

# Product Environmental Aspects Declaration



No. AA-03-018

Electrophotographic Dry Process Photocopier



**Canon**

<http://canon.jp>

Canon Inc.

Environment Management and Engineering Center

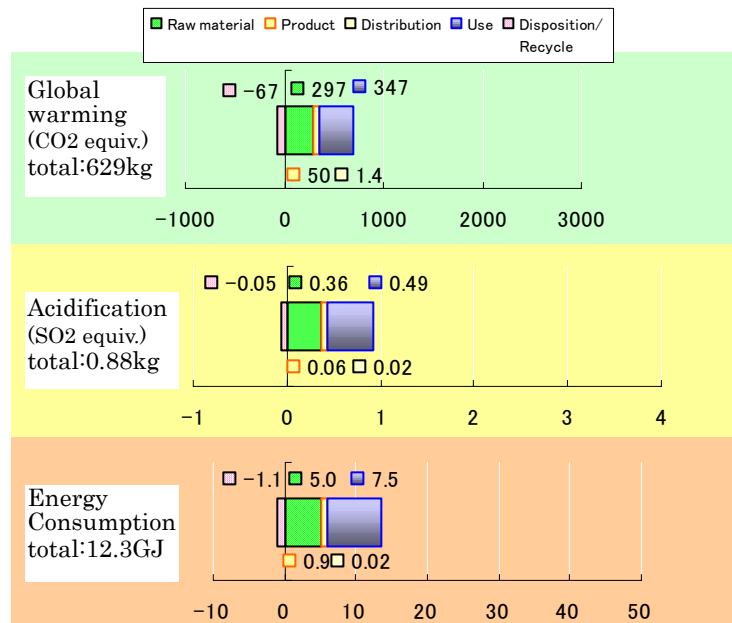
Email: [eco@web.canon.co.jp](mailto:eco@web.canon.co.jp)

## imageRUNNER s iR3310

- Copy speed : 33 pages-per-minute
- Maximum original size : A3
- Automatic Trayless Duplexing



Note: ADF, Cassette Feeding Unit-W1 and Finisher-J1 are optional.



Use stage: copying 480,000 A4 sheets in 5 years. The life cycle loads for consumables are included on this stage. Environmental loads for sheets are excluded.

Notes:

1. Visit *EcoLeaf* website under JEMAI homepage at [http://www.jemai.or.jp/ecoleaf\\_e/](http://www.jemai.or.jp/ecoleaf_e/) for full details including below.
2. Original LCA data is available on *PEIDS: Product Environmental Information Declaration Sheet*, and *Product Data Sheet*.
3. Unified rules and requirements for EcoLeaf LCA, for intended product category, are available as a *PSC: Product Specification Criteria*.
4. *Basic Units* used for calculations are based on Japan domestic data at this time, due to a lack of base data to establish localized *Basic Unit* for oversea locations adequately.

### [Supplemental environmental information]

- Conformed to the International ENERGY STAR® Program.
- Obtained the Japan Environmental Association's Eco-Mark.
- Conformed to the LAW on Promoting Green Purchasing.
- Manufactured at ISO14001 certified factories.
- All parts: Specific brominated flame retardants (PBB and PBDE) are not used.
- Plastic housing and outer package: Heavy metals(Pb, Hg, Cr(IV), Cd) are not used.

# Product Environmental Information Data Sheet (PEIDS)



Document control no.	
Product vendor	Canon Inc.
EcoLeaf registration	AA-03-018

Unit Function DB ver.	020601
Characterization Factor DB ver.	020902

PSC name	Electrophotographic Dry Process Photocopier	Product type	imageRUNNER s IR3310				
PSC code	AA	Product weight (kg)	83	Package (kg)	18	Weight total (kg)	101

In/Out items	Life Cycle Stage	Unit	Production		Distribution	Use	Disposition/Recycle	Total		
			Raw material	Product						
Energy Consumption			MJ	5.04E+03	8.77E+02	2.04E+01	7.51E+03	-1.10E+03	1.23E+04	
			Mcal	1.20E+03	2.09E+02	4.86E+00	1.79E+03	-2.64E+02	2.95E+03	
Inventory analyses	Resource Consumption from the environment	Energy	kg	5.79E+01	6.26E+00	4.76E-05	4.30E+01	-2.12E+01	8.60E+01	
			kg	3.90E+01	7.11E+00	4.44E-01	5.84E+01	-4.56E+00	1.00E+02	
			kg	5.54E+00	3.34E+00	6.87E-03	1.81E+01	3.61E-01	2.74E+01	
			kg	5.67E-04	4.23E-04	3.22E-09	1.85E-03	7.77E-05	2.92E-03	
			kg	2.13E+01	0	0	2.08E+01	-6.86E+00	3.52E+01	
		Material	kg	5.87E+01	0	0	1.59E+01	-2.76E+01	4.69E+01	
			kg	2.55E-01	0	0	1.56E-03	-6.49E-02	1.91E-01	
			kg	5.45E-01	0	0	1.09E+00	-2.58E-01	1.38E+00	
			kg	8.02E-03	0	0	2.69E-03	-3.80E-03	6.91E-03	
			kg	3.10E-02	0	0	9.11E-03	-1.46E-02	2.55E-02	
	kg		3.12E-01	0	0	1.09E-01	9.82E-02	5.19E-01		
	kg		2.07E-02	0	0	1.27E-04	-5.28E-03	1.55E-02		
	kg		0	0	0	0	0	0		
	kg		2.03E-01	0	0	1.24E-03	-5.18E-02	1.53E-01		
	kg		0	0	0	0	0	0		
	kg		0	0	0	0	0	0		
	kg		0	0	0	0	0	0		
	kg		2.36E+00	0	0	4.17E-01	-5.19E-01	2.26E+00		
	kg		1.26E+01	0	0	2.88E+00	-4.08E+00	1.14E+01		
	kg		1.23E+01	0	0	3.50E+00	-4.02E+00	1.18E+01		
kg	1.84E-01	0	0	2.31E-02	-5.39E-02	1.53E-01				
Renewable resources	kg	2.95E+01	0	0	1.40E+01	-9.79E+00	3.38E+01			
	kg	1.28E+04	4.76E+03	3.52E-02	3.05E+04	4.94E+02	4.86E+04			
Emission/Discharge to the environment	to Atmosphere	kg	2.92E+02	4.93E+01	1.44E+00	3.41E+02	-6.54E+01	6.18E+02		
		kg	1.47E-01	3.71E-02	1.76E-03	2.45E-01	-1.78E-02	4.14E-01		
		kg	3.09E-01	3.05E-02	2.22E-02	3.50E-01	-4.80E-02	6.64E-01		
		kg	2.14E-02	1.24E-03	2.59E-05	2.36E-02	-4.90E-03	4.14E-02		
		kg	1.50E-03	1.13E-03	8.61E-09	4.92E-03	2.11E-04	7.77E-03		
		kg	4.10E-02	7.29E-03	8.78E-03	5.52E-02	-4.32E-03	1.08E-01		
		kg	2.94E-03	2.22E-03	1.69E-08	9.64E-03	4.13E-04	1.52E-02		
		kg	1.14E-02	2.30E-04	4.44E-04	8.98E-03	-2.92E-03	1.81E-02		
		kg	4.03E-02	1.59E-03	1.76E-03	3.04E-02	-1.13E-02	6.28E-02		
		to Water system	kg	-	-	-	-	-	-	
	kg		-	-	-	-	-	-		
	kg		-	-	-	-	-	-		
	kg		-	-	-	-	-	-		
	kg		-	-	-	-	-	-		
	to Soil system	kg	1.45E+00	1.74E-04	0	9.53E-01	-2.70E-01	2.14E+00		
		kg	1.84E+01	0	0	4.81E+00	-8.30E+00	1.49E+01		
		kg	1.17E+00	0	0	2.34E+00	-5.54E-01	2.95E+00		
		kg	3.97E-04	2.96E-04	2.26E-09	1.29E-03	5.42E-05	2.04E-03		
		kg	-	-	-	-	-	-		
	Impact assessment	by Resource Consumption	Exhaustible resources	kg	8.74E+01	1.86E+01	4.53E-01	1.23E+02	-1.70E+01	2.12E+02
Mineral resources (Iron ore equivalent)			kg	1.62E+02	0	0	3.50E+01	-5.45E+01	1.43E+02	
by Emission/Discharge		to Atmosphere	Global warming (CO2 equivalent)	kg	2.97E+02	4.97E+01	1.44E+00	3.47E+02	-6.67E+01	6.29E+02
			Acidification (SO2 equivalent)	kg	3.64E-01	5.84E-02	1.73E-02	4.90E-01	-5.14E-02	8.78E-01

## Notes:

### I. Stage related

- A. "Production" stage is intended for two sub-stages listed below.
  - (1) "Raw material" production: consists of mining, transportation and raw material production.
  - (2) "Product" production: consists of the parts processing, assembly and installation.
- B. "Distribution" stage is intended for transportation of produced product. Transportation of consumables and maintenance goods (e.g. replacement parts) for use of the product are included into "Use" stage.
- C. "Use" stage is intended for use of the product (active mode, standby mode, etc.) and production, transportation to disposal/recycle of consumables/maintenance goods (e.g. replacement parts).
- D. "Disposition/Recycle" stage is intended for environmental impacts by product disposition/recycle, and deduction by recycling (e.g. impact reduction of raw material production).

### II. Inventory analyses

- A. Data of mineral ore on "Exhaustible resources" are presented in weight of pure ingredients (e.g. iron, aluminum) in the ore.
- B. Data of discharge to water system are in actual figure (not calculated using unit function in inventory analyses).

### III. Impact analyses

- Result of the "Impact analyses" is found in converting results of inventory analyses into total amount of a reference material (e.g. CO2 in case of "Global Warming").
- A. Impact "by resource consumption" represents magnitude of impacts to resource depletion.
  - B. Impact "by emission/discharge to environment" represents magnitude of impacts to Atmosphere, Water and Soil system.

### IV. Data entry format

- A. Exponential notation, after the decimal point to two, should be used.
- B. Indicate "0" instead exponential notation, if the result of calculation or estimation is considered as "zero" or negligible in comparison to related results.
- C. Indicate "NA" if calculation nor estimation can not be done, in order to differentiate to indicate "zero".
- D. Row total of the data is automatically calculated, excluding a row includes "NA" item. Row total of such is presented as a blank (no data).

### V. Others

- A. Environmental loads for main assembly are cut off, because of less than 1% of whole life cycle loads.
- B. Based on the PSC, class Med 2 (480,000 copies in 5 years) is adopted. Environmental loads for sheets are excluded.
- C. The coverage on original paper is 6% (A4).

# Product data sheet

(Input data and parameters for LCA)



Document control no.	
Product vendor	Canon Inc.
EcoLEAF registration no.	AA-03-018

PSC name	Electrophotographic Dry Process Copier		Product type	imageRUNNER s iR3310			
LCA/LCIA in units of:	1	Product weight (kg)	83	Package (kg)	18	Weight total (kg)	101

## 1. Product information (per unit): parts etc. by material and by process/assembly method

Product	Breakdown of primary materials				Math breakdown of parts, which need to apply Processing / Assembly Base Units (Parts B, C)			
	Material name	Weight (kg)	Material name	Weight (kg)	Process name	Weight (kg)	Process name	Weight (kg)
	Ordinary steel	56.6	Wood	7.4	Press molding: Iron	54.0	Parts assembly	81
	Stainless steel	0.04	Paper	10.3	Press molding: Nonferrous metal	0.6		
	Aluminum	0.5	Rubber	0.1	Injection molding	25.0		
	Other metals	0.5	Circuit board with semiconductor parts	0.9	Glass molding	1.8		
	Glass	1.9						
	Thermoplastic resin	23.2						
	Subtotal	82.8	Subtotal	18.7				
	Total			101	Subtotal	81	Subtotal	81

Note

## 2. Production site information (per unit): Consumption and discharge/emission for production/processing/assembly within the site.

SOx and NOx should be indicated in SO2, NO2 equivalent.

Consumption	Classification	Energy	Energy	Energy	Material	Material				
	Distribution	Electricity (kWh)	Kerosene as fuel (kg)	Furnace urban gas (13A) (m3)	Industrial water (kg)	Groundwater (kg)				
	Quantity	4.74	0.023	0.26	4.61	13.67				
	Note									

Note

## 3. Distribution stage information (per unit): means, distance, loading ratio, consumptions and emissions/discharges.

Distribution	Means of transportation	Conditions	Quantity							
	Distribution	kgkm	1.85E+04							
	Note									

Note

## 4. Use stage (per unit): use condition (mode, term) including active mode, standby mode and maintenance.

### 4.1 Product and accessories subject to this analysis

Classification	Energy	Energy	Energy	Material	Material	Material	Material	Material	Material	
	Distribution	Electricity (kWh)	Kerosene as fuel (kg)	Furnace urban gas (13A)	Industrial water (kg)	Groundwater (kg)	Ordinary steel (kg)	Stainless steel (kg)	Aluminum (kg)	Other metals (kg)
	Quantity	4.08E+02	1.83E-01	2.10E+00	1.43E+02	1.09E+02	1.79E+01	2.97E-02	2.06E+00	7.28E-03
	Note									
Classification	Material	Material	Material	Material	Material	Processing	Processing	Processing	Processing	
	Distribution	Glass (kg)	Thermoplastic resin (kg)	Wood (kg)	Paper (kg)	Rubber (kg)	Press molding: Iron (kg)	Press molding: Nonferrous metal (kg)	Injection molding (kg)	Parts assembly (kg)
	Quantity	4.17E-01	3.22E+01	4.95E-02	1.01E+01	2.16E-01	5.23E+00	1.90E+00	1.92E+01	2.58E+01
	Note									
Classification	Transportation									
	Distribution	Diesel truck: 4 ton (kgkm)								
	Quantity	6.30E+03								
	Note									

Note

### 4.2 Disposition/Recycle information on consumables and replacement parts

Classification	Energy	Processing	Processing	Processing	Processing	Processing	Processing	Processing	
	Distribution	Electricity (kWh)	Recycle: to cold-rolled steel (kg)	Recycle: to copper plate (kg)	Recycle: to Aluminum plate (kg)	Recycle: to Thermoplastic pellet (kg)	Recycle: to corrugated cardboard (kg)	Recycle: to Paper (kg)	Incineration: Industrial waste (kg)
	Quantity	6.69E+00	5.26E+00	4.24E-03	2.05E+00	4.04E-01	9.99E+00	7.68E-03	2.46E+00
	Note								
Classification	Deduction	Deduction	Deduction	Deduction	Deduction	Deduction			
	Distribution	Ordinary steel (kg)	Aluminum (kg)	Other metals (kg)	Glass (kg)	Thermoplastic resin (kg)	Paper (kg)		
	Quantity	-2.62E+00	-1.03E+00	-2.12E-03	-1.40E-01	-6.89E+00	-3.50E+00		
	Note								

Notes

## 5. Disposition/Recycle stage information (per product): process method and scenarios

Scenario	Classification	Energy	Transportation	Processing	Processing	Processing	Processing		
	Distribution	Electricity (kWh)	Diesel truck: 4 ton (kgkm)	Shredding (kg)	Sorting: Iron (kg)	Sorting: Nonferrous metal (kg)	Sorting: Plastics (kg)		
	Quantity	7.81E+00	1.01E+04	8.75E+00	1.75E+00	8.17E-01	5.04E-01		
	Note								
Classification	Processing	Processing	Processing	Processing	Processing	Processing	Processing	Processing	Processing
	Distribution	Recycle: to cold-rolled steel (kg)	Recycle: to copper plate (kg)	Recycle: to Aluminum plate (kg)	Recycle: to cardboard (kg)	Recycle: to corrugated cardboard (kg)	Recycle: to Paper (kg)	Recycle: to Glass (kg)	Incineration: Industrial waste (kg)
	Quantity	5.33E+01	4.31E-01	4.88E-01	9.60E-04	8.71E+00	1.07E+00	1.84E+00	7.95E-02
	Note								
Classification	Deduction	Deduction	Deduction	Deduction	Deduction	Deduction	Deduction	Deduction	Deduction
	Distribution	Ordinary steel (kg)	Stainless steel (kg)	Aluminum (kg)	Other metals (kg)	Glass (kg)	Thermoplastic resin (kg)	Wood (kg)	Paper (kg)
	Quantity	-2.66E+01	-2.05E-02	-2.44E-01	-2.15E-01	-6.42E-01	-7.57E+00	-2.45E+00	-3.42E+00
	Note								

Notes

## 6. Others