

# Pressure-Sensitive Hot Melt Carton Sealing Tape

from



## Environmental Product Declaration

In accordance with ISO 14025

<b>PROGRAMME:</b>	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
<b>PROGRAMME OPERATOR:</b>	EPD International AB
<b>EPD REGISTRATION NUMBER:</b>	S-P-03406
<b>PUBLICATION DATE:</b>	2023-07-19
<b>VALID UNTIL:</b>	2028-07-18



# EPD Programme Information



Programme:

The International EPD® System  
EPD International AB  
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SE-100 31 Stockholm  
Sweden  
[www.environdec.com](http://www.environdec.com)  
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Owner of the EPD: IPG  
Contact: [Sustainability@itape.com](mailto: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](mailto: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.



# Pressure-Sensitive Hot Melt Carton Sealing Tape



# IPG Company Information

Company



Product



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Environmental Performance



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

## EUROPE

- |                        |   |                          |   |
|------------------------|---|--------------------------|---|
| 27. Flensburg, Germany | ▲ | 31. Chopanki, India      | ● |
| 28. Porto, Portugal    | ● | 32. Daman, India         | ● |
| 29. Soest, Germany     | ● | 33. Dahej, India         | ● |
| 30. Widnes, UK         | ● | 34. Jiangmen City, China | ● |
|                        |   | 35. Karoli, India        | ● |

## ASIA

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

# Our Vision

Company



Product



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Environmental Performance



Additional Information



# VISION<sup>®</sup> ipg

TO BE THE  
**GLOBAL LEADER**  
IN  
**PACKAGING**  
AND  
**PROTECTIVE**  
SOLUTIONS



# Our Commitment

Company



Product



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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.**



**ecovadis**



# Working with Experts



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

The collage includes:

- The MBDC website homepage featuring logos for Henry Rose, Herman Miller, L'Oréal, Shaw, SunPower, and GFI.
- A grid of logos for various companies: eCovative, Milliken, IFF, Alcoa, ipg, and Steelcase.
- A section titled "Remaking the Way We Make Things" with a quote by William McDonough and Michael Braungart.
- The book cover for "Cradle + Cradle: Remaking the Way We Make Things" by William McDonough and Michael Braungart.

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



# Multi-Attribute Certifications



-  **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



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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

Company



Product



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Environmental Performance



Additional Information



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



# LCA Information

Company

**Functional unit:**

- per 1 m<sup>2</sup> tape

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

Product

**Reference Flow**

F4090-05, machine roll: 4.46E-02 kg/m<sup>2</sup>

F4020-05, hand roll: 4.35E-02 kg/m<sup>2</sup>

Content Declaration

**Reference service life:**

- single use

Environmental Performance

**Time representativeness:**

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

Additional Information

**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
	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)**

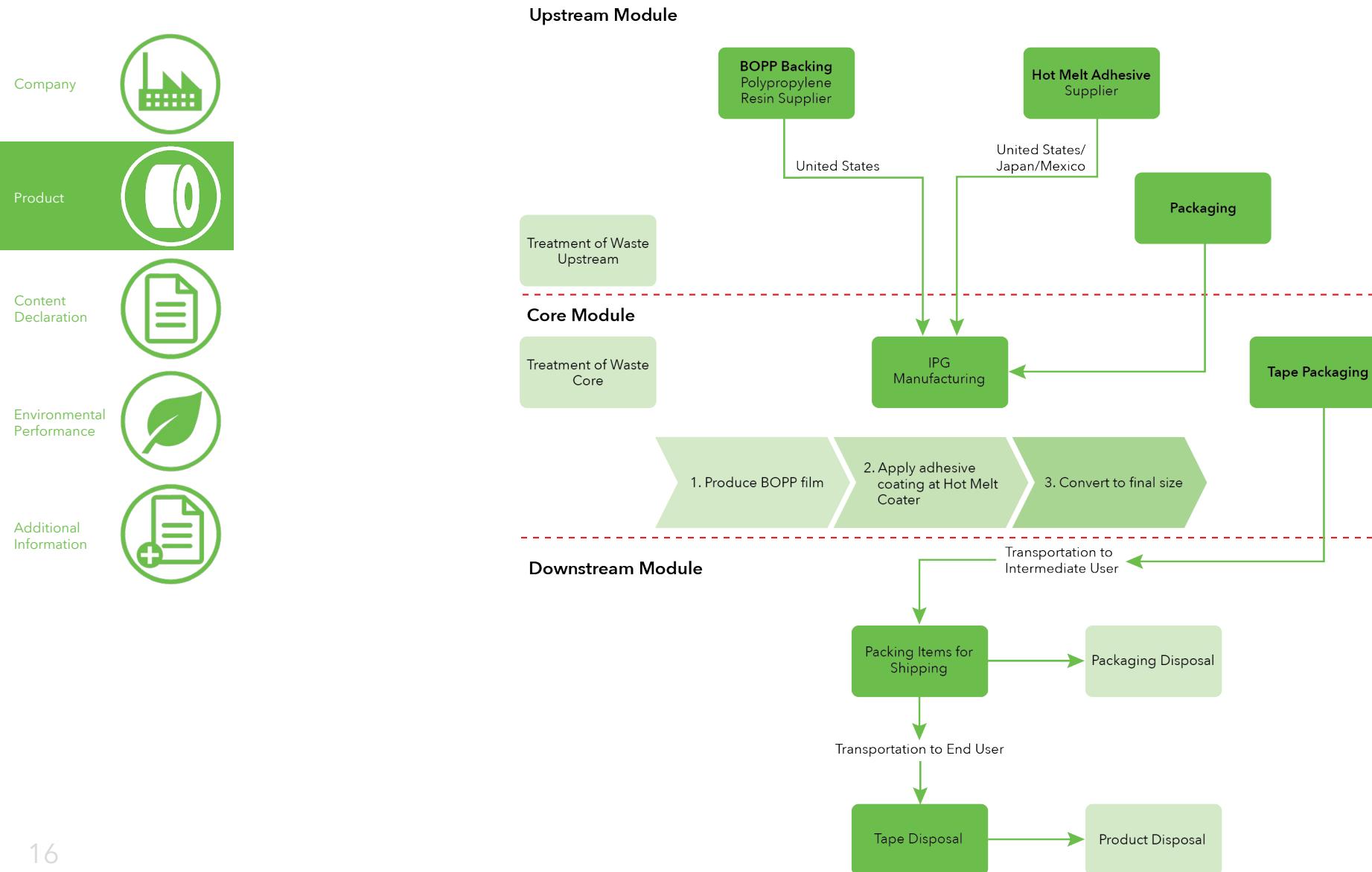
Product is single use

**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



Company



Product



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Environmental Performance



Additional Information



# Content Declaration: F4090-05, machine roll



## Product

### Materials / chemical substances



Polypropylene Resin

**63%**

 2.83E-02  
per m<sup>2</sup> tape



Hot Melt Adhesive

**37%**

 1.63E-02  
per m<sup>2</sup> 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			
			Upstream	Core	Downstream	Total
<b>Core environmental impact indicators</b>						
	<b>Climate Change - total</b>	kg CO <sub>2</sub> eq.	1.29E-01	6.69E-02	7.50E-03	2.03E-01
	<b>Climate Change - fossil</b>	kg CO <sub>2</sub> eq.	1.29E-01	6.68E-02	7.53E-03	2.03E-01
	<b>Climate Change - biogenic</b>	kg CO <sub>2</sub> eq.	3.99E-04	2.46E-05	-2.96E-05	3.94E-04
	<b>Climate Change - LULUC</b>	kg CO <sub>2</sub> eq.	5.96E-06	3.79E-06	2.55E-07	1.00E-05
	<b>Ozone depletion</b>	kg CFC-11 eq.	5.18E-12	5.34E-13	1.63E-13	5.88E-12
	<b>Acidification</b>	Mole of H+ eq.	1.25E-03	2.31E-04	4.80E-05	1.53E-03
	<b>Eutrophication, freshwater</b>	kg P eq.	4.14E-07	1.12E-07	1.67E-06	2.20E-06
	<b>Eutrophication, marine</b>	kg N eq.	7.47E-05	8.11E-05	1.73E-05	1.73E-04
	<b>Eutrophication, terrestrial</b>	mol N eq.	7.91E-04	8.82E-04	1.89E-04	1.86E-03
	<b>Photochemical ozone formation</b>	kg NMVOC eq.	3.46E-04	2.31E-04	6.27E-05	6.40E-04
	<b>Abiotic depletion potential, minerals &amp; metals<sup>1</sup></b>	kg Sb eq.	2.83E-08	9.00E-09	3.69E-10	3.77E-08
	<b>Abiotic depletion potential, fossil resources<sup>1</sup></b>	MJ	3.95E+00	1.06E+00	9.95E-02	5.11E+00
	<b>Water use<sup>1</sup></b>	m <sup>3</sup> world eq. deprived	1.81E-02	8.47E-03	-1.26E-03	2.53E-02
<b>Indicators describing resource use</b>						
	<b>Use of renewable primary energy as energy carrier</b>	MJ	3.76E-02	1.25E-01	1.73E-03	1.64E-01
	<b>Use of renewable primary energy resources used as raw materials</b>	MJ	4.94E-13	5.52E-12	3.80E-14	6.05E-12
	<b>Total use of renewable primary energy</b>	MJ	3.76E-02	1.25E-01	1.73E-03	1.64E-01
	<b>Use of non-renewable primary energy as energy carrier</b>	MJ	3.97E+00	1.06E+00	1.00E-01	5.13E+00
	<b>Use of non-renewable primary energy resources used as raw materials</b>	MJ	3.79E-12	1.40E-05	1.22E-13	1.40E-05
	<b>Total use of non-renewable primary energy resource</b>	MJ	3.97E+00	1.06E+00	1.00E-01	5.13E+00
	<b>Secondary material</b>	kg	0	0	0	0
	<b>Renewable secondary fuels</b>	MJ	0	0	0	0
	<b>Non-renewable secondary fuels</b>	MJ	0	0	0	0
	<b>Net use of fresh water</b>	m <sup>3</sup>	4.21E-04	2.53E-04	-2.94E-05	6.45E-04

# Environmental Performance: F4090-05, machine roll

Company	Indicator name	Unit	Module			
			Upstream	Core	Downstream	Total
<b>Environmental information describing waste categories</b>						
	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
<b>Environmental information describing output flows</b>						
Product	Components for reuse	kg	0	0	0	0
	Material for recycling	kg	0	0	0	0
Content Declaration	Materials for energy recovery	kg	0	0	0	0
	Exported energy, electricity	MJ	0	0	0	0
Environmental Performance	Exported energy, thermal	MJ	0	0	0	0
	<b>Note: EN 15804 reference package based on EF 3.0</b>					
<b>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.</b>						



# Content Declaration: F4020-05, hand roll



## Product

### Materials / chemical substances



Polypropylene Resin

**61%**

2.66E-02  
per m<sup>2</sup> tape



Hot Melt Adhesive

**39%**

1.69E-02  
per m<sup>2</sup> 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			
			Upstream	Core	Downstream	Total
<b>Core environmental impact indicators</b>						
	<b>Climate Change - total</b>	kg CO <sub>2</sub> eq.	1.33E-01	6.64E-02	7.32E-03	2.07E-01
	<b>Climate Change - fossil</b>	kg CO <sub>2</sub> eq.	1.33E-01	6.63E-02	7.35E-03	2.07E-01
	<b>Climate Change - biogenic</b>	kg CO <sub>2</sub> eq.	4.25E-04	2.46E-05	-2.89E-05	4.21E-04
	<b>Climate Change - LULUC</b>	kg CO <sub>2</sub> eq.	6.31E-06	3.79E-06	2.49E-07	1.03E-05
	<b>Ozone depletion</b>	kg CFC-11 eq.	5.24E-12	5.22E-13	1.59E-13	5.92E-12
	<b>Acidification</b>	Mole of H+ eq.	1.20E-03	2.28E-04	4.68E-05	1.47E-03
	<b>Eutrophication, freshwater</b>	kg P eq.	4.29E-07	1.12E-07	1.63E-06	2.17E-06
	<b>Eutrophication, marine</b>	kg N eq.	7.60E-05	7.99E-05	1.69E-05	1.73E-04
	<b>Eutrophication, terrestrial</b>	mol N eq.	8.04E-04	8.69E-04	1.85E-04	1.86E-03
	<b>Photochemical ozone formation</b>	kg NMVOC eq.	3.45E-04	2.27E-04	6.11E-05	6.33E-04
	<b>Abiotic depletion potential, minerals &amp; metals<sup>1</sup></b>	kg Sb eq.	3.39E-08	9.00E-09	3.60E-10	4.33E-08
	<b>Abiotic depletion potential, fossil resources<sup>1</sup></b>	MJ	3.93E+00	1.05E+00	9.71E-02	5.08E+00
	<b>Water use<sup>1</sup></b>	m <sup>3</sup> world eq. deprived	1.99E-02	8.47E-03	-1.23E-03	2.71E-02
<b>Indicators describing resource use</b>						
	<b>Use of renewable primary energy as energy carrier</b>	MJ	4.05E-02	1.25E-01	1.68E-03	1.67E-01
	<b>Use of renewable primary energy resources used as raw materials</b>	MJ	6.08E-13	5.52E-12	3.70E-14	6.17E-12
	<b>Total use of renewable primary energy</b>	MJ	4.05E-02	1.25E-01	1.68E-03	1.67E-01
	<b>Use of non-renewable primary energy as energy carrier</b>	MJ	3.95E+00	1.05E+00	9.77E-02	5.10E+00
	<b>Use of non-renewable primary energy resources used as raw materials</b>	MJ	4.19E-12	1.40E-05	1.19E-13	1.40E-05
	<b>Total use of non-renewable primary energy resource</b>	MJ	3.95E+00	1.05E+00	9.77E-02	5.10E+00
	<b>Secondary material</b>	kg	0	0	0	0
	<b>Renewable secondary fuels</b>	MJ	0	0	0	0
	<b>Non-renewable secondary fuels</b>	MJ	0	0	0	0
	<b>Net use of fresh water</b>	m <sup>3</sup>	4.64E-04	2.53E-04	-2.80E-05	6.89E-04

# Environmental Performance : F4020-05, hand roll



	Indicator name	Unit	Module			
			Upstream	Core	Downstream	Total
<b>Environmental information describing waste categories</b>						
	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
<b>Environmental information describing output flows</b>						
	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
<b>Note: EN 15804 reference package based on EF 3.0</b>						
<b>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.</b>						

# References

Company



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.

Product



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>

Content Declaration



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

Environmental Performance



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.

Additional Information



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

Sphera (2022). GaBi LCA Software.

# Thanks!

