



EcoLeaf

Type III Environmental Declaration (EPD)

Registration number : JR-AI-22196E

Japan EPD Program by SuMPO

Sustainable Management Promotion Organization

2-1, Kaji-cho 2 chome, Chiyoda-ku, Tokyo Japan

<https://ecoleaf-label.jp/>

TOSHIBA

Toshiba Tec Corporation

Multifunctional Digital Monochrome Systems

e-STUDIO4528A



Functional unit

Per unit of product

System boundary

■ final products intermediate products

Raw material acquisition - Production -

Distribution - Use & maintenance - End-of-Life

Main specifications of the product

Model name: e-STUDIO4528A

■ Digital Color MFD (EP Type)

■ Print speed: 45ppm (LT)

■ Maximum paper size: LD

■ Automatic duplex printing

Company Information

Toshiba Tec Corporation

Engineering Planning Group

Engineering Planning Dept.

TEL: +81-55-976-7011

<https://www.toshibatec.co.jp/>

Registration#	JR-AI-22196E
PCR number	PA-590000-AI-04
PCR name	Imaging input and/or output equipment
Publication date	8/31/2022
Verification date	8/18/2022
Verification method	Product-by-product
Verification#	JV-AI-22196
Expiration date	8/17/2027
PCR review was conducted by:	
Approval date	4/1/2022
PCR review panel chair	Masayuki Kanzaki (Sustainable Management Promotion Organization)

Third party verifier*

Hiroyuki Nakamura

Independent verification of data & declaration in accordance with ISO14025

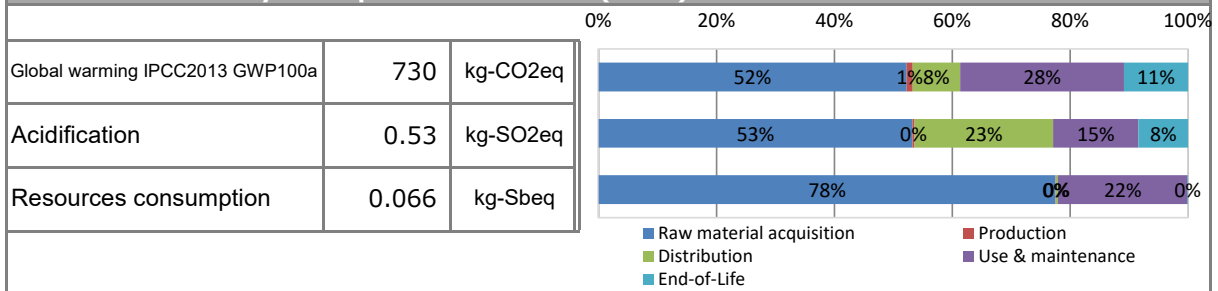
internal external

*Auditor's name is stated if system certification has been performed.

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1. Results of life cycle impact assessment (LCIA)



Parameter	stage	Unit	Total	Raw material acquisition	Production	Distribution	Use & maintenance	End-of-Life
Global warming IPCC2013 GWP100a		kg-CO ₂ eq	7.3E+02	3.8E+02	7.6E+00	5.9E+01	2.0E+02	8.0E+01
Ozone layer destruction		kg-CFC-11eq	4.9E-05	3.9E-05	7.1E-08	4.5E-10	8.9E-06	9.6E-07
Acidification		kg-SO ₂ eq	5.3E-01	2.8E-01	2.0E-03	1.2E-01	7.7E-02	4.4E-02
Urban area air pollution		kg-SO ₂ eq	3.1E-01	1.9E-01	1.0E-03	4.8E-02	4.5E-02	1.9E-02
Photochemical ozone		kg-C ₂ H ₄ eq	5.8E-03	4.4E-03	5.2E-05	2.5E-04	8.7E-04	1.4E-04
Toxic chemicals(cancer)		kg-C ₆ H ₆ eq	9.2E-02	8.9E-02	1.0E-05	1.8E-08	3.1E-03	2.3E-05
Toxic chemicals(chronic disease)		kg-C ₆ H ₆ eq	5.2E-04	4.8E-04	1.5E-06	2.6E-09	3.1E-05	3.4E-06
Aquatic toxicity		kg-C ₆ H ₆ eq	6.4E-01	5.9E-01	2.3E-03	4.0E-06	4.3E-02	5.2E-03
Biological toxicity		kg-C ₆ H ₆ eq	2.8E+01	2.6E+01	5.5E-02	9.7E-05	1.3E+00	1.3E-01
Eutrophication		kg-PO ₄ ³⁻ eq	7.1E-04	3.0E-05	2.4E-04	3.9E-13	3.0E-04	1.4E-04
Land use(Occupation)		m ² /year	3.6E+01	3.1E+01	1.5E-02	3.0E+00	2.2E+00	2.1E-01
Land use(Transformation)		m ²	5.2E-01	4.2E-01	3.0E-04	6.1E-02	3.9E-02	4.2E-03
Resources consumption		kg-Sbeq	6.6E-02	5.1E-02	2.2E-05	2.5E-04	1.5E-02	4.9E-05

2. Life cycle inventory analysis (LCI)

項目	値	単位
Non-renewable material resources	4.4E+01	kg
Non-renewable energy resources	1.1E+04	MJ
Renewable material resources	8.6E+01	kg
Renewable primary energy	2.3E+02	MJ

3. Material composition

Material	値	Unit
Ordinary steel	3.1E+01	kg
SUS	5.8E-01	kg
Other metals	1.1E+00	kg
Aluminium	2.4E-01	kg
Glass	1.9E+00	kg
Thermoplastic resin	2.0E+01	kg
Thermosetting resin	2.1E-01	kg
Rubber	8.7E-01	kg
Paper	5.6E+00	kg
Wood	5.3E+00	kg
Circuit Board	1.6E+00	kg
Medium-sized motor	1.3E+00	kg



5. Additional explanation

- Product destination: North America
 - Calculation method of use stage (scenario)
 - Expected usage period: five years
 - Estimated number of use: 297,600 sheets*
 - Print measuring method (pattern): ISO/IEC 19798
 - Automatic Document Feeder and Paper Feed Pedestal is optional, its impact is not included.
 - Inventory of the print paper is not included
 - Products selected in the scenario used for Inventory
 - Multifunction device (EP type)
- * Electric power in the use and maintenance stage is evaluated using TEC value according to International ENERGY STAR program Version3.1 and the public electric-power-consumption-rate in the United States.
(32 jobs/day) x (31 sheets/job) x (1/4) x 5days x 4weeks x12months x5years = 297,600 sheets

6-1. Supplementary environmental information

- This product is produced in our ISO 14001 certified factories.
- ENERGY STAR®Ver.3.1 qualified.
- EU RoHS2 compliant.

7. Assumptions of secondary data used

- Inventory Database:LCI Database IDEA v2.1.3,Japan EPD Program by SuMPO registered data v1.10.

8. Remarks

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- For data quantification, please refer to PCR and Rules on quantification and declaration.
- Comparative assertion is permitted only when Rules on quantification and declaration are satisfied.
(Reference URL : <https://ecoleaf-label.jp/regulation/>)