SuMPO EPD JAPAN VERIFIED

SuMPO EPD Japan

Third party verified

Environmental Product Declaration

In conformance with

ISO14025 | ISO14040 | ISO14044

KYOCERA Document Solutions Inc.

# ECOSYS PA5000x (US)

## Monochrome Printer ECOSYS PA5000x (US)



| Registration number | Verificartion date | Publication date | Expiration date | EPD type |
|---|---|---|---|---|
| SuMPO-EPD-2610-270-1 | 11/13/2026 | 11/27/2026 | 11/12/2031 | Single Product EPD |

* First publication date

**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EPD can be updated or withdrawn during the validity period.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.2.2.0 |
| PCR name | Imaging input and/or output equipment Sub-PCR v9.0.0 |
| PCR registration number | 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 | |
| | ☐ Third-party verification by individual verifier | ☐ Third-party verification by verification body | ■ Third-party verification by system certification |
| Verifier | Shino Nishikimi (JAPAN QUALITY ASSURANCE ORGANIZATION) | | |

## ＞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. | KYOCERA Document Solutions Inc. |
| Address | 1-2-28 Tamatsukuri, Chuo-ku, Osaka 540-8585, Japan |
| Contact | Reliability Assurance Section 21　+81-6-6764-3764 |
| LCA practitioner | Hiromu Ibaragi (R&D Office) |
| Company description | Group Companies: 96　Group Employees: 21,076 (As of March 2026)<br>Our Business:<br>Development, Manufacturing and Sales of Printing Products (MFPs, Printers), Commercial and Industrial Printing, Business Solutions, Application Software and Supply products<br>Production Sites:<br>Tamaki Plant, Hirakata Plant (Japan), China Plant, Vietnam Plant |

## ●Product Information

| | | | | |
|---|---|---|---|---|
| Product name | | ECOSYS PA5000x (US) | | |
| Product /model number | | ECOSYS PA5000x | | |
| Product specification | Mass | 20.34 kg | Conversion factor | - |
| | Function | Monochrome A4 printer<br>Printing speed: Monochrome 50 pages per min. in A4<br>Printing pager: Maximum Folio (Legal)<br>Duplex function: Standard | | |
| | Applications | Printing in large quantity and continuous printing at low cost | | |
| | TS* | Method: Electrophotographic Printer (EP) | | |
| RSL (Reference Service Life) | Service life | 5 years | | |
| | In-use conditions | Total lifetime print volume: 374,400 pages<br>Number of images per day* x 1/4 x 5 (days/week) x 4 (weeks/month) x 12 (months/year) x 5 (years) = 374,400 pages<br>(Number of images per day*(= jobs/day x images/job) | | |
| | reference | Based on the estimated period of use for Printers and Multifunction Devices (EP method) as defined in Sub-PCR for Imaging input and/or output equipment products v.9.0.0 | | |
| Manufacturing site(s) | | Vietnam plant Hai Phong City, Vietnam | | |
| Product description | | Product destination: North America<br>Printing speed: Monochrome 50 pages per minute in A4<br>Printing paper: Maximum Folio (Legal)<br>Duplex function: Standard | | |
| Website | | https://www.kyoceradocumentsolutions.com/global/ja/index.html | | |

* TS: technical specifications,

## ●Product Content

| Product components | Proportion (%) | Mass (unit) | |
|---|---|---|---|
| Steel | 27.4 | 4.51 | kg |
| SUS | 0.6 | 0.11 | kg |
| Cu | 5.6 | 0.92 | kg |
| Al | 1.6 | 0.26 | kg |
| Thermoplastics resin | 49.7 | 8.18 | kg |
| Thermosetting resin | 0.2 | 0.03 | kg |
| Rubber | 0.2 | 0.03 | kg |
| Paper | 0.9 | 0.15 | kg |
| Assembled circuit board | 5.8 | 0.96 | kg |
| Medium-sized motor | 5.0 | 0.82 | kg |
| Glass | 2.9 | 0.49 | kg |
| Wood | 0.0 | 0.00 | kg |
| Othe electric electronic component | 0.0 | 0.01 | kg |
| Packaging materials | Proportion (%) | Mass (unit) | |
| Thermoplastics resin | 4.4 | 0.17 | kg |
| Paper | 95.6 | 3.71 | kg |
| | | | |
| | | | |

## ●Biogenic Carbon Content

| Item | Content (kg-C) | Content (kg-$CO_2$ eq) |
|---|---|---|
| Biogenic carbon content per product | - | - |
| Biogenic carbon content in packaging | - | - |

# ●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 | | 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 unit of product | |
| Mass per declared unit (Conversion factor to mass) | | 20.34 kg (Conversion factor to mass: -) | |
| 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 | |
| LCI database | | IDEA Ver3.1.0 | |
| Characterization model | | Climate change: IPCC the Sixth Assessment Report (IPCC, 2021)<br>Othe impact areas: LIME2 | |
| Use of other background data | | – | |
| Secondary data quality | | Calculation was conducted by using data that meet the secondary data quality requirements specified in the GPI. | |
| Primary data collection sites | | Toner and drum production plants Product assembly plant | |
| Primary data collection period | | October 2022 ～ | |
| 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

In this calculation, process subdivision and allocation were examined by the procedures described in GPI.
Since other products were also manufactured, collecting the primary data only for the subject product was difficult, allocation was applied based on production time and the number of units produced for the subject products.

## ＞Cut-off rules

Stages, processes and flows that are subject to cut-off specified by PCR
(Cut-off rules 5%)

## ＞System Boundary

Based on the PCR, all items defined as out-of-boundary were set as out-of-boundary.
The temporal system boundary is 100 years.

## ＞Scenario

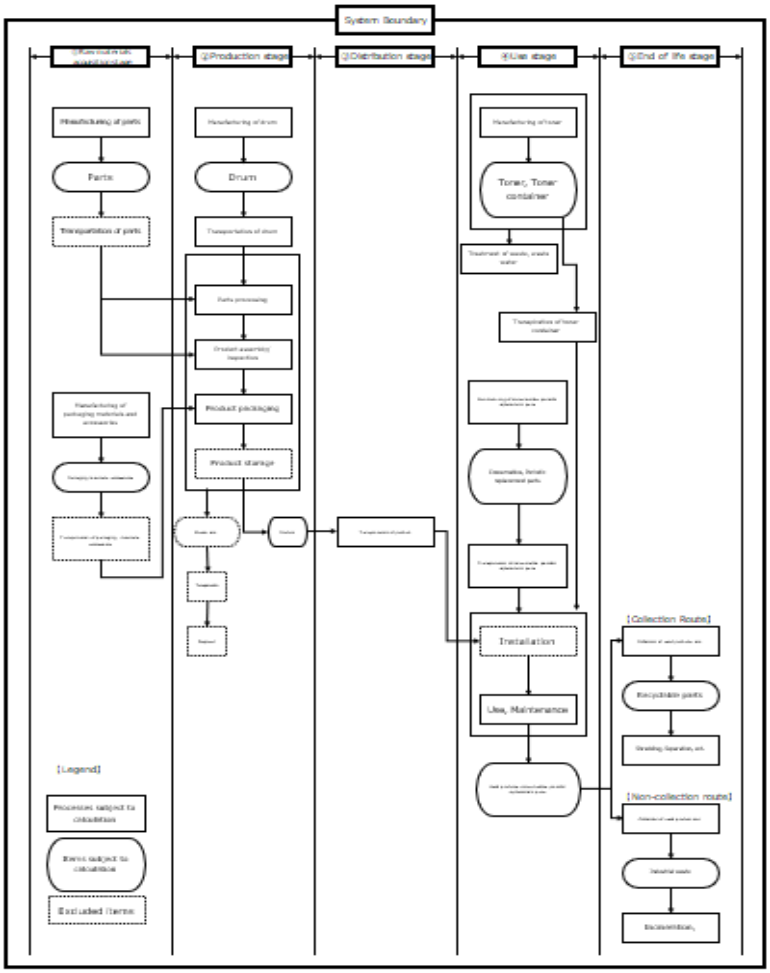
【Distribution Stage】
Means of transportation, Loading rate: Applied PCR scenarios.
Transportation distance: Applied PCR scenarios and internal company's scenarios.
【Use & Maintenance Stage】
Means of transportation, Loading rate: Applied PCR scenarios.
Transportation distance: Applied PCR scenarios and internal company's scenarios.
- Confirmed to the International ENERGY STAR Ver3.2 Program.
- Lifetime electricity consumption
  [167.2 kWh] = TEC [0.697 kWh/week] x 4 weeks x 12 months x 5 years
- The impact of printing paper is not included.
- Consumables, Periodic replacement parts
  Toner container
  Printable pages : 15,500 pages  Number of lifetime usage : 24.155 toner containers
- Consumables will be shipped directly from the factory to the country of sales separately from the product body and al of them are accounted in the use and maintenance stage.

【End-of-Life Stage】
Means of transportation, Loading rate: Applied PCR scenarios.
Transportation distance: Applied PCR scenarios and internal company's scenarios.
Product take back rate: Applied PCR senarios (40%)

## ＞Electricity Modelling

For the targeted life cycle stages, conducted the calculation by applicable IDEA Ver3.1.0 (Electricity Japan average FY2018 JPN and so on).

## ＞Life Cycle System Diagram



# ●LCA Result

## ＞LCIA Indicators

| | | Total | Raw materials acquisition stage | Production stage | Distribution stage | Use stage | End of life stage |
|---|---|---|---|---|---|---|---|
| GWP | kg-$CO_2$eq | 3.61E+02 | 1.09E+02 | 6.15E+00 | 1.50E+01 | 1.99E+02 | 3.19E+01 |
| Ozone layer depletion | kg-CFC-11eq | 3.90E-05 | 2.08E-05 | 9.70E-07 | 1.67E-10 | 1.65E-05 | 7.02E-07 |
| Acidification | kg-$SO_2$eq | 9.53E-01 | 1.14E-01 | 1.79E-02 | 1.04E-02 | 7.69E-01 | 4.22E-02 |
| Photochemical oxidants | kg-$C_2H_4$eq | 6.83E-03 | 4.56E-03 | 8.03E-05 | 4.37E-05 | 2.05E-03 | 9.63E-05 |
| Eutrophication | kg-$PO_4^{3-}$eq | 2.22E-02 | 1.03E-02 | 1.11E-04 | 1.51E-10 | 1.18E-02 | 1.56E-05 |

## ＞LCI

| | | Raw materials acquisition stage | Production stage | Distribution stage | Use stage | End of life stage |
|---|---|---|---|---|---|---|
| Use of non-renewable resources | kg | 1.59E+01 | 9.31E-02 | 1.25E-05 | 6.75E+00 | 1.07E+00 |
| Use of non-renewable energy | MJ | 1.96E+03 | 9.49E+01 | 2.10E+02 | 3.83E+03 | 1.27E+02 |
| Use of renewable resources | kg | 2.92E+01 | 5.70E-03 | 3.20E-06 | 8.61E+01 | 1.00E-02 |
| Use of renewable energy | MJ | 2.23E+02 | 3.06E+01 | 4.30E-03 | 5.54E+02 | 1.85E+01 |
| Consumption of freshwater resources | $m^3$ | - | - | - | - | - |

## ＞Waste Indicators

| | | Raw materials acquisition stage | Production stage | Distribution stage | Use stage | End of life stage |
|---|---|---|---|---|---|---|
| hazardous waste disposed | kg | - | - | - | - | - |
| non-hazardous waste disposed | kg | - | - | - | - | - |

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

＞Description of LCA Results

Since general values (IDEAv3 intensity) are used, the specific characteristics of the materials used in this product my not be reflected.
Therefore, please use these results a approximate values.

## ●Additional Environmental Information

＞Additional Environmental Information not related to LCA

・Manufactured at ISO14001 certified factories.
・Halogenated flame retardants are not used in plastic housing and outer package.

＞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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