



✓ Third party verified

Environmental Product Declaration

In conformance with

ISO14025

ISO14040

ISO14044



BROTHER INDUSTRIES, LTD.

MFC-J5115DW for Europe

MFC-J5110DW / MFC-J5115DW / MFC-J5115N



MFC-J5110DW



MFC-J5115DW



MFC-J5115N

Registration number

SuMPO-EPD-2610-276-1

Verification date

2026/10/5

Publication date

2026/10/23

* First publication date

Expiration date

2031/10/4

EPD type

Multiple Products EPD

Additional standards in conformance

ISO14067:2018

EPD can be updated or withdrawn during the validity period. To confirm the validity of this EPD, check the following website:
<https://ecoleaf-label.jp/epd/search>

● General Information

> Programme

Programme name	SuMPO EPD Japan
Programme operator	Sustainable Management Promotion Organization (SuMPO)
Address	KANDA SQUARE GATE 4F, 14-8, Uchikanda 1-chome, Chiyoda-ku, Tokyo, 101-0047, Japan
Website	https://ecoleaf-label.jp

> GPI and PCR

GPI	SuMPO EPD Japan General Program Instructions v.2.2.0
PCR name	Imaging input and/or output equipment products v.9.0.0
PCR registration number	PA-SuMPO-PCR-02001-9-0-0
PCR publication date	10/17/2025
PCR review panel chair	Ken Yamagishi (LCA Expert Center Co., Ltd.)
PCR valid until	10/16/2030
PCR issuer	Sustainable Management Promotion Organization (SuMPO)

> Verification

Verification Type	Third-party verification in conformance with ISO14025		
	☐ Internal	☒ External	
Verification body	☐ Third-party verification by individual verifier	☐ Third-party verification by verification body	☒ Third-party verification by system certification
	Japan Quality Assurance Organization (Shino Nishikimi)		

> Standards

Standards in conformance with;	☒ ISO14040:2006	☒ ISO14044:2006	☒ ISO14067:2018
	☒ ISO14025:2006	☐ ISO21930:2007	☐ ISO21930:2017
	☐ EN15804+A2	☐ EN50693:2019	☐ ISO/IEC63366:2025

EPD owner is responsible for the information contained in the EPD and for environmental claims related to the information. For any inquiries or requests regarding the content of the EPD, please contact the EPD owner.

EPDs are comparable only if they comply with this document, use the same sub-PCR where applicable, include all relevant information and are based on equivalent scenarios. Comparability of EPDs is limited to those applying a functional unit.

The LCIA results are relative expressions and do not predict impacts on category endpoints, the exceedance of thresholds, safety margins or risks.

When using weighted averages for calculation, the life cycle impact assessment results, life cycle inventory analysis-related information, waste-related information, and environmental information on output flows do not correspond to information about a specific product.

● EPD Owner's Information

Name of company and dept.	Brother Industries, Ltd. Environment & Climate Change Strategy Dept.
Address	15-1 Naeshiro-cho, Mizuho-ku, Nagoya, 467-8561, Japan
Contact	inml-ecoleaf-jimukyoku(at)brother.co.jp
LCA practitioner	Brother Industries, Ltd. Toshiaki Iwasaki
Company description	The Brother Group's mission is to place our customers first everywhere, every time and provide them with superior value by quickly creating and delivering high-quality products and services. We offer products and services with our distinctive expertise in a wide range of fields, such as printers and All-in-Ones, labeling systems and label printers, coding & marking equipment, digital printing equipment, garment printers, machine tools, industrial sewing machines, gearmotors and gears, home sewing machines.

●Product Information

Product name		MFC-J5115DW for Europe
Product /model number		MFC-J5110DW/MFC-J5115DW/MFC-J5115N
Product specification	Mass	16.6kg
	Conversion factor	16.6kg/unit
	Function	Print/Copy/Scan/FAX/Automatic duplex printing/Automatic document feeding, Maximum Paper Size A4
	Applications	Used for printing documents and photos, duplicating documents, digitizing images and documents, sending faxes, and more in homes and offices.
Service life	TS*	Inkjet multifunction device, Method(IJ)
	Service life	3 years
	In-use conditions	Printing 10 pages per day, 8 hours/day, 20 days/month, 12 months/year operation, lifetime print count: 7,200 pages.
	reference	Scenarios for printers and multifunction device (inkjet method) of imaging input and/or output equipment products v.9.0.0 scenario
Manufacturing site(s)		Philippines Factory (Taanuan City, Batangas, Philippines) Hoshizaki Factory (Nagoya City, Japan)
Product description		Inkjet multifunction device
Website		https://global.brother/en

* TS: technical specifications,

●Product Content

Product components	Proportion (%)	Mass (unit)
Steel	18.9	3.14 kg
SUS	0.4	0.07 kg
Aluminium	0.0	0.00 kg
Other metals	0.0	0.00 kg
Plastic	63.1	10.48 kg
Rubber	0.4	0.07 kg
Glass	4.7	0.78 kg
Paper and Wood	1.4	0.24 kg
Circuit board	4.2	0.70 kg
Others	6.9	1.14 kg
Packaging materials	Proportion (%)	Mass (unit)
Plastic	4.0	0.17 kg
Paper and Wood	96.0	4.03 kg
Others	0.0	0.00 kg

●Biogenic Carbon Content

Item	Content (kg-C)	Content (kg-CO ₂ eq)
Biogenic carbon content per product	0.07	0.26
Biogenic carbon content in packaging	0.03	0.09

● LCA-related Information

> EPD Type Information

EPD type	Product type	☐ Single product EPD	☒ Multiple products EPD	☐ Industry-wide EPD
	Site type	☐ Single site	☒ Multiple sites	
Geographical coverage		Europe		
Description of representativeness for multiple-products/sites EPD		This calculation and its evaluation results satisfy all of the following conditions required by GPI: • The same PCR • The same or similar function • The same production process • The same basic composition of main components and raw materials Therefore, the representativeness of the calculation results is ensured. The main unit and ink/printhead are manufactured at separate production sites. Since each product is manufactured at a single site, the data collected are considered representative of the respective product and are assessed as adequately reflecting actual production conditions.		
Description of variation for multiple-products/sites EPD		Range of the product weight selected as a key parameter: 0.4 kg Transportation distance: Europe-bound shipments were assumed as the upper-limit scenario.		
Description of products covered in the multiple products EPD		Products with similar functions, the same production process, and the same basic composition of main components are disclosed as multiple products EPD. Among the products in the group, the product with the highest life cycle environmental impact (MFC-J5115DW) was selected as the upper-limit case for the calculation, taking into account the following factors: • Product weight • Transportation distance		

> LCA Information

Declared unit	Per unit of product		
Mass per declared unit (Conversion factor to mass)	16.6 kg		
Reference flow (number of products required to fulfil the function)	-		
System boundary	☐ Cradle-to Gate	☐ Cradle-to-Gate with options	☒ Cradle-to-Grave
LCA software	MiLCA Cloud Edition, version: 1.2.3.1		
LCI database	IDEA3.5.1		
Characterization model	Climate change: IPCC Sixth Assessment Report (IPCC, 2021); Other impact areas: LIME2		
Use of other background data	-		
Secondary data quality	The calculation was performed using data that met the secondary data quality standards specified in the GPI.		
Primary data collection sites	The ink and printhead production plant and the product assembly plant		
Primary data collection period	From April 2024 to August 2026		
Biogenic carbon	☐ 0/0 approach	☒ -1/+1 approach	
Information about electricity	Use	☒ Average consumption mix	☐ Others
	Type	-	
	Purchase date	-	
	Issuing body	-	

> Life Cycle Stages

Raw materials acquisition stage	Production stage	Distribution stage	Use stage	End of life stage
☒	☒	☒	☒	☒

■ : declared stage - : stage not declared

> Allocation

Following the procedure described in the GPI, process subdivision and allocation were examined. Allocation was applied to the following processes because avoiding allocation through process subdivision was not feasible.

- The discrepancy between the actual measured mass of the product and the mass registered in the environmental system must be within 5%, and should be allocated within 1%.
- Factory load is allocated based on standard assembly time.
- The packaging materials for ink and printhead are allocated based on the amount used per unit.

> Cut-off rules

- The burden of packaging and transportation materials used when procuring input materials from external sources.
- The burden of auxiliary materials.
- The burden related to the transportation process of "parts," "materials," "packaging materials," and "accessories."
- The burden related to product storage, warehouse management during transportation, sales, and installation processes.
- The burden related to the proper disposal of "waste" at the raw material procurement and manufacturing stages.
- The burden related to parts assembly.
- The burden related to manufacturing losses.

The impact of the cut-off is less than 5%, and therefore does not affect the results of the life cycle assessment.

> System Boundary

The settings were made based on the PCR. No items defined as out-of-boundary processes in the GPI or PCR were included in the calculation. The temporal system boundary is 100 years.

> Scenario

Distribution Stage

This product is intended for Europe.

The transportation distance from the warehouse to the customer is 400 km.

Use Stage

The printable yield of the replacement ink cartridge is 6,000 pages for black and 5,000 pages for colour.

Number of black ink cartridge replacements: 0.80 times

Number of colour (three-colour) ink cartridge replacements: 1.04 times each

Print pattern: ISO/IEC 24712

Printing paper is not included in the environmental impact.

Power consumption is calculated according to the usage conditions specified in the product information.

Applied ENERGY STAR program: Ver. 3.2

The transportation distance for consumables from the warehouse to the customer is 400 km.

The transportation distance for the disposal of consumables is 100 km.

End-of-Life Stage

The transportation distance for the disposal of the main unit is 100 km.

> Electricity Modelling

For all targeted life cycle stages, appropriate regional unit values were allocated for the calculations.

Manufacturing Stage

Electricity, Japan Average, FY2022, JPN

Electricity, Ember, Philippines, 2022, PHL

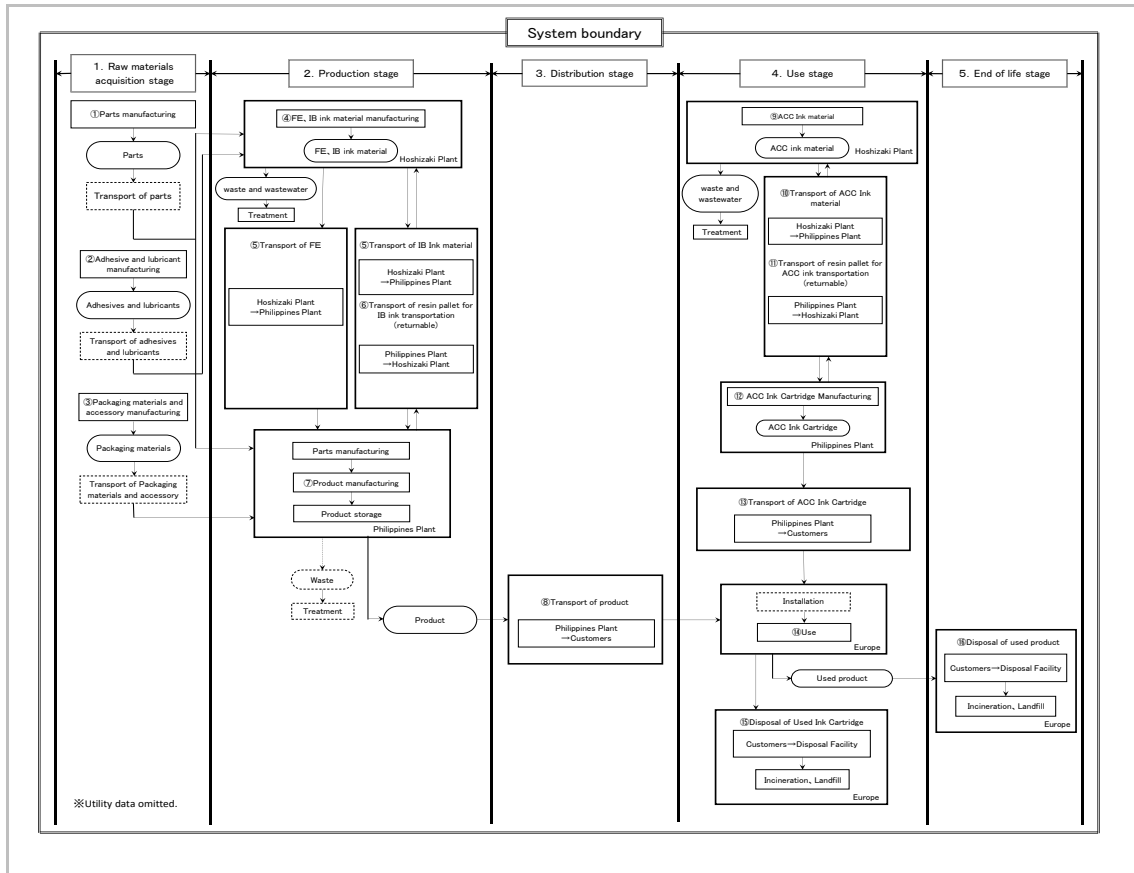
Use and Maintenance Stage

Electricity, Japan Average, FY2022, JPN

Electricity, Ember, Philippines, 2022, PHL

Electricity, Ember, Germany, 2022, DEU

> Life Cycle System Diagram



Environmental Product Declaration for **MFC-J5115DW for Europe**● **LCA Result**> **LCIA Indicators**

		Raw materials acquisition stage	Production stage	Distribution stage	Use stage	End of life stage
GWP - total	kg-CO ₂ eq	9.08E+01	1.27E+01	1.30E+01	5.25E+00	3.70E+01
GWP - fossil	kg-CO ₂ eq	8.98E+01	1.27E+01	1.30E+01	5.23E+00	3.60E+01
GWP - biogenic	kg-CO ₂ eq	-1.71E-01	-2.49E-02	4.98E-04	-6.37E-03	1.06E+00
GWP - land use and land use change	kg-CO ₂ eq	1.14E+00	7.10E-03	2.29E-03	2.14E-02	7.20E-03
ODP: Ozone depletion potential	kg-CFC-11eq	4.61E-06	2.36E-08	8.78E-11	1.50E-07	9.36E-09
EP: Eutrophication potential	kg-PO ₄ ³⁻ eq	5.62E-03	4.87E-05	4.69E-08	6.21E-04	1.72E-05
AP: Acidification potential	kg-SO ₂ eq	2.18E-01	3.48E-02	8.30E-03	9.40E-03	1.98E-02
POCP: Photochemical oxidant creation potential	kg-C ₂ H ₄ eq	2.66E-03	1.00E-04	8.83E-05	1.05E-04	5.20E-05

Optional indicators

GWP - aircraft	kg-CO ₂ eq	0.00E+00	8.47E-02	0.00E+00	0.00E+00	0.00E+00
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> **LCI - Primary Resource Use**

		Raw materials acquisition stage	Production stage	Distribution stage	Use stage	End of life stage
RPR _E *	MJ	3.56E+02	1.04E+02	2.65E-02	6.29E+01	1.20E+01
RPR _M *	MJ	6.75E+00	3.25E-02	1.05E-04	3.10E-01	2.16E-03
NRPR _E *	MJ	1.73E+03	1.62E+02	1.41E+02	9.05E+01	6.18E+01
NRPR _M *	MJ	5.89E+02	5.89E-01	2.93E-04	1.24E+01	4.17E-02

*RPRE: Renewable primary resources used as an energy carrier, RPRM: Renewable primary resources with energy content used as material, NRPRE: Non-renewable primary resources used as an energy carrier, NRPRM: Non-renewable primary resources with energy content used as material.

> **LCI - ADP-fossil and Consumption of freshwater**

		Raw materials acquisition stage	Production stage	Distribution stage	Use stage	End of life stage
Consumption of freshwater resources	m ³	1.84E+00	2.25E-02	5.24E-03	7.42E-02	2.17E-02

> **Waste Indicators**

		Raw materials acquisition stage	Production stage	Distribution stage	Use stage	End of life stage
Hazardous waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.98E-01
Non-hazardous waste disposed	kg	1.80E+00	5.15E-02	5.10E-03	5.95E-02	1.24E+00
High-level radioactive waste	m ³	1.38E-09	3.88E-11	1.00E-13	7.74E-11	4.68E-11
Intmd. and low-level radioactive waste	m ³	1.41E-06	3.95E-08	1.05E-10	7.90E-08	4.77E-08

> Description of LCA Results

Since general values (unit values) are used, the specific characteristics of the materials used in this product may not be reflected. Therefore, please use these results as approximate values.

The totals for each life cycle stage are shown below.

LCIA Indicators		Total
GWP - total	kg-CO ₂ eq	1.59E+02
GWP - fossil	kg-CO ₂ eq	1.57E+02
GWP - biogenic	kg-CO ₂ eq	8.59E-01
GWP - land use and land use change	kg-CO ₂ eq	1.18E+00
ODP: Ozone depletion potential	kg-CFC-11eq	4.80E-06
EP: Eutrophication potential	kg-PO ₄ ³⁻ eq	6.31E-03
AP: Acidification potential	kg-SO ₂ eq	2.90E-01
POCP: Photochemical oxidant creation potential	kg-C ₂ H ₄ eq	3.01E-03
GWP - aircraft	kg-CO ₂ eq	8.47E-02

LCI		Total
RPR _E *	MJ	5.35E+02
RPR _M *	MJ	7.09E+00
NRPR _E *	MJ	2.18E+03
NRPR _M *	MJ	6.02E+02
Consumption of freshwater resources	m ³	1.97E+00

Waste Indicators		Total
Hazardous waste disposed	kg	6.98E-01
Non-hazardous waste disposed	kg	3.16E+00
High-level radioactive waste	m ³	1.54E-09
Intmd. and low-level radioactive waste	m ³	1.57E-06

● Additional Environmental Information

> Additional Environmental Information not related to LCA

The assembly and production of this product, as well as the manufacturing of key components such as inks and printheads, are carried out at the factories certified under ISO 14001.

This product complies with the EU RoHS Directive.

The mass of hazardous waste is defined as the mass of component parts, such as substrates containing lead (Pb).

> Information on Hazardous Substances

Hazardous materials name	CAS No.	Standards or regulations
Pb	7439-92-1	PRTR Law (Pollutant Release and Transfer Register Law)

● Definitions of Terms

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● References

- ISO14025:2006 Environmental labels and declarations — Type III environmental declarations — Principles and procedures
- ISO14040:2006 Environmental management - Life Cycle Assessment - Principles and framework
- ISO14044:2006 Environmental management - Life Cycle Assessment - Requirements and guidelines
- ISO14067:2018 Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification

● Version History

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