Environmental Product Declaration

In accordance with ISO 14025:2006 for:

1 Recycled paper: KTECH
2 Recycled paper: KPLUS

from

Cartiere Saci Spa

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	S-P-10279
Publication date:	2023-08-07
Valid until:	2028-08-07

1 Recycled paper: KTECH

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TABLE OF CONTENTS

GENERAL INFORMATION

Programme information

Programme:	The International EPD® System EPD International AB Box 210 60 SE-100 31 Stockholm Sweden www.environdec.com info@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
PCR: *PROCESSED PAPER AND PAPERBOARD, 2010:14, version 3.1 valid until 2024-11-18 and UN CPC 3214, 32151*
PCR review was conducted by: *<name and organisation of the review chair, and information on how to contact the chair through the programme operator>*
Life Cycle Assessment (LCA)
LCA accountability: *Leyton Italia Srl*
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☐ EPD verification by individual verifier Third-party verifier: *<name, organisation, and signature of the third-party verifier>* Approved by: The International EPD® System
OR
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ EPD verification by accredited certification body Third-party verification: <RINA Services S.p.A> is an approved certification body accountable for the third-party verification The certification body is accredited by: < ACCREDIA Registration number 001H >
OR

Independent third-party verification of the declaration and data, according to ISO 14025:2006 via:

☐ EPD verification by EPD Process Certification*

Internal auditor: <*name, organisation*>

Third-party verification: <*name, organisation*> is an approved certification body accountable for third-party verification

Third-party verifier is accredited by: <*name of accreditation body & accreditation number, where applicable*>

*For EPD Process Certification, an accredited certification body certifies and reviews the management process and verifies EPDs published on a regular basis. For details about third-party verification procedure of the EPDs, see GPI.

Procedure for follow-up of data during EPD validity involves third-party verifier:

☒ Yes ☐ No

[Procedure for follow-up the validity of the EPD is at minimum required once a year with the aim of confirming whether the information in the EPD remains valid or if the EPD needs to be updated during its validity period. The follow-up can be organized entirely by the EPD owner or together with the original verifier via an agreement between the two parties. In both approaches, the EPD owner is responsible for the procedure being carried out. If a change that requires an update is identified, the EPD shall be re-verified by a verifier]

COMPANY INFORMATION

Owner of the EPD

Cartiere Saci Spa - Strada della Ferriera 17 -37135- Verona - Italia - ecologia@cartieresaci.com
0458566855 – www.cartieresaci.com

Accreditation bodies and registration number

RINA Services S.p.A. – ACCREDIA (Registration Number 001H)

Description of the Organisation

Cartiere Saci, established in 1959 and specialized in the production of packaging paper made from 100% recycled raw materials, has become a market leader over the years. In the European paper industry landscape, Cartiere Saci is recognized as an important and reliable company, thanks to continuous innovations and investments that have standardized quality and provided with a high-level service, catering to an increasingly demanding world. It is worth noting the specialization in the production of low-grammage papers, which has proven to be a successful bet.
Cartiere Saci offers a wide range of 100% recycled eco-friendly papers in natural, white, kraft, blue, or yellow color. These papers are available in MG or ribbed finishes with different gradations. They have various end-use applications, including industrial packaging, laminating, shoppers, queue tickets, bread bags with food certification and compostable certified paper for organic waste collection. We also provide the corrugated cardboard industry and corrugators with a personalized series of niche papers, tailored on the needs of the most demanding customers.
Cartiere Saci has an annual production capacity of 130 tons, spread across three machines.
At the Verona plant, there are two continuous machines equipped with a soft calender and embossing press. The company has state-of-the-art water purifiers and a plant for recovering plastic materials from waste paper.
Our proposal includes the widest range of recycled paper available in the market. We use both pre-consumer and post-consumer waste as raw materials in accordance with UNI EN 643:2014 standards Consistency. Sourcing of raw materials and careful selection are the main guarantees of uniformity and quality of the finished product.
By blending a wide variety of recycled materials and processing them through a modular chain of machinery, we create a significant list of adaptable references to meet the diverse needs of the market niches we serve. Depending on the case, the use of pre-consumer or post-consumer materials also allows us to comply with the most comprehensive certifications.

Product-related or Management System-related Certifications

Certifications are a valuable tool for the company to demonstrate its ability not only to comply with legal requirements but also to implement a proactive approach aimed at continuous process improvement, emphasizing the organization's commitment and constant attention to quality, environmental respect, and people.
Main certifications are the following:

- UNI EN ISO 9001:2015

- UNI EN ISO 14001:2015
- UNI EN ISO 45001:2018
- UNI CEI EN ISO 50001:2018
- FSC Certification for Chain of Custody
- PEFC Certification
- Specific product certifications
- Food certification according to the M.D. of 21/03/1973 and subsequent amendments)

https://cartieresaci.com/en/certifications/

Name and Location of Production Site

- **Production Plant & Head Quarter**

  Cartiere Saci Spa: Verona - Strada della Ferriera, 17 – 37135

LCA INFORMATION

Declared Unit

- 1 ton of KTECH
- 1 ton of KPLUS

Reference Service life

Not applicabile

Time representativeness

2022

Database(s) and LCA Software Used

Database Ecoinvent 3.7.1 – Software SimaPro 9.5

Description of System Boundaries

The product life cycle has been divided into three different phases:

- Upstream processes
- Core processes
- Downstream processes

In the EPD, the environmental performances associated with each of the above-mentioned life cycle phases, have been separately reported as required by the reference PCR.

1. Upstream process:

The following attribution processes are part of the product system and have been classified as upstream processes:

- Production of pigments, additives and other chemicals used in the core processes
- Production of other raw materials used in the core processes
- Production of packaging used for transporting raw materials to the core processes
- Production of electricity and fuels used in the core processes. The residual national electricity mix has been chosen for the electricity used
- Transportation for each specific material used, calculated as a weighted average among all suppliers of a particular material

2. Core process:

The following attribution processes are part of the product system and are classified as core processes:

- Water usage, considering the specific value for the facility
- Pollutants present in water, considering the specific value for the facility. The consumption related to the production process for the Verona facility comes directly by the company monitoring system

3. **Downstream process**:
The following attribution processes are part of the product system and are classified as downstream processes:

- Utilization phase, transportation from the final production to an average converter, trader or distribution platform, and management of waste materials after use.
- The usage phase has not been considered as it is not relevant for the products covered by this PCR (i.e. it does not provide relevant environmental impact data)

Excluded Lifecycle Stages

- The construction of buildings and infrastructure for companies
- The production of machinery
- The activities of personnel

Cut-off Rules

To ensure the assessment of all relevant impacts in the study, the criteria used were considered to be in line with the reference PCR at a minimum of 99% of the declared environmental impacts.

Data Quality

Time related coverage

Specific data were collected from 2022-01-01 to 2022-12-31.

The geographical boundaries can be identified as follows:

- Within the national Italian area for the sourcing of raw materials, electricity, and the processes carried out within the company
- At the European level for end-of-life scenarios of products

Allocation Rules

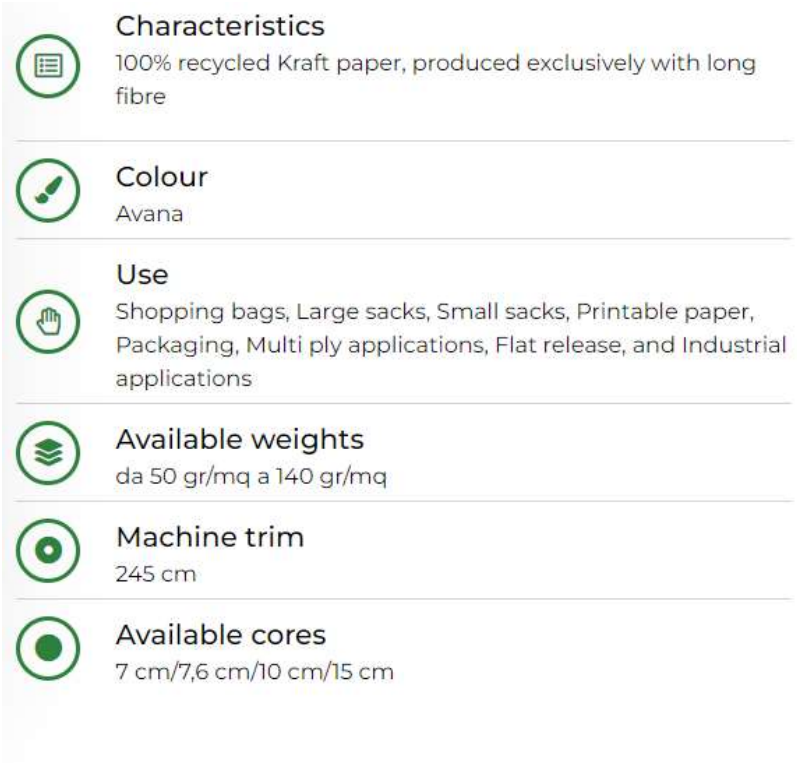
In the selection of the allocation principle, the criterion of maximum relevance to reality was used, modifying the principle according to the material or resource considered and its use, while still referring to the declared functional unit.

PRODUCT INFORMATION: KTECH

Product name
KTECH – 100% Recycled paper

Product identification
Ktech is a 100% recycled Kraft paper produced exclusively using long recycled fibers, typically with a calendered finish (C). This sustainable production process contributes to waste reduction and the preservation of natural resources. Recycled Kraft paper has a distinctive brown color that gives it a rustic and natural appearance. This paper is extremely versatile and can be used in a wide range of applications. It is particularly suitable for creating shoppers, sacks, bags and various types of packaging. Its strength and durability make it ideal for protecting and transporting different objects.

Product Description



PRODUCT INFORMATION: KPLUS

Product name

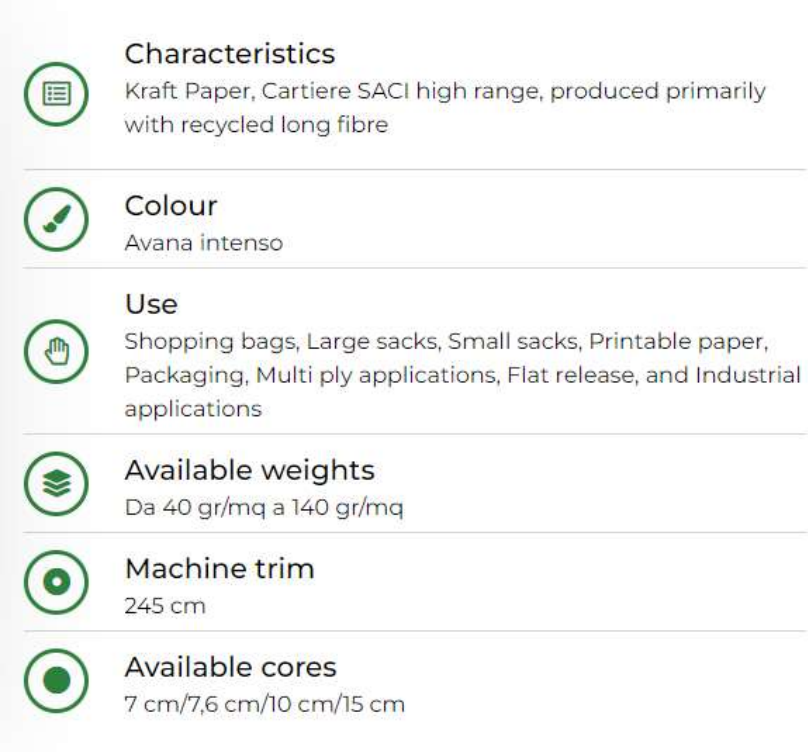
KPLUS – Recycled paper

Product identification

Kplus is a high-performance Kraft paper primarily produced using recycled long fibers. It is a sustainable, resilient and durable product established in 2013. Typically, this paper is produced with a calendered finish (C), which imparts a smooth appearance and a uniform surface. This characteristic further enhances the versatility of the paper, making it suitable for various applications.

The color of KPLUS is “Avana intense”, a rich brown, adding a touch of elegance and naturalness to the products made with it. The intense brown color creates a distinctive and refined image for shoppers, sacks, bags, prints, packaging, laminations, coatings, and industrial applications.

Product Description



CONTENT DECLARATION

Packaging
As per above mentioned cut-off criteria, this was not considered

Recycled Material
Provenance of recycled materials (pre-consumer or post-consumer) in the product

ENVIRONMENTAL PERFORMANCE

Environmental Impacts - KTECH

Paramter		Unit	Upstream	Core	Down-stream	Total
Global waming potential (GWP)	Fossil	kg CO2 eq	487,4	4,175E-06	8,451	495,9
	Biogenic	kg CO2 eq	9,4	1,498E-07	2,024E-02	9,42
	Land use and land transfor-mation	kg CO2 eq	20,09	6,082E-09	2,844E-03	20,09
	TOTAL	**kg CO2 eq**	**516,9**	**4,331E-06**	**8,474**	**525,4**
Acidification Potential (AP)		kg SO2 eq	1,052	1,933E-08	2,964E-02	1,082
Eutrophication		kg PO4--- eq	3,417E-01	2,019E-02	6,002E-03	3,679E-01
Formation potential of tropo-spheric ozone (POCP)		kg CFC-11 eq	8,402E-05	2,521E-13	1,521E-06	8,554E-05
Abiotic depletion, elements		kg Sb eq	1,325E-03	1,973E-11	3,045E-05	1,356E-03
Abiotic depletion, fossil fuels		MJ	6703	4,644E-05	1,251E+02	6828
Water scarcity potential		m3 eq	58,12	2,513E-04	3,503E-01	58,47

Use of Resources - KTECH

Paramter		Unit	Upstream	Core	Down-stream	Total
Primary energy re-sources - Renewable	Use as energy carrier	MJ	111,8	7,328E-06	1,254	113,1
	Used as raw ma-terials	MJ	192,7	1,503E-06	4,683E-01	193,2
	TOTAL	**MJ**	**304,5**	**8,832E-06**	**1,722**	**306,2**
Primary energy re-sources - Non-re-newable	Use as energy carrier	MJ	150,4	2,472E-05	2,744	153,2
	Used as raw ma-terials	MJ	0	0	0	0
	TOTAL	**MJ**	**150,4**	**2,472E-05**	**2,744**	**153,2**
Secondary material		kg	1,869E+07	0	0	1,869E+07

Renewable secondary fuels	MJ	0	0	0	0
Non-renewable secondary fuels	MJ	0	0	0	0
Net use of fresh water	m3	0	12,20	0	12,20

Waste production and Output Flows - KTECH

Waste Production

Paramter	Unit	Upstream	Core	Downstream	Total
Hazardous waste disposed	kg	1,137E-02	1,220E-10	5,319E-01	5,432E-01
Non-hazardous waste disposed	kg	43,28	9,027E-07	75,98	119,3
Radioactive waste disposed	kg	8,575E-03	4,169E-10	8,754E-04	9,451E-03

Output flows

Paramter	Unit	Upstream	Core	Downstream	Total
Components for reuse	kg	0	0	0	0
Material for recycling	kg	0	0	1000	1000
Materials for energy recovery	kg	0	0	0	0
Exported energy, elecrticity	MJ	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0

Environmental Impacts – KPLUS

Paramter		Unit	Upstream	Core	Down-stream	Total
Global waming potential (GWP)	Fossil	kg CO2 eq	466,9	4,175E-06	8,451	475,4
	Biogenic	kg CO2 eq	9,839	1,498E-07	2,024E-02	9,859
	Land use and land transfor-mation	kg CO2 eq	20,09	6,082E-09	2,844E-03	20,1
	TOTAL	**kg CO2 eq**	**496,9**	**4,331E-06**	**8,474**	**505,4**
Acidification Potential (AP)		kg SO2 eq	1,075	1,933E-08	2,964E-02	1,105
Eutrophication		kg PO4--- eq	3,533E-01	2,019E-02	6,002E-03	3,795E-01
Formation potential of tropo-spheric ozone (POCP)		kg CFC-11 eq	7,977E-05	2,521E-13	1,521E-06	8,129E-05

Abiotic depletion, elements	kg Sb eq	1,423E-03	1,973E-11	3,045E-05	1,453E-03
Abiotic depletion, fossil fuels	MJ	6383	4,644E-05	125,1	6508
Water scarcity potential	m3 eq	58,78	2,513E-04	3,503E-01	59,13

Use of Resources – KPLUS

Paramter		Unit	Upstream	Core	Down-stream	Total
Primary energy resources - Renewable	Use as energy carrier	MJ	128,6	7,328E-06	1,254	129,8
	Used as raw materials	MJ	195,4	1,503E-06	4,683E-01	195,9
	TOTAL	**MJ**	**324**	**8,832E-06**	**1,722**	**325,7**
Primary energy resources - Non-renewable	Use as energy carrier	MJ	1,731E+02	2,472E-05	2,744	175,8
	Used as raw materials	MJ	0	0	0	0
	TOTAL	MJ	173,1	2,472E-05	2,744	175,8
Secondary material		kg	3,641E+06	0	0	0
Renewable secondary fuels		MJ	0	0	0	0
Non-renewable secondary fuels		MJ	0	0	0	0
Net use of fresh water		m3	0	12,20	0	12,20

Waste production and Output Flows – KPLUS

Waste Production

Paramter	Unit	Upstream	Core	Downstream	Total
Hazardous waste disposed	kg	1,102E-02	1,220E-10	1,102E-02	2,205E-02
Non-hazardous waste disposed	kg	45,57	9,027E-07	75,98	121,5
Radioactive waste disposed	kg	9,075E-03	4,169E-10	8,754E-04	121,6

Output flows

Paramter	Unit	Upstream	Core	Downstream	Total
Components for reuse	kg	0	0	0	0
Material for recycling	kg	0	0	1000	1000
Materials for energy recovery	kg	0	0	0	0
Exported energy, elecrticity	MJ	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0

CONTACT INFORMATION

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Programme Operator

THE INTERNATIONAL EPD® SYSTEM

REFERENCES

- UNI EN ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations.

- UNI EN ISO 14044: 2018, Gestione ambientale - Valutazione del ciclo di vita - Requisiti e linee guida.

- ISO14040: 1997 - Environmental management - Life cycle assessment - Principles and framework ISO 14044: 2006 - Environmental Management — Life Cycle Assessment — Requirements and Guidelines

- PRODUCT CATEGORY RULES (PCR) DATE 2022-07-06