Pressure-Sensitive Hot Melt Carton Sealing Tape

from

Environmental Product Declaration

In accordance with ISO 14025

PROGRAMME:	The International EPD® System, www.environdec.com
PROGRAMME OPERATOR:	EPD International AB
EPD REGISTRATION NUMBER:	S-P-03406
PUBLICATION DATE:	2023-07-19
VALID UNTIL:	2028-07-18

EPD Programme Information

Programme:

The International EPD® System
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Owner of the EPD: IPG
Contact: Sustainability@itape.com

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.

Product category rules (PCR): Packaging PCR 2019:13 Version 1.1 Valid until: 2023-11-08

PCR review was conducted by: Anna Bortoluzzi, Università degli Studi di Milano - Department of Chemistry, anna.bortoluzzi@unimi.it

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

☐ EPD process certification ☒ EPD verification

Third party verifier: Maggie Wildnauer, Brad McAllister
WAP Sustainability Consulting
In case of recognised individual verifiers:
Approved by: The International EPD® System

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

☒ Yes ☐ No

The environmental impacts of different EPDs can be compared only taking into account all the technical information supporting the declared/functional unit definition as requested by the PCR.

EPD®

Pressure-Sensitive Hot Melt Carton Sealing Tape

ipg®

IPG Company Information

Headquartered in Sarasota, Florida, IPG is a global provider of packaging and protective solutions across a diversified set of geographies and end-markets. The Company develops, manufactures, and sells a variety of solutions including paper and film-based pressure-sensitive and water-activated tapes, stretch and shrink films, protective packaging, woven and non-woven products and packaging machinery.

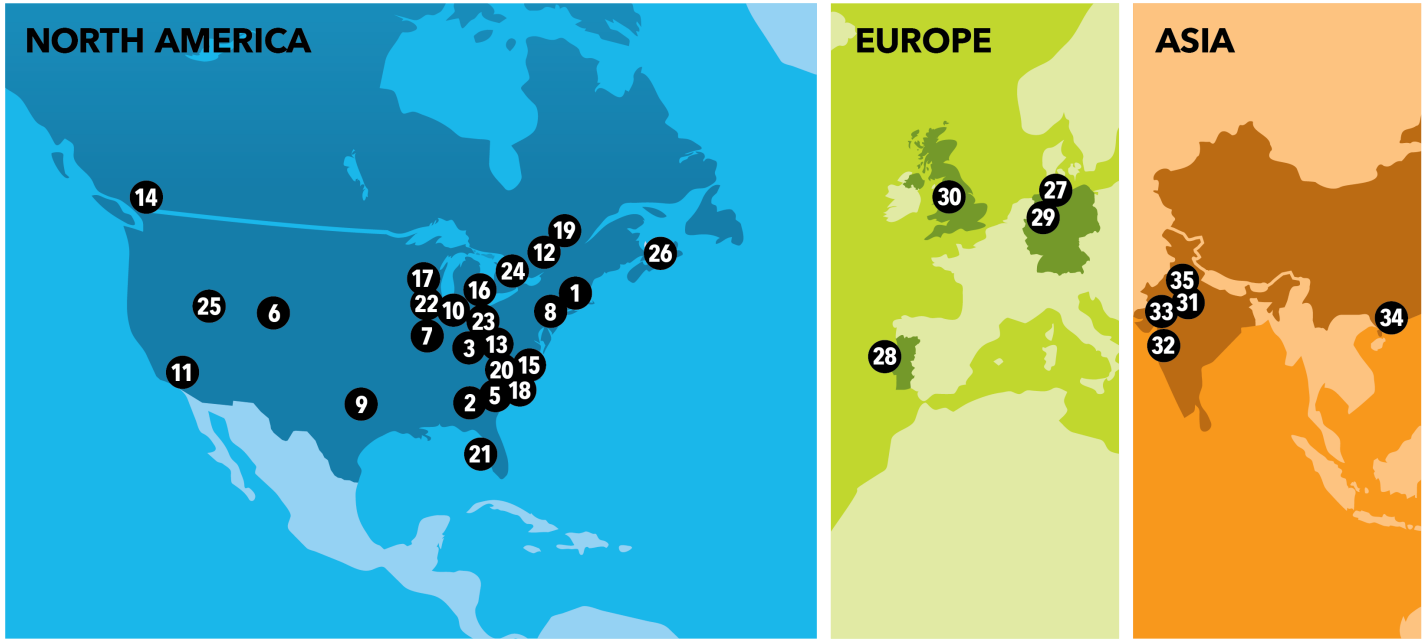
Name and location of production site:

Pressure-Sensitive Hot Melt Carton Sealing Tape product line is manufactured at the IPG facility located at 1101 Eagle Springs Rd, Danville, VA 24540, United States.

IPG Facility, Danville, Virginia

IPG Corporate Headquarters, Sarasota, Florida

Our Locations



NORTH AMERICA

1. Ansonia, CT ■
2. Atlanta, GA ●
3. Bardstown, KY (2) ●
5. Blythewood, SC ●
6. Brighton, CO ●
7. Carbondale, IL ●
8. Carlstadt, NJ ●
9. Carrollton, TX ●
10. Chicago, IL ●
11. Corona, CA ●
12. Cornwall, ON ●
13. Danville, VA ● ▲
14. Delta, BC ●
15. Everetts, NC ●
16. Marysville, MI ●
17. Menasha, WI ●
18. Midland, NC ●
19. Montreal, QC ☆
20. Salisbury, NC ●
21. Sarasota, FL ★
22. Schaumburg, IL ■
23. Springfield, OH ●
24. Toronto, ON ●
25. Tremonton, UT ●
26. Truro, NS ●

EUROPE

27. Flensburg, Germany ▲
28. Porto, Portugal ●
29. Soest, Germany ●
30. Widnes, UK ●

ASIA

31. Chopanki, India ●
32. Daman, India ●
33. Dahej, India ●
34. Jiangmen City, China ●
35. Karoli, India ●

● Manufacturing ■ Machine Assembly ▲ Distribution
☆ Administrative Office ★ Corporate Headquarters

Our Vision


VISION ipg
TO BE THE
GLOBAL LEADER
IN
PACKAGING
AND
PROTECTIVE
SOLUTIONS
VALUES
PASSION
PEOPLE
INTEGRITY
PERFORMANCE
TEAMWORK
STRATEGY
STRENGTHEN THE PRODUCT BUNDLE
EXPAND THE GLOBAL FOOTPRINT
EMBRACE SUSTAINABILITY
DRIVE OPERATIONAL EXCELLENCE

Our Commitment

Company
Product
Content Declaration
Environmental Performance
Additional Information

"At IPG, we remain committed to the development and commercialization of more sustainable packaging solutions, and our partnership with leading organizations such as the Sustainable Packaging Coalition, ENERGY STAR, United Nations Global Compact, and others, is a demonstration of our commitment."

Jay Bolus, Vice President, Sustainability

IPG subscribes to externally developed economic, environmental, and social charters, principles and other initiatives that align with our sustainability efforts.

APR Recycling DEMAND CHAMPIONS

ENERGY STAR AWARD 2023 PARTNER OF THE YEAR Sustained Excellence

SUSTAINABLE PACKAGING COALITION

BUILT FOR BETTER FOR PLANET

CERTIFIED cradle to cradle PRODUCTS PROGRAM

Operation Clean Sweep®

Member of How2Recycle®

WE SUPPORT UN GLOBAL COMPACT

THE CLIMATE PLEDGE

ecovadis

SmartWay®

Working with Experts

Company

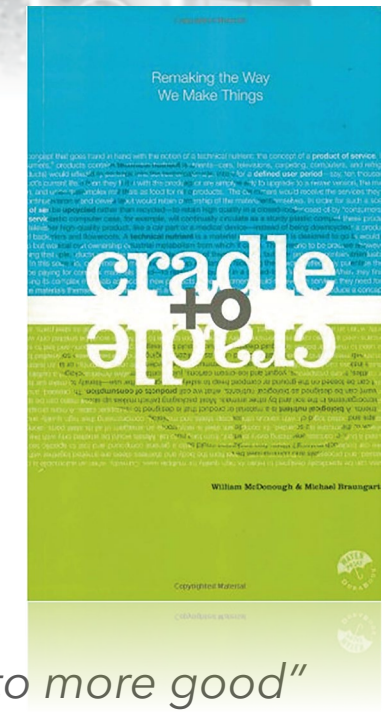
Product

Content Declaration

Environmental Performance

Additional Information

- William McDonough
- Author of *Cradle to Cradle*
- Focused on the circular economy
- Complex evaluations and monitoring for improvement



"Making the transition from less bad to more good"
Jay Bolus, VP Sustainability, IPG

Multi-Attribute Certifications

- Company
- Product
- Content Declaration
- Environmental Performance
- Additional Information

CERTIFIED

cradle to cradle

PRODUCTS PROGRAM

- material health
- product circularity
- clean air & climate protection
- water & soil stewardship
- social fairness

C2C Certified® Product Standard

Our Circular Economy

Eliminating the concept of waste

Our Sustainable Product Design and Development Vision Statement directs the application of “safe and circular” concepts to our products’ design and development. We have committed to eliminating toxic substances from new and existing products and incorporating recycled and renewable materials while maintaining product performance. Achieving a circular economy is a long-term objective, and we are dedicated to working towards it.

The Circular Economy emulates natural life cycles and eliminates the concept of waste so that all products and their components become “food” for other systems- either biological (returning to nature) or technical (returning to industry).

Product Information – Pressure-Sensitive Hot Melt Carton Sealing Tape

Company
Product
Content Declaration
Environmental Performance
Additional Information

Product

Product name: Pressure-Sensitive Hot Melt Carton Sealing Tape

Product description:
IPG offers a full line of Pressure-Sensitive Hot Melt Carton Sealing Tape (Packing Tape) with all three adhesive technologies. As a leader in the pressure-sensitive carton sealing tape market, IPG combines years of experience as a prime manufacturer of superior quality tape to the Industrial and Retail channels.

Intertape® brand Hot Melt Packing Tape offers the widest range of application flexibility available. All styles in the line offer excellent processing performance whether manually (tape gun) or with packaging automation. Their superior adhesion properties, holding force, tensile strength, and easy unwind ensure consistent, reliable seals to a variety of corrugated and linerboard boxes.

UN CPC code:
UN CPC 36920

Geographical scope:
North America

Cradle to Cradle® Certification

At IPG, our ongoing sustainability efforts are a top priority. Our brand is committed to developing sustainable packaging alternatives that meet the changing needs of the market, as well as customers who consider the environment in their decision-making.

Cradle to Cradle Certified® is a globally recognized and trusted, science-based measure that leads industry transformation towards a safe, circular and equitable future. Unlike many of the single attribute certifications available, it is a multi-attribute measure of sustainable products; the globally recognized certification assesses all aspects of product design and manufacturing and signals that the brand has made the commitment to continuous improvement for all products that carry the Cradle to Cradle Certified mark.

Cradle to Cradle Certified provides brands with the framework for considering the impact of their actions on the environment and the communities across their value chain.

Pressure-Sensitive Hot Melt Carton Sealing Tape

As of September 2021, IPG's Clear Hot Melt Carton Sealing Tapes are Cradle to Cradle Certified Bronze. IPG has undergone the rigorous process of qualification against a series of prescribed tests that evaluate these products' material health, material reutilization, the measure of renewable energy consumed to create the products, stewardship of the water used in production and adherence to social fairness standards.

Product Information

Company
Product
Content Declaration
Environmental Performance
Additional Information

Product	IPG Facility Location	Roll Dimensions
F4090-05, machine roll	Danville, VA	48mm x 914m
F4020-05, hand roll	Danville, VA	48mm x 100m

LCA Information

Functional unit:
- per 1 m^2 tape

The final packaging product unit cannot be identified as it varies by packaging size, application, and user.

Reference Flow

F4090-05, machine roll: 4.46E-02 kg/m2

F4020-05, hand roll: 4.35E-02 kg/m2

Reference service life:
- single use

Time representativeness:
Primary data for electricity and scrap rate at IPG production facility and material composition and supplier information from 2022.

Database(s) and LCA software used:
GaBi LCA Software version 8.0
Sphera database 2022, US LCI Database 2022

LCA Information

Description of system boundaries:

Life cycle stage	Life cycle module	Life cycle module group	EPD Type Functional Unit: Cradle-Grave
Upstream	A1) Raw material supply	A1-A3) Product stage	Declared
Core	A2) Transport		Declared
	A3) Manufacturing		Declared
Downstream	A4) Transport to forming or filling	A4-A5) Forming stage	Module not declared, MND
	A5) Forming		Module not declared, MND
	B1) Filling operation	B1-B5) Use stage	Declared
	B2) Distribution of filled packaging		Declared
	B3) Transport to reconditioning		Module not declared, MND
	B4) Reconditioning		Module not declared, MND
	B5) Transport to re-filling point		Module not declared, MND
	C1) Disassembling/sorting	C1-C3) End of life stage	Declared
	C2) Transport to recovery/disposal		Declared
	C3) Final disposal		Declared

Excluded lifecycle stages: Downstream Module

A4) Transport to Forming or Filling (Module Not Declared, MND)
Product is sold unfilled to the final consumer and shipped to distributor from manufacturing facility

A5) Packaging Forming (Module Not Declared, MND)
Product is formed during manufacturing

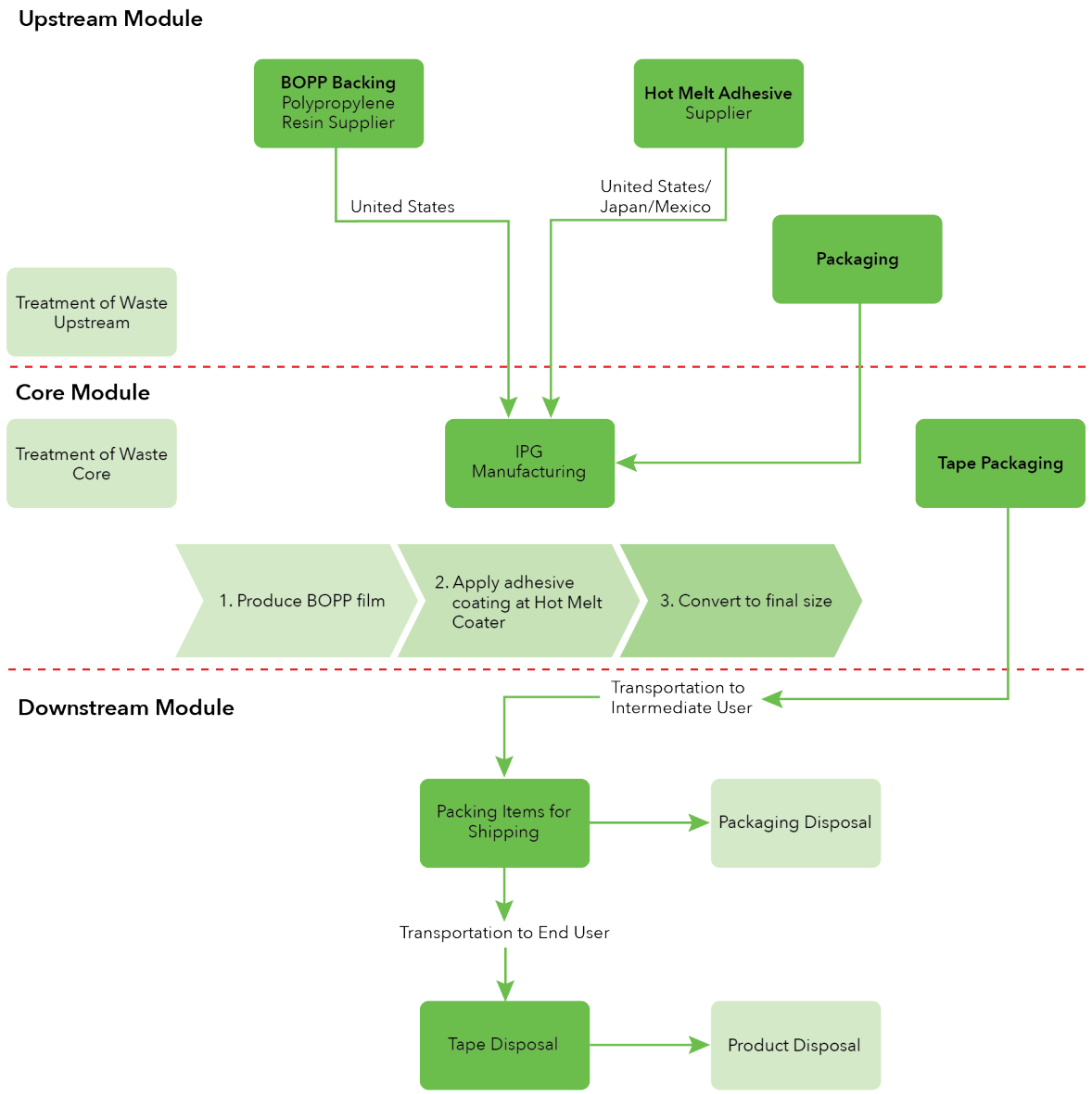
B3) Transport to Reconditioning (Module Not Declared, MND)
Product is single use

B4) Reconditioning (Module Not Declared, MND)
Product is single use

B5) Transport to Re-Filling Point (Module Not Declared, MND)
Product is single use

LCA Information

Pressure-Sensitive Hot Melt Carton Sealing Tape Process System Diagram



Content Declaration: F4090-05, machine roll

Product

Materials / chemical substances

Polypropylene Resin

63%

kg 2.83E-02 per m^2 tape

Hot Melt Adhesive

37%

kg 1.63E-02 per m^2 tape

Packaging

Distribution/Consumer packaging:

Wrapped on machine roll core, poly bagged, one roll per bag, 6 rolls per case, 48 cases per pallet; 4"x6" label

Environmental Performance: F4090-05, machine roll

Indicator name	Unit	Module			
Core environmental impact indicators		**Upstream**	**Core**	**Downstream**	**Total**
Climate Change - total	kg CO_2 eq.	1.29E-01	6.69E-02	7.50E-03	2.03E-01
Climate Change - fossil	kg CO_2 eq.	1.29E-01	6.68E-02	7.53E-03	2.03E-01
Climate Change - biogenic	kg CO_2 eq.	3.99E-04	2.46E-05	-2.96E-05	3.94E-04
Climate Change - LULUC	kg CO_2 eq.	5.96E-06	3.79E-06	2.55E-07	1.00E-05
Ozone depletion	kg CFC-11 eq.	5.18E-12	5.34E-13	1.63E-13	5.88E-12
Acidification	Mole of H+ eq.	1.25E-03	2.31E-04	4.80E-05	1.53E-03
Eutrophication, freshwater	kg P eq.	4.14E-07	1.12E-07	1.67E-06	2.20E-06
Eutrophication, marine	kg N eq.	7.47E-05	8.11E-05	1.73E-05	1.73E-04
Eutrophication, terrestrial	mol N eq.	7.91E-04	8.82E-04	1.89E-04	1.86E-03
Photochemical ozone formation	kg NMVOC eq.	3.46E-04	2.31E-04	6.27E-05	6.40E-04
Abiotic depletion potential, minerals & metals[1]	kg Sb eq.	2.83E-08	9.00E-09	3.69E-10	3.77E-08
Abiotic depletion potential, fossil resources[1]	MJ	3.95E+00	1.06E+00	9.95E-02	5.11E+00
Water use[1]	m^3 world eq. deprived	1.81E-02	8.47E-03	-1.26E-03	2.53E-02
Indicators describing resource use		**Upstream**	**Core**	**Downstream**	**Total**
Use of renewable primary energy as energy carrier	MJ	3.76E-02	1.25E-01	1.73E-03	1.64E-01
Use of renewable primary energy resources used as raw materials	MJ	4.94E-13	5.52E-12	3.80E-14	6.05E-12
Total use of renewable primary energy	MJ	3.76E-02	1.25E-01	1.73E-03	1.64E-01
Use of non-renewable primary energy as energy carrier	MJ	3.97E+00	1.06E+00	1.00E-01	5.13E+00
Use of non-renewable primary energy resources used as raw materials	MJ	3.79E-12	1.40E-05	1.22E-13	1.40E-05
Total use of non-renewable primary energy resource	MJ	3.97E+00	1.06E+00	1.00E-01	5.13E+00
Secondary material	kg	0	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	m^3	4.21E-04	2.53E-04	-2.94E-05	6.45E-04

Environmental Performance: F4090-05, machine roll

Indicator name	Unit	Module			
Environmental information describing waste categories		**Upstream**	**Core**	**Downstream**	**Total**
Hazardous waste disposed	kg	3.02E-07	3.03E-10	6.13E-09	3.08E-07
Non-hazardous waste disposed	kg	8.29E-04	2.25E-03	4.44E-02	4.75E-02
Radioactive waste disposed	kg	2.82E-05	9.92E-05	3.54E-07	1.28E-04
Environmental information describing output flows		**Upstream**	**Core**	**Downstream**	**Total**
Components for reuse	kg	0	0	0	0
Material for recycling	kg	0	0	0	0
Materials for energy recovery	kg	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0

Note: EN 15804 reference package based on EF 3.0

Disclaimer 1 – The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

Content Declaration: F4020-05, hand roll

Product

Materials / chemical substances

Polypropylene Resin

61%

kg 2.66E-02 per m^2 tape

Hot Melt Adhesive

39%

kg 1.69E-02 per m^2 tape

Packaging

Distribution/Consumer packaging:

Wrapped on hand roll core, 6 rolls per pack, flat pack (clear shrink wrapped, no top label); 36 rolls per case; 60 cases/pallet

Environmental Performance : F4020-05, hand roll

Indicator name	Unit	Module			
Core environmental impact indicators		**Upstream**	**Core**	**Downstream**	**Total**
Climate Change - total	kg CO_2 eq.	1.33E-01	6.64E-02	7.32E-03	2.07E-01
Climate Change - fossil	kg CO_2 eq.	1.33E-01	6.63E-02	7.35E-03	2.07E-01
Climate Change - biogenic	kg CO_2 eq.	4.25E-04	2.46E-05	-2.89E-05	4.21E-04
Climate Change - LULUC	kg CO_2 eq.	6.31E-06	3.79E-06	2.49E-07	1.03E-05
Ozone depletion	kg CFC-11 eq.	5.24E-12	5.22E-13	1.59E-13	5.92E-12
Acidification	Mole of H+ eq.	1.20E-03	2.28E-04	4.68E-05	1.47E-03
Eutrophication, freshwater	kg P eq.	4.29E-07	1.12E-07	1.63E-06	2.17E-06
Eutrophication, marine	kg N eq.	7.60E-05	7.99E-05	1.69E-05	1.73E-04
Eutrophication, terrestrial	mol N eq.	8.04E-04	8.69E-04	1.85E-04	1.86E-03
Photochemical ozone formation	kg NMVOC eq.	3.45E-04	2.27E-04	6.11E-05	6.33E-04
Abiotic depletion potential, minerals & metals[1]	kg Sb eq.	3.39E-08	9.00E-09	3.60E-10	4.33E-08
Abiotic depletion potential, fossil resources[1]	MJ	3.93E+00	1.05E+00	9.71E-02	5.08E+00
Water use[1]	m^3 world eq. deprived	1.99E-02	8.47E-03	-1.23E-03	2.71E-02
Indicators describing resource use		**Upstream**	**Core**	**Downstream**	**Total**
Use of renewable primary energy as energy carrier	MJ	4.05E-02	1.25E-01	1.68E-03	1.67E-01
Use of renewable primary energy resources used as raw materials	MJ	6.08E-13	5.52E-12	3.70E-14	6.17E-12
Total use of renewable primary energy	MJ	4.05E-02	1.25E-01	1.68E-03	1.67E-01
Use of non-renewable primary energy as energy carrier	MJ	3.95E+00	1.05E+00	9.77E-02	5.10E+00
Use of non-renewable primary energy resources used as raw materials	MJ	4.19E-12	1.40E-05	1.19E-13	1.40E-05
Total use of non-renewable primary energy resource	MJ	3.95E+00	1.05E+00	9.77E-02	5.10E+00
Secondary material	kg	0	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	m^3	4.64E-04	2.53E-04	-2.80E-05	6.89E-04

Environmental Performance : F4020-05, hand roll

Indicator name	Unit	Module			
Environmental information describing waste categories		**Upstream**	**Core**	**Downstream**	**Total**
Hazardous waste disposed	kg	3.22E-07	3.03E-10	5.98E-09	3.28E-07
Non-hazardous waste disposed	kg	9.05E-04	2.25E-03	4.33E-02	4.65E-02
Radioactive waste disposed	kg	2.96E-05	9.92E-05	3.45E-07	1.29E-04
Environmental information describing output flows		**Upstream**	**Core**	**Downstream**	**Total**
Components for reuse	kg	0	0	0	0
Material for recycling	kg	0	0	0	0
Materials for energy recovery	kg	0	0	0	0
Exported energy, electricity	MJ	0	0	0	0
Exported energy, thermal	MJ	0	0	0	0

Note: EN 15804 reference package based on EF 3.0

Disclaimer 1 – The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

References

CEN (2019): EN 15804:2012+A2:2019/AC:2021, Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products.

EPA (2021) Containers and packaging: product-specific data – paper and paperboard containers and packaging. United States Environmental Protection Agency. Retrieved from https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/containers-and-packaging-product-specific-data#PaperandPaperboardC&P

EPD International (2017) General Programme Instructions for the International EPD® System. Version 3.0, dated 2017-12-11. www.environdec.com

ISO (2006b), ISO 14040:2006, Environmental management – Life cycle assessment – Principles and framework.

ISO (2006c), ISO 14044: 2006, Environmental management – Life cycle assessment – Requirements and guidelines.

ISO (2006a), ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures.

PCR (2019:13). Packaging. Version 1.1.

Sphera (2022). GaBi LCA Software.

Thanks!