fristads.com
www.fristads.com

NAME AND LOCATION OF PRODUCTION SITE:

Laos

PROGRAMME:

The International EPD® System
www.environdec.com

PROGRAMME OPERATOR:

EPD International AB

EPD REGISTRATION NUMBER: S-P-01700

PUBLICATION DATE:

2019-10-21

VALIDITY DATE:

2024-10-21

GEOGRAPHICAL SCOPE:

Global

Prepared with the assistance of RISE IVF AB.

A GREEN REVOLUTION

Fristads Green is much more than a new collection of high quality workwear for craftsmen. Its innovative solutions, smart functionality and outstanding performance are a result of a new concept where design and production are driven by EPD, a verifiable commitment to sustainability. The results are extraordinary – and with an environmental footprint that's smaller than ever, so are the consequences.

EPD – ENVIRONMENTAL PRODUCT DECLARATION

It's called an Environmental Product Declaration - or EPD for short – and its purpose is to show a product's accumulated environmental effect through its life cycle. It's already used in other areas of the textile industry, but with our Fristads Green collection, we're first to innovate and implement it in clothing. Good news for craftsmen, even better news for the environment.



COMMITTED TO SUSTAINABILITY

In 2019 Fristads became the first clothing producer in the world to introduce a new standard for measuring the total environmental impact of a garment – from choice of material to delivery of the finished garment.

With three own factories in Europe and sales in more than 20 countries, there are many people around the world working for us – and we care for each and every one of them. These are fine words of course, and we stand firmly behind them. Injustices, unreasonable working hours, low wages, corruption – these are all issues that we resist, where we are constantly on our guard. We work hard to exert our influence wherever our products are made.

We have set high requirements for the companies that want to be our suppliers, at all stages. We give consideration to all the details in the chain, from human rights to environmental impact. It's our duty.

Our work with sustainability is based on the 10 principles in the UN's Global Compact, which forms the basis for our Code of Conduct. We respect and promote human rights according to the United Nations Declaration of Human rights and the Core Conventions of the International Labour Organisation. As a member of amfori BSCI (Business Social Compliance Initiative), we pursue a constructive and open dialogue among our business partners and stakeholders to reinforce the principles of a socially responsible business.

We are certified according to ISO 14001 and work constantly to improve our environmental performance. We monitor the use of chemicals in our products throughout our supply chain. Our Restricted Substance List, shared among all suppliers, reflects the latest EU harmonized legislation which includes REACH, pops regulation, Biocide Regulation and Product Safety Regulation, and is updated regularly based on the guidance of our partner RISE, the Swedish Chemical Group. Furthermore, most of our products are OEKO-TEX® certified.

These efforts are rarely visible from the outside. But, we know they make a difference. For this reason, they are extremely important for us as we strive to make a better world to live in, a world we can proudly leave for the generations that follow us.

Read more at fristads.com.



HUMAN RIGHTS,
LABOUR, ENVIRONMENT,
ANTI-CORRUPTION



SOCIAL COMPLIANCE



CHEMICAL REGULATIONS



EPD

ENVIRONMENTAL PRODUCT DECLARATION

By developing an EPD, Fristads aims to contribute to positive change and greater transparency when it comes to environmental impact.

The Fristads Green concept presents the first EPD certified garments in the world. Fristads Green is the world's first clothing line with an Environmental Product Declaration (EPD).



THE WORLD'S FIRST EPD FOR CLOTHING

Fristads objective is to contribute to a longterm, sustainable and transparent measuring tool for environmental impact – a standard that can be used throughout the textile industry.

An Environmental Product Declaration (EPD) is an independently verified and registered document that communicates transparent and comparable information about the life cycle environmental impact of products. The relevant standard for Environmental Product Declarations is ISO 14025, where they are referred to as "Type III environmental declarations". A Type III environmental declaration is created and registered in the framework of a programme, such as the International EPD® System.

The International EPD® System has, as a main objective, the ambition to enable and support organisations in any country to communicate quantified environmental information on the life cycle of their products in a credible, comparable, and understandable way. All EPDs registered in the International EPD® System are publically available and free to download on this website: www.environdec.com.

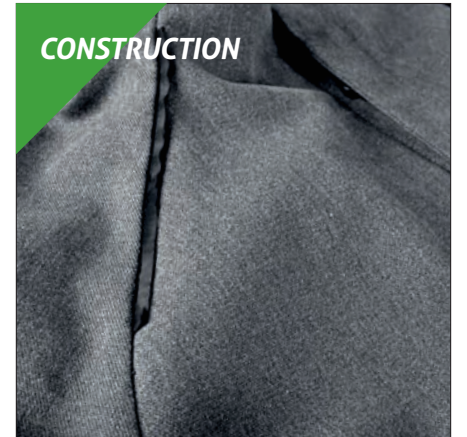
EPD®



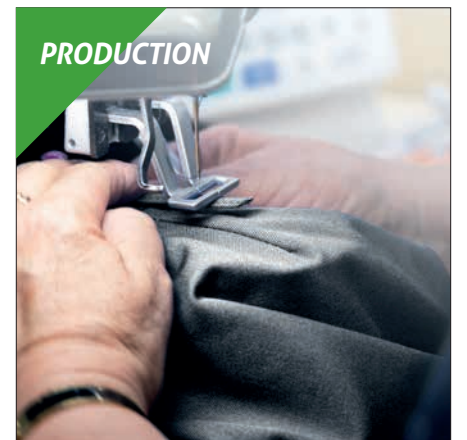
MATERIAL



CONSTRUCTION



PRODUCTION



DELIVERY



**REDUCES WATER
CONSUMPTION
BY 75%**



e.dye® – THE WATERLESS COLOURING SYSTEM

e.dye is a solution dyed polyester color system with over 2,500 colors and a sophisticated color-matching process for textiles. Solution dyeing means putting color inside the masterbatch chips, melt spun and extruded into yarn in color, instead of extruding raw white yarn that is later dyed in traditional water dye process.

With over 20 years of experience, e.dye Ltd has the R&D and knowhow to offer customers a wide range of support and value added services that provide a competitive edge.

By controlling the entire supply chain, they make their own recipe by producing their masterbatch 100% in-house. This is then sent throughout the supply chain with clear instructions for the best end result

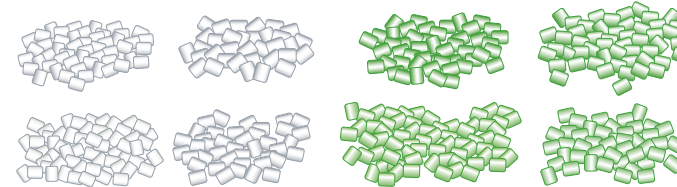
on fabric ready for Gmt production. They ensure that quality meets the highest standards. e.dye® Waterless Color System™ offers an environmentally sustainable process for dyeing fabrics. Using the solution dyed polyester process, e.dye® requires no water to dye synthetics. By adding the color before the polymers are extruded, the color is inside the yarn, resulting in superior color performance. e.dye is a solution dyed polyester color

system with over 2,500 colors and a sophisticated color-matching process for garment textiles.

e.dye is a paradigm shift in textile dyeing, because e.dye actually puts the color inside the yarn.

THIS IS THE e.dye TECHNIQUE

WHAT IS e.dye?

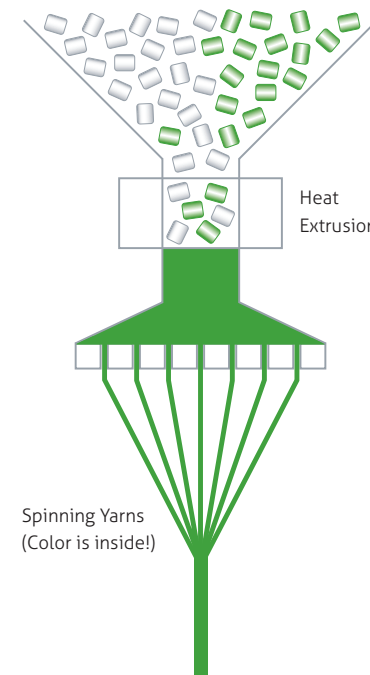


Raw stock PET or rPET
Lusters available: bright, semidull and full dull. Up to 95% recycled. GRS Certified.

Masterbatch Colors - in stock
Made in-house by e.dye, according to a recipe tied to 2,500 colors in the e.dye Color Bank.



Dosing Masterbatch and raw white PET



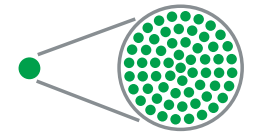
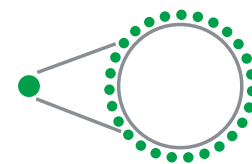
Spinning Yarns
(Color is inside!)

This process eliminates water consumption and reduces chemical use, energy consumption and CO₂ emissions.

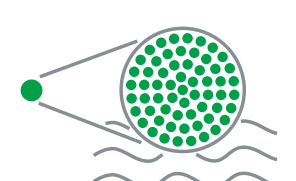
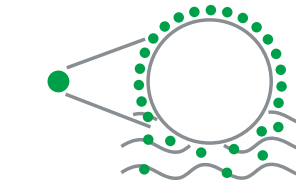
WHY IS e.dye BETTER?

Traditional Piece Dye
Color is outside - of the surface of the yarn filament.

e.dye® Waterless Color System™
Color is inside - evenly dispersed throughout the entire yarn filament.



Wash Fastness

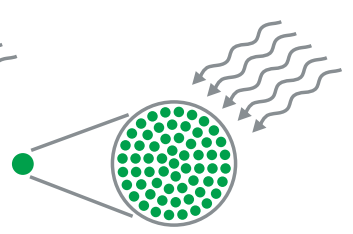
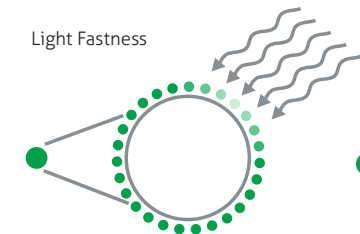


x2
x8
x12
x60
x130



x2
x8
x12
x60
x130

Light Fastness



2hrs
10hrs
30hrs
100hrs
500hrs



2hrs
10hrs
30hrs
100hrs
500hrs

THE WORLD'S FIRST SHORTS WITH AN EPD



Buttons made of raw finished metal alloy, using a metal treatment method that cuts water consumption

Most of the zipper is made of recycled polyester

Clean design involving minimal details and smart solutions; saves energy in production and facilitates recycling of the material

Special design featuring advanced folding and fewer stitches – reduces sewing time, cuts usage of thread and avoids unnecessary waste

Made of recycled polyester and undyed cotton. The polyester is dyed using the e.dye® system which reduces water consumption by 75%

Outline logo embroidery made with few stitches to reduce sewing time and thread usage

All surplus material from production is utilised on site and turned into "comfort pads" – a bonus product for knees



GREEN SHORTS 2690 GRN

Article no 130018

Part of Fristads Green collection / Screw buttons in raw metal / CORDURA® reinforced loose hanging pockets, 1 with 3 smaller pockets and tool loops, D ring and 1 with 1 extra pocket / 2 front pockets / 2 back pockets with flap / Double reinforced crotch seam / Hammer loop / CORDURA® reinforced folding rule pocket, button and loop for sheath knife / Thigh pocket with flap / e.dye® / With EPD (Environmental Product Declaration) / OEKO-TEX® certified.

MATERIAL 65% recycled polyester, 35% cotton. **WEIGHT** 360 g/m². **COLOUR** 896 Grey/Black. **SIZE** C44-C66.



GREEN SHORTS 2690 GRN AND SHORTS 2137 DCS

The Green shorts 2690 GRN are constructed from a dope-dyed cotton/ recycled polyester fabric. The comparison product Shorts 2137 DCS are from piece-dyed cotton/polyamide/polyester fabric.

GARMENT NAME	STYLE NO	DESCRIPTION
Green shorts 2690 GRN	130018	Shorts: Green collection, dope dyed
Shorts 2137 DCS	126530	Shorts: Comparison product



GREEN SHORTS 2690 GRN

Art no 130018



SHORTS 2137 DCS

Art no 126530

LCA INFORMATION

– LIFE CYCLE ASSESSMENT

Life Cycle Assessment is a method for analysing the environmental impact of a product throughout its life-cycle, from the extraction of raw materials (the cradle) to handling the waste (the grave).

GOAL OF THE STUDY

An LCA study has been conducted in accordance with ISO 14044 and the requirements stated in the General Programme Instructions by The International EPD® System¹. The goal of the present LCA study has been to calculate environmental impact values for Fristads' Shorts 2690 GRN and Shorts 2137 DCS to create this Environmental Product Declaration, to be used for communicating environmental performance to customers.

SCOPE OF THE STUDY

The scope of this study is cradle to gate and includes all processes up until the pair of shorts are manufactured, see Figure 1. All material and resource consumption is tracked back to the point of raw material extraction, mainly by using cradle-to-gate data² from the Ecoinvent database. The functional unit of the study is 1 (one) garment, in accordance with the Product Category Rules (PCR)³.

DATA COLLECTION

The inventory for the LCA study was carried out during 2019, collecting data for 2018 and 2019. The data for the textile processing is provided by the Fristads' suppliers. Data for confectioning was collected by Fristads' staff.

ALLOCATION

Whenever it has been necessary to partition the system inputs and outputs, mass criteria have been used in accordance with the PCR. Such situations have for example been when the share of energy and water consumption of an entire production plant has been allocated to the specific fabric based on the total production volume (mass) of the plant.

CUT-OFF RULES

The PCR states that life cycle inventory data for a minimum of 99 % of total inflows to the three life cycle stages (up-stream, core and downstream modules) shall be included and a cut-off rule of 1% regarding energy, mass and environmental relevance shall apply.

ASSUMPTIONS AND LIMITATIONS

Some general assumptions have been made around transport vehicles to enable use of database data from Ecoinvent⁴ to represent primary data. Country electricity mix datasets have been used for electricity when the site reports that they use the country electricity net.

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

DATA QUALITY

The data quality has been considerably increased by the experience from making a similar study in the past⁵.

ADDITIONAL INFORMATION ABOUT THE LCA STUDY

TIME REPRESENTATIVENESS:

2018-2019

DATABASE(S) AND LCA SOFTWARE USED:

SimaPro version 9.0.0.48⁶
ecoinvent version 3.5⁷

DESCRIPTION OF SYSTEM BOUNDARIES:

cradle-to-gate

LCA PRACTITIONER:

Sandra Roos, RISE
PO Box 104, SE-431 22 Mölndal, Sweden

THIRD PARTY REVIEWER:

Marcus Wendin, Miljögiraff AB, Övre Hövik 25b,
SE-430 84 Göteborg, Sweden

SYSTEM DIAGRAM

The system boundaries of this EPD are decided by the Product Category Rules (PCR) and illustrated by Figure 1.

Garment manufacturing, retail, use and end-of-life processes are not included. The only downstream process included in the system boundary, the transport to the customer, was found to give a negligible contribution to the environmental impact (<1% for all categories). Therefore, the downstream phase is not reported separately.

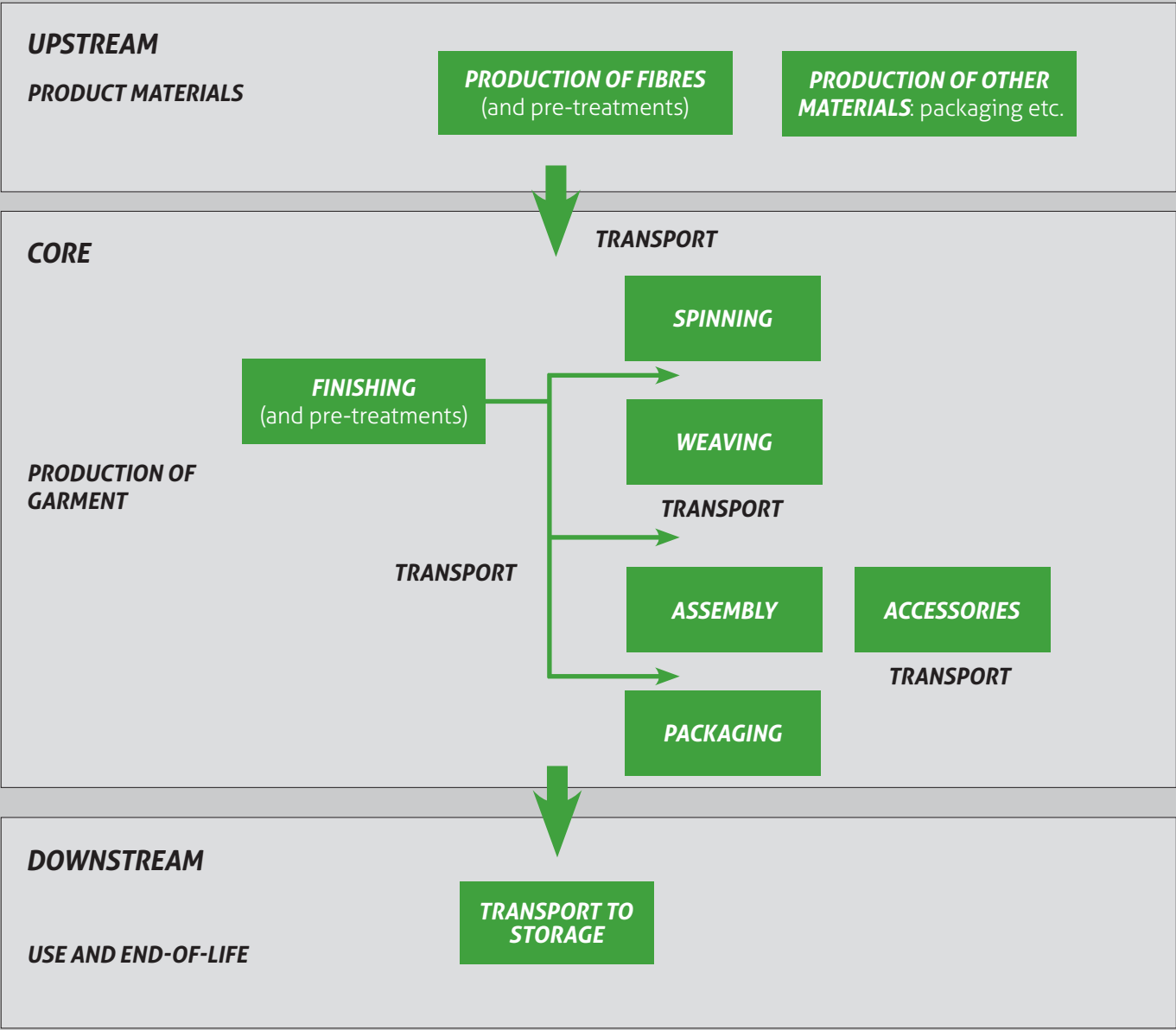


Figure 1. The system boundaries include upstream, core and downstream processes.

¹ EPD International, 'General Programme Instructions for the International EPD® System Version 3.0' (2017) <www.environdec.com>.
² Cradle-to-gate = all processes from cradle (mining site, forest etc.) to gate (until the goods is produced and ready for delivery at the factory gate).
³ EPD International, 'PCR 2019:06. Trousers, Shorts and Slacks and Similar Garments: UN CPC 282. Product Category Rules According to ISO 14025. Version 1.01' (2019).
⁴ Ecoinvent, 'Ecoinvent' <<https://www.ecoinvent.org/database/database.html>>.
⁵ EPD International, 'EPD GREEN CRAFTSMAN TROUSERS 2538 GRN AND TROUSERS 232 LUXE. EPD Registration Number S-P-01536.' (2019)
⁶ PRé Consultants, 'SimaPro 8.5' <<http://www.pre-sustainability.com/simapro>>.
⁷ Ecoinvent, 'Ecoinvent' <<https://www.ecoinvent.org/database/database.html>>.

CONTENT DECLARATION

GREEN SHORTS 2690 GRN

MATERIALS	UNIT	%	ENVIRONMENTAL / HAZARDOUS PROPERTIES
Main fabric 8615 mélange dope dye		87%	65% recycled polyester, 35% cotton
Trims for pockets		8%	100% polyamide
Interlining		0.01%	100 % cotton
Thread polyester		0.3%	100% polyester
Care and size labels		2%	100% polyester
Paper trims		2%	100% paper

SHORTS 2137 DCS

MATERIALS	UNIT	%	ENVIRONMENTAL / HAZARDOUS PROPERTIES
DCS fabric		83%	73% cotton, 17% polyamide, 8% elastomultiester, 2% elastane
Trims for pockets and details		9%	100% polyamide
Trim fabric		3%	65% polyester, 35% cotton
Interlining		0.01%	100 % cotton
Thread polyester		0.3%	100% polyester
Care and size labels		2%	100% polyester
Paper trims		2%	100% paper

PRODUCT

Our garments are OEKO-TEX® certified at garment level and we have a well-established programme to monitor chemical safety compliance. OEKO-TEX® certification together with suppliers ensures that the level of substances are not exceeded, in accordance with the European Regulations on substances and preparations.

PACKAGING

Distribution packaging: Cardboard box
Consumer packaging: Plastic bag (polyethylene)

RECYCLED MATERIAL

Provenience of recycled materials (pre-consumer or post-consumer) in the product:
The polyester in the 8615 fabric is recycled post-consumer waste. The claim is certified by the Global Recycled Standard (GRS).

ENVIRONMENTAL PERFORMANCE

The only downstream process included in the system boundary, the transport to the customer, was found to give a negligible contribution to the environmental impact (<1% for all categories). Therefore, the downstream phase is not reported separately but is included in the total figure.

POTENTIAL ENVIRONMENTAL IMPACT

PARAMETER		UNIT	TROUSERS	UPSTREAM	CORE	TOTAL
Global warming potential (GWP)	Fossil	kg CO ₂ eq.	2690 GRN	4.56	8.15	12.71
			2137 DCS	7.87	10.95	18.82
	Biogenic	kg CO ₂ eq.	2690 GRN	0.38	0.60	0.98
			2137 DCS	0.31	0.76	1.07
	Land use and land transformation	kg CO ₂ eq.	2690 GRN	0.02	0.02	0.05
			2137 DCS	0.03	0.17	0.20
	TOTAL	kg CO ₂ eq.	2690 GRN	4.96	8.78	13.73
			2137 DCS	8.21	11.88	20.09
Acidification potential (AP)		kg SO ₂ eq.	2690 GRN	0.028	0.030	0.058
			2137 DCS	0.048	0.046	0.094
Eutrophication potential (EP)		kg PO ₄ ³⁻ eq.	2690 GRN	0.012	0.018	0.030
			2137 DCS	0.019	0.014	0.033
Formation potential of tropospheric ozone (POCP)		kg NMVOC	2690 GRN	0.016	0.025	0.041
			2137 DCS	0.028	0.032	0.060
Water scarcity potential		m³ eq.	2690 GRN	38.34	3.36	41.70
			2137 DCS	78.96	3.66	82.63

USE OF RESOURCES

PARAMETER		UNIT	TROUSERS	UPSTREAM	CORE	TOTAL
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value	2690 GRN	25.74	3.76	29.50
			2137 DCS	48.63	14.16	62.80
	Used as raw materials	MJ, net calorific value	2690 GRN	0	0	0
			2137 DCS	0	0	0
	TOTAL	MJ, net calorific value	2690 GRN	25.74	3.76	29.50
			2137 DCS	48.63	14.16	62.80
Primary energy resources – Non-renewable	Use as energy carrier	MJ, net calorific value	2690 GRN	79	143.4	222.4
			2137 DCS	128.9	138.7	267.6
	Used as raw materials	MJ, net calorific value	2690 GRN	5.7	0.0	5.7
			2137 DCS	16.2	0.0	16.2
	TOTAL	MJ, net calorific value	2690 GRN	84.7	143.4	228.1
			2137 DCS	145.1	138.7	283.8
Secondary material		kg	2690 GRN	0.55	0.00	0.55
			2137 DCS	0	0	0
Renewable secondary fuels		MJ, net calorific value	2690 GRN	0	0	0
			2137 DCS	0	0	0
Non-renewable secondary fuels		MJ, net calorific value	2690 GRN	0	0	0
			2137 DCS	0	0	0
Net use of fresh water		m³	2690 GRN	35.88	0.04	35.92
			2137 DCS	74.81	0.05	74.86

PRODUCT CHARACTERISTICS

The product characteristics are presented in Table 2.

TABLE 2. PRODUCT CHARACTERISTICS

CHARACTERISTIC	TEST METHOD	RESULTS GRN	RESULTS DCS
COMPOSITION	Regulation EU No 1007/2011	65% polyester, 35% cotton	73% cotton, 17% nylon, 8% elastomultiester, 2% elastane
WEAVE	ISO 3572	Panama	Twill
MASS PER UNIT AREA	EN 12127	360 g/m²	322 g/m²
WIDTH	EN 1773	149 cm	127 cm
ABRASION STRENGTH	ISO 12947-2	Over 50000 rubs	50000 rubs
TEAR STRENGTH	ISO 13937-2	Warp: 90 N Weft: 110 N	Warp: 45 N Weft: 31 N
TENSILE STRENGTH	SO 13934-1	Warp: 1900 N Weft: 1600 N	Warp: 1700 N Weft: 450 N
SEAM SLIPPAGE	ISO 13936-2	Warp: 1 mm Weft: 1 mm	Warp: 1 mm Weft: 1 mm
PILLING TEST (MARTINDALE) AFTER 5000 RUBS	EN ISO 12945-2	2-3	3
DIMENSIONAL CHANGE TO WASHING	EN ISO 6330	Warp: -2,0% Weft: -1,0%	Warp: -1,5% Weft: -5,0%
PH OF WATER EXTRACT	EN ISO 3071	5,9	6,77
COLOUR FASTNESS TO ARTIFICIAL LIGHT: XENON ARC FADING LAMP TEST	EN ISO 105 B02	Above 4	3-4
COLOUR FASTNESS TO WASHING	EN ISO 105 C06	Color change: 4-5 Color staining: Acetate 4-5 Cotton 4-5 Nylon 4-5 Polyester 4-5 Acrylic 4-5 Viscose 4-5	Color change: 3-4 Color staining: Acetate 4 Cotton 3-4 Nylon 4-5 Polyester 4 Acrylic 4 Wool 4
ACID AND ALKALINE PERSPIRATION	EN ISO 105 E04	Alkaline and Acidic Color change: 4-5 Color staining: Acetate 4-5 Cotton 4-5 Nylon 4-5 Polyester 4-5 Acrylic 4-5 Viscose 4-5	Alkaline Color change: 4 Color staining: Acetate 4-5 Cotton 4 Nylon 4-5 Polyester 4-5 Acrylic 4-5 Wool 4-5 Acid Color change: 4 Color staining: Acetate 4 Cotton 4-5 Nylon 4-5 Polyester 4-5 Acrylic 4-5 Wool 4
DRY AND WET RUBBING	EN ISO 105 X12	Dry: 4-5 Wet: 4-5	Dry: 4 Wet: 1-2

WASTE PRODUCTION AND OUTPUT FLOWS

WASTE PRODUCTION

PARAMETER	UNIT	TROUSERS	UPSTREAM	CORE	TOTAL
Hazardous waste disposed	kg	2690 GRN	0	0	0
		2137 DCS	0	0	0
Non-hazardous waste disposed	kg	2690 GRN	0.038	0.281	0.319
		2137 DCS	0.057	0.273	0.330
Radioactive waste disposed	kg	2690 GRN	0	0	0
		2137 DCS	0	0	0

The result tables shall only contain values or the letters "INA" (Indicator Not Assessed). It is not possible to specify INA for mandatory indicators. INA shall only be used for voluntary parameters that are not quantified because no data is available.

ADDITIONAL INFORMATION

The water savings (Water Scarcity Footprint) with Green shorts 2690 GRN compared to Shorts 2137 DCS stems mainly from substituting cotton fibres in the upstream processes, which is illustrated in Figure 2.

The Global Warming Potential (GWP) of Green shorts 2690 GRN compared to Shorts 2137 DCS are shown in Figure 3. The lower climate impact stems from using less fossil fuels in the upstream processes (cotton cultivation) as well as core processes.

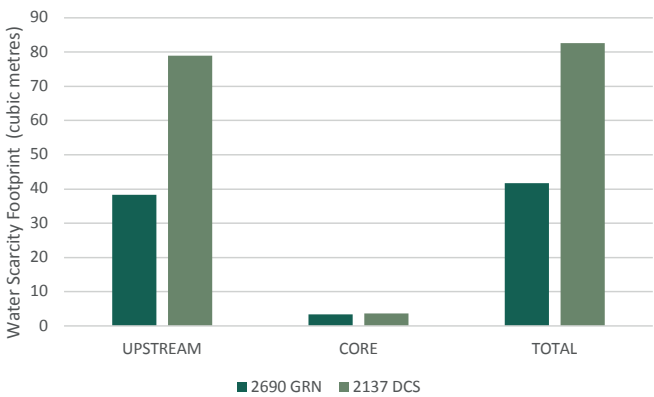


Figure 1. The Water Scarcity Footprint of Green shorts 2690 GRN and Shorts 2137 DCS. Figures for one pair of shorts.

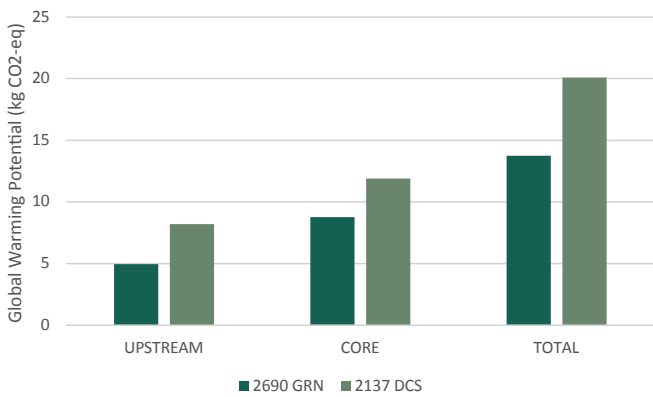


Figure 2. The Global Warming Potential of Green shorts 2690 GRN and Shorts 2137 DCS. Figures for one pair of shorts.



FRISTADS **GREEN** COLLECTION

GARMENTS WITH CARE FOR THE FUTURE

Fristads Green is a concept where the entire manufacturing chain is characterised by environmental awareness and innovative solutions to minimise the environmental footprint.



The materials are recycled polyester and undyed cotton. The polyester is dyed using the e.dye® system where the colour is added to the raw material before it becomes yarn. This reduces water consumption by 75 % compared with traditional dyeing.

The garments are specially designed, featuring advanced folding that reduces sewing time and avoids unnecessary waste.

The garments have a clean design involving minimal details and smart solutions, which saves energy in production and facilitates recycling of the material.

We employ a “zero waste” approach – which means that we reuse all waste material from production. All surplus material is utilised on site and turned into “comfort pads” – a bonus product for elbows and knees.

In order to avoid the use of plastic bags, garments are folded using a special folding technique. This also means they take up less space, allowing us to make optimum use of transport capacity.

All transport is by sea and road, which has significantly less environmental impact than air transport.

PROGRAMME-RELATED INFORMATION AND VERIFICATION

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

Programme:	The International EPD® System EPD International AB Box 210 60 SE-100 31 Stockholm Sweden www.environdec.com
EPD registration number:	S-P-01700
Published:	2019-10-21
Valid until:	2024-10-21
Product Category Rules:	PCR 2019:06. Trousers, Shorts and Slacks and Similar Garments. Version 1.01
Product group classification:	UN CPC 282
Reference year for data:	2018-19
Geographical scope:	Global

Product category rules (PCR): Trousers, shorts and slacks and similar garments, PCR 2019:06, Version 1.01, UN CPC 282.
PCR review was conducted by: The Technical Committee of the International EPD® System. A full list of members available on www.environdec.com. The review panel may be contacted via info@environdec.com. Chair of the PCR review: Hüdaï Kara, Metsims Sustainability Consulting.
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: Marcus Wendin Miljögiraff AB
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

REFERENCES

Anonymous. (2018a). Facility B for weaving and sizing.
 Anonymous. (2018c). Facility D for confectioning.
 Anonymous. (2018d). Facility E for mélange yarn spinning.
 Anonymous. (2018e). Facility F for staple fibre manufacturing.
 Anonymous. (2019). Facility H for fabric wet treatment and finishing.
 EPD International, 'EPD GREEN CRAFTSMAN TROUSERS 2538 GRN AND TROUSERS 232 LUXE. EPD Registration Number S-P-01536.' (2019)
 EPD International, 'General Programme Instructions of the International EPD® System Version 3.0' (2017) <www.environdec.com.>
 EPD International, 'PCR 2019:06. Trousers, Shorts and Slacks and Similar Garments: UN CPC 282. Product Category Rules According to ISO 14025. Version 1.01' (2019)
 Facility A, Smartex Solution Co., Ltd, for masterbatch production, polyester filament yarn manufacturing and knitting.
 Facility J, PangRim Co., Ltd., for fabric wet treatment and finishing
 Ecoinvent, 'Ecoinvent'
 <<https://www.ecoinvent.org/database/database.html>>
 PRé Consultants, 'SimaPro 9.0'
 <<http://www.pre-sustainability.com/simapro>>

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Programme operator:	EPD International AB info@environdec.com