

TOSHIBA

Toshiba Tec Corporation

e-STUDIO331AC

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Registration number

SuMPO-EPD-2606-179-1

Verification date

2026/6/16

Publication date

2026/7/13

* First publication date

Expiration date

2031/6/15

EPD type

Single Product EPD

Additional standards in conformance

none

EPD can be updated or withdrawn during the validity period.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.2.1.1
PCR name	Imaging input and/or output equipment
PCR registration number	SuMPO-PCR-02001-9-0-0
PCR publication date	2025/10/17
PCR review panel chair	Ken Yamagishi (LCA Expert Center Co., Ltd.)
PCR valid until	2030/10/16
PCR issuer	Sustainable Management Promotion Organization (SuMPO)

> Verification

Verification Type	Third-party verification in conformance with ISO14025		
	☐ Internal	☒ External	
	☒ Third-party verification by individual verifier	☐ Third-party verification by verification body	☐ Third-party verification by system certification
Verifier	Yasuo Koseki (Koseki Environmental Office)		

> 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

● EPD Owner's Information

Name of company and dept.	Toshiba Tec Corporation, Business Innovation Management Section, Business Innovation Department, Workplace Solutions Business Group
Address	6-78 Minamicho, Mishima City, Shizuoka Prefecture
LCA practitioner	Business Innovation Management
Company description	Toshiba Tec is a core company of the Toshiba Group—providing "Retail & Printing Solutions" centered on POS systems and multifunction peripherals—and is an electronics manufacturer with extensive operations both in Japan and overseas.

●Product Information

Product name		e-STUDIO331AC	
Product /model number		FC-331AC	
Product specification	Function	64.38kg	Conversion factor —
	Mass	Multifunction devices (copiers, printers, scanners, etc.)	
	Applications	Business equipment	
	TS*	40 pages/minute	
Service life	Service life	5	
	In-use conditions	10–30°C, 20–85% RH, no condensation	
	reference	From product specifications	
Manufacturing site(s)		China factory (TESS), Malaysia factory (EMMY)	
Product description		(a) Copiers, printers, and multifunction devices (EP method, including large format) 1. Method (EP) 2. Color 3. Print speed (33, 40) 4. Max. paper size: A4 5. Print/Copy/Scan/Fax/Duplex printing/ADF (Automatic Document Feeder)	
Website		https://www.toshibatec.com/cnt/products_overseas/MFP/eS401AC_series/	

* TS: technical specifications,

●Product Content

Product components	Proportion (%)	Mass (unit)
Carbon steel	41.0	21.31 kg
Stainless steel	2.7	1.39 kg
Other metals	1.7	0.87 kg
Aluminum	0.7	0.35 kg
Glass	2.5	1.28 kg
Thermoplastic resin	42.6	22.14 kg
Thermosetting resin	0.1	0.05 kg
Rubber	0.3	0.14 kg
Paper	0.0	0.01 kg
Wood	0.0	0.00 kg
Mounted circuit boards	4.4	2.29 kg
Medium-sized motors	4.1	2.13 kg
Packaging materials	Proportion (%)	Mass (unit)
Other metals	2.4	0.30 kg
Thermoplastic resin	6.6	0.81 kg
Paper	44.8	5.57 kg
Wood	46.2	5.74 kg

●Biogenic Carbon Content

Item	Content (kg-C)	Content (kg-CO ₂ eq)
Biogenic carbon content per product	—	—
Biogenic carbon content in packaging	—	—

Environmental Product Declaration for e-STUDIO331AC

● 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	
	Value	☒ Specific	☐ Average	☐ Representative
Geographical coverage		North America		
Description of representativeness for multiple-products/sites EPD		—		
Description of variation for multiple-products/sites EPD		—		
Description of products covered in the multiple products EPD		—		

> LCA Information

Declared unit		Per product unit	
Mass per declared unit (Conversion factor to mass)		64.38kg	
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 for EPD 3.2.0.0	
LCI database		IDEAv3.1	
Characterization model		IPCC Fifth Assessment Report (IPCC, 2013)	
Use of other background data		—	
Secondary data quality		Calculations were performed using data that met the secondary data quality requirements specified by the GPI.	
Primary data collection sites		China Plant (TESS), Malaysia Plant (EMMY)	
Primary data collection period		Data for the one-year period from January 2025 to December 2025	
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

Regarding the manufacturing energy for the main unit, an allocation was applied based on the ratio of the labor hours required for a single unit to the total assembly labor hours at the respective factories in China and Malaysia. Energy consumption associated with the production of periodic replacement parts at the Chinese factory was calculated using the same method.

> Cut-off rules

As the cutoff is 0%, it is not listed.

> System Boundary

The following items described in PCR4.4.6 are excluded from the calculation scope:

- Processes related to employee work activities (e.g., environmental impacts associated with the employees themselves operating machinery) and commuting/travel
- Processes related to research and development, administrative work, etc.
- Processes related to the manufacturing and construction of capital goods such as manufacturing facilities and equipment (excluding power plants and power generation equipment)
- Processes related to the manufacturing of trucks, ships, aircraft, etc., used for transportation
- Processes related to general-purpose supplies used for purposes other than product manufacturing, such as work uniforms and work gloves

> Scenario

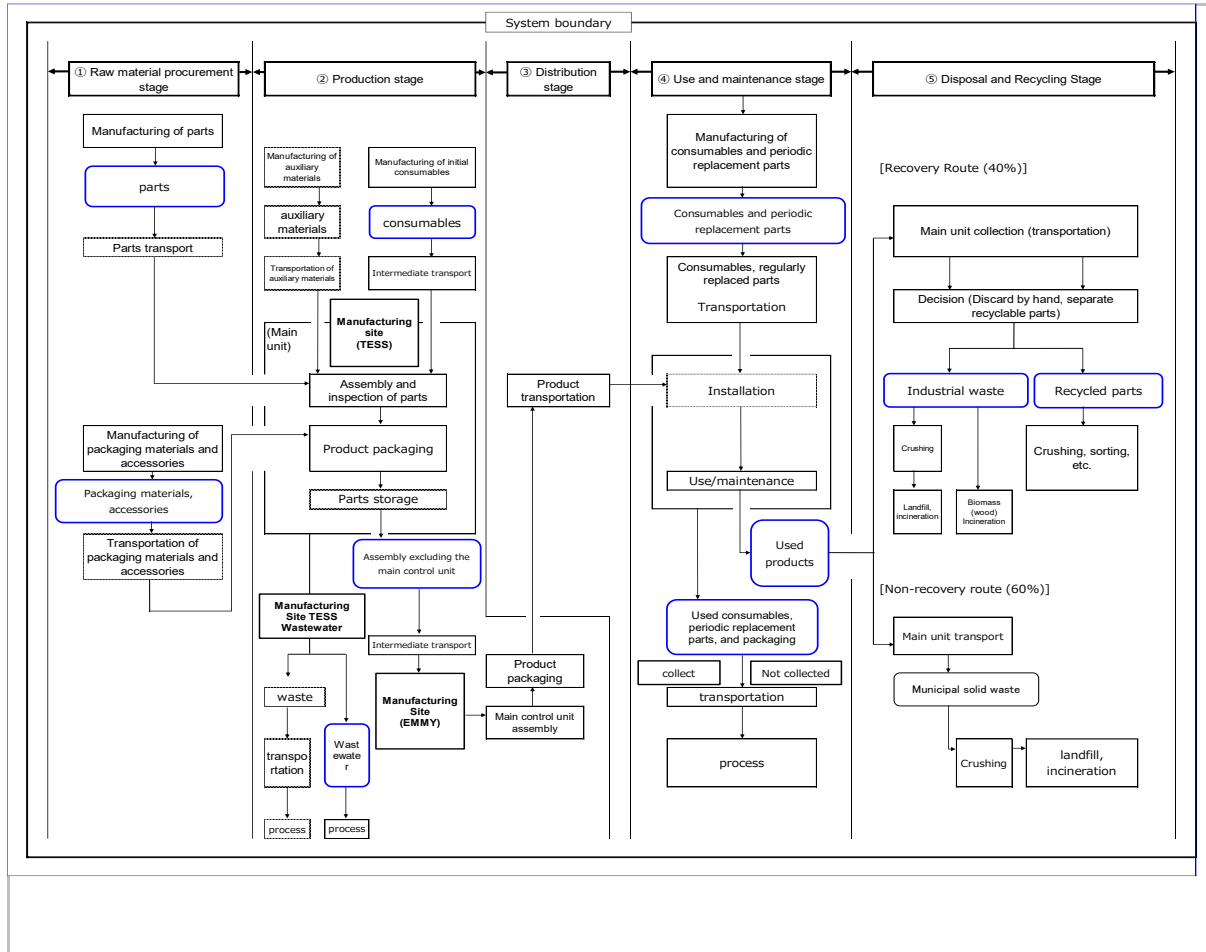
"60% was treated as scrapped.

→ Basis: Refer to Scenario 4.4.5.5.3 (The product recovery rate shall be based on actual data for the product in question or a similar product; if actual data is unavailable, a rate of 40% shall be used, regardless of whether the location is domestic or overseas.)"

> Electricity Modelling

- For the electricity used at the Chinese factory, calculations were based on data for the average grid electricity in China for 2015.
- For the electricity used at the Malaysian factory, calculations were based on data for the average grid electricity in Malaysia for 2015.

> Life Cycle System Diagram



Environmental Product Declaration for e-STUDIO331AC

● LCA Result

> LCIA Indicators

		Raw materials acquisition stage	Production stage	Distribution stage	Use stage	End of life stage
GWP	kg-CO ₂ eq	2.52E+02	3.34E+01	5.97E+01	2.72E+02	7.70E+01
Ozone layer depletion	kg-CFC-11eq	6.00E-05	3.12E-07	7.29E-10	1.11E-05	9.79E-07
Acidification	kg-SO ₂ eq	2.62E-01	1.81E-01	1.15E-01	9.09E-01	4.71E-02
Urban air pollution	kg-SO ₂ eq	1.96E-01	1.50E-01	4.43E-02	7.24E-01	2.05E-02
Photochemical oxidants	kg-C ₂ H ₄ eq	7.68E-03	7.86E-05	2.93E-04	3.09E-03	1.26E-04
Hazardous chem. - carcinogenic	kg-C ₆ H ₆ eq	3.86E-01	3.04E-02	2.95E-04	1.15E-01	5.91E-03
Hazardous chem. - chronic	kg-C ₆ H ₆ eq	3.69E-03	1.10E-04	1.94E-04	1.17E-03	4.31E-05
Aquatic ecotoxicity	kg-C ₆ H ₆ eq	9.46E-01	4.59E-02	7.73E-06	2.06E-01	1.23E-02
Terrestrial ecotoxicity	kg-C ₆ H ₆ eq	1.59E+01	5.65E-02	1.43E-04	2.15E+00	1.82E-01
Eutrophication	kg-PO ₄ ³⁻ eq	1.09E-02	2.13E-03	6.05E-10	1.90E-03	9.55E-05
Land use - maintenance	m ² /year	2.85E+01	1.82E-01	2.82E+00	2.75E+00	2.04E-01
Land use - modification	m ²	5.05E-02	4.18E-03	5.64E-02	7.41E-02	4.22E-03
Resource consumption	kg-Sbeq	3.96E-01	1.19E-04	2.51E-04	3.85E-02	5.56E-05

> LCI

		Raw materials acquisition stage	Production stage	Distribution stage	Use stage	End of life stage
Use of non-renewable resources	kg	4.12E+01	2.40E-01	5.45E-05	4.58E+00	8.50E-01
Use of non-renewable energy	kg	1.12E+02	1.45E+01	1.84E+01	1.12E+02	3.62E+00
Use of non-renewable energy	MJ	4.53E+03	5.08E+02	8.25E+02	4.78E+03	1.56E+02
Use of renewable resources	kg	7.80E+01	2.17E-02	1.39E-05	2.56E+01	2.31E-02
Use of renewable energy	MJ	4.31E+02	4.66E+01	1.88E-02	6.74E+02	2.41E+01
Consumption of freshwater resources	m ³	2.60E+01	2.28E-02	1.10E-03	6.82E-01	6.36E-03

> 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	0.00E+00
non-hazardous waste disposed	kg	1.37E+01	2.99E-03	4.72E-07	6.99E+00	2.27E+01
Municipal waste, landfill	kg	2.67E-07	2.65E-13	7.82E-16	1.59E+00	1.75E+01

*It indicates the amount of waste generated throughout the lifecycle.

> Output Flow Indicators

		Raw materials acquisition stage	Production stage	Distribution stage	Use stage	End of life stage
Components for reuse	kg	—	—	—	—	—
Materials for recycling	kg	—	—	—	—	—
Material for energy recovery	kg	—	—	—	—	—
Exported energy from waste (energy recovery efficiency ≥ 60%)	MJ	—	—	—	—	—
Incineration of waste (energy recovery efficiency < 60%)	Waste disposed	kg	—	—	—	—
	Recovered energy	MJ	—	—	—	—
Waste disposed in landfill and energy recoved from landfill gas	Waste disposed	kg	—	—	—	—
	Recovered energy	MJ	—	—	—	—

Environmental Product Declaration for e-STUDIO331AC

> Description of LCA Results

"As general values (unit values) are used, the specific characteristics of the materials used in this product may not be fully reflected; therefore, please treat these results as estimates.

- Assumed product destination for calculation: North America
- Calculation method for the use and maintenance phase: Based on PCR scenarios
- Assumed usage period: 5 years
- Applied International ENERGY STAR Program version: Version 3.2
- Environmental impact associated with printing paper during the use and maintenance phase is not included.
- Product selected for the impact calculation scenario: Multifunction printer (EP method)"

● Additional Environmental Information

> Additional Environmental Information not related to LCA

- Manufactured in an ISO 14001-certified factory.
- Complies with the International ENERGY STAR Program Ver. 3.2.
- Complies with the European RoHS Directive.

> Information on Hazardous Substances

Hazardous materials name	CAS No.	Standards or regulations
—	—	—

● 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

● Version History

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