Product Environmental Aspects Declaration

EP and IJ printer (PCR-ID:AD-04)



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http://konicaminolta.jp

Please direct any inquiries or comments to e-mail: eco-support@konicaminolta.jp



Total of 3,375,000 sheets on the assumption of five years usage.

Environmental impact by copypaper is not included.

bizhub c754e

Marking technologies Electrophotographic Printer (EP)

Printing speed 75 prints-per-minute(B/W), 60 prints-per-minute(color)

Maximum copy paper SRA3

Duplex copying Non-stack ADU equipped

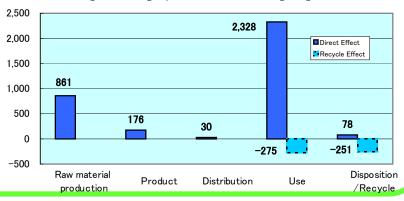
Document feeding ADF with Auto-document reversing function equipped

Life Cycle Impact

Consumption and discharge in a life cycle	All the stage sum totals
Global warming (CO ₂ equivalent):kg	3,474 (2,948)
Acidification (SO₂equivalent):kg	5.7 (4.8)
Energy resources (crude oil	63,837
equivalent):MJ	(54,638)

※Figures in () indicated environmental impact including recycle effect *note3

Warming load CO₂ equivalent of each stage(kg)



Notes:

- 1. Original LCA data is available on PEIDS: Product Environmental Information Declaration Sheet, and Product Data Sheet.
- 2. Unified rules and requirements for EcoLeaf LCA, for intended product category, are available as a PCR: Product Category Rule. Visit EcoLeaf website under JEMAI homepage at http://www.ecoleaf-jemai.jp/eng/ for details.
- 3. Recycle Effect illustrates an indirect influence to other products/services.
- 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 overseas locations adequately.

[Supplemental environmental information]



Certified Environmental Standards



- Japan Eco Mark
- International Energy Star Program
- Conforming to Japanese Law on Promoting Green Purchasing

PCR review was conducted by : PCR Deliberation Committee, January 01, 2008, Name of reprentative : Youji Uchiyama, University of Tsukuba, Graduate School

Independent verification of the declaration and data, according to ISO14025 □internal ■external Third party verifier*: Shozo Nakamuta

 $Programme\ operator: Japan\ Environmental\ Management\ Association\ for\ Industry,\ ecoleaf@jemai.or.jp$

^{*} In the case of an business entity certified as an Ecoleaf-data-collection system, the names of certification auditors are written.

Product Environmental Information Data Sheet (PEIDS)

Document control no.	F-02B-03	Unit Function DB version	v2.1
Document control no.	F-02D-03	Office Puricular DB version	VZ. I
Product vendor	KONICAMINOLTA, INC.	Characterization Factor DB version	v2.1
EcoLeaf registration no.	AD-13-290	-	



		R name	EP and IJ print	er	Product type			bizhub C754		
	PC	R-ID	AD-04		Product weight[kg]	221.0	Package[kg]	38.6	Weight total[kg]	259.6
	_		Life Cycle Stage		Produ	ıction				_
In/O	ut ite	ms		Unit	Raw material	Product	Distribution	Use	Disposal	Recycle
				MJ	1.41E+04	3.41E+03	3.98E+02	4.57E+04	1.67E+02	-9.20E+03
		Energy C	onsumption	Mcal	3.37E+03	8.16E+02	9.50E+01	1.09E+04	4.00E+01	-2.20E+03
			Coal	kg	1.67E+02	2.20E+01	9.30E-04	2.48E+02	8.18E-01	-1.09E+02
			Crude oil (as a fuel)		1.08E+02	2.50E+01	8.69E+00	3.20E+02	1.86E+00	-6.22E+01
		Energy	Natural Gas	kg						
			Uranium ore	kg	2.20E+01	1.22E+01	1.34E-01	1.40E+02	4.26E-01	-1.25E+01
			Crude oil (as an	mg	2.00E-03	1.49E-03	6.30E-08	8.52E-03	5.53E-05	-4.76E-04
			ingredients)	kg	4.90E+01	0	0	1.94E+02	0	-4.91E+01
			Iron ore	kg	1.63E+02	0	0	1.01E+02	0	-1.05E+02
			Copper ore	kg	3.75E+00	0	0	1.08E+00	0	-1.76E+00
			Bauxite	kg	3.29E+00	0	0	1.50E+01	0	-7.31E+00
	5 ±	Φ	Nickel ore	kg	2.50E-01	0	0	1.52E+00	0	-7.09E-01
	mpti	ustibl	Chromium ore	kg	3.92E-01	0	0	2.09E+00	0	-9.94E-01
	onsu	Exhaustible resources	Manganese ore			0	0		0	
	e en		Plumbous ore	kg	8.48E-01 1.43E-01	0	0	7.50E-01 0	0	-1.59E-01
	Resource Consumption from the environment	Material		kg		_		0		-4.72E-02
	Res		Tin ore	kg	0	0	0		0	0
			Zinc ore	kg	1.41E+00	0	0	0	0	-4.64E-01
			Gold ore	kg	0	0	0	0	0	0
			Silver ore	kg	0	0	0	0	0	0
			Silica sand	kg	5.73E+00	0	0	1.11E+00	0	-1.90E+00
ω,			Rock salt	kg	3.21E+01	4.30E-03	0	2.05E+01	8.93E-02	-2.04E+01
Inventory analyses			Limestone	kg	3.22E+01	0	0	1.98E+01	7.40E-01	-1.69E+01
ana			Natural soda ash	kg	3.93E-01	0	0	0.00E+00	0	-1.32E-01
ntony		Renewable	Wood	kg	5.23E+01	0	0	1.04E+02	0	−6.25E+01
Inve		resources	Water	kg	4.67E+04	1.77E+04	7.02E-01	1.32E+05	6.64E+02	-2.35E+04
			CO2	kg	8.45E+02	1.75E+02	2.82E+01	2.24E+03	7.83E+01	−5.13E+02
			SOx	kg	5.16E-01	1.31E-01	1.71E-02	1.75E+00	4.28E-02	-4.61E-01
			NOx	kg	8.75E-01	1.14E-01	1.31E-01	3.41E+00	1.12E-01	-6.92E-01
			N2O	kg	5.94E-02	5.83E-03	4.77E-03	3.44E-01	1.69E-04	-4.60E-02
		to Atmosphere	CH4	kg	5.30E-03	3.98E-03	1.68E-07	2.25E-02	1.48E-04	-1.14E-03
			CO	kg	1.26E-01	2.59E-02	3.39E-02	5.17E-01	2.62E-02	-1.08E-01
			NMVOC	kg	1.04E-02	7.81E-03	3.30E-07	4.41E-02	2.90E-04	-2.24E-03
	rge ant		СхНу	kg	3.07E-02	1.04E-03	4.00E-03	1.03E-01	8.32E-04	-2.27E-02
	scha		dust	kg	1.12E-01	5.61E-03	1.27E-02	2.80E-01	6.85E-03	-9.00E-02
	Emission/Discharge to the environment		BOD	kg	_	_	_	_	_	_
	issio he e		COD	kg	-	-	_	_	-	-
	Em	to Water system	N total	kg	-	-	-	_	-	-
			P total	kg	_	_	_	_	_	_
			SS	kg	-	-	_	_	-	-
			Unspecified solid waste	kg	4.61E+00	3.00E-02	0	9.28E+01	1.11E+02	-4.79E+00
			Slag	kg	5.09E+01	0	0	2.99E+01	0	-3.08E+01
		to Soil system	Sludge	kg	5.15E+00	0	0	3.12E+01	0	-1.46E+01
			Low emission	.16		,	·			1.702.01
			radioactive waste	kg	1.40E-03	1.04E-03	4.40E-08	5.94E-03	3.86E-05	-3.33E-04
			Energy resources	kg	2.58E+02	6.60E+01	8.85E+00	7.19E+02	3.35E+00	-1.51E+02
	by Resource Consumption	Exhaustible	(crude oil equivalent) Mineral resources							
	y Res	resources	(Iron ore equivalent)	kg	1.17E+03	0	0	1.59E+03	0	-1.03E+03
ent	20		, and a square state of							
sm			Global warming							
sse			(CO2 equivalent)	kg	8.61E+02	1.76E+02	2.95E+01	2.33E+03	7.83E+01	−5.25E+02
Impact assesment	<u> </u>	to	Acidification	l	1 125:00	2.10F_01	1.005_01	4.145+00	1.21E-01	_0.465_01
Jac	sio	Atmosphere	(SO2 equivalent)	kg	1.13E+00	2.10E-01	1.09E-01	4.14E+00	1.21E-01	−9.46E−01
m H	Em;									
	by Emision Consumption	to Water								
	_ 0									
		to Soil system								
		-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								

[Notes for readers: EcoLeaf common rules]

I. Stage related

- 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)
- "Use" stage is intended for use of the product (active mode, standby mode, etc.) and production, transportation to disposal/recycle of consumables
- D. "Disposition/Recycle" stage is intended for environmental impacts by product disposition/recycle, and deduction by recycling E. "Recycle Effect" illustrates an indirect environmental influences to other products/services by use of reclaimed materials/parts, and/or by supply of Case 1: Use of reclaimed materials/parts: Sum of increase of environmental impact by collection activities of used materials/parts, and decrease Case 2: Supply of used products to other businesses for material reclaim/parts reuse: Sum of increase of environmental impact by materials/parts

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 on energy resources are presented based on origin in calorific value. e.g. Data on uranium ore presents weight of uranium concentrate,
- C. 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 "-" if calculation nor estimation can not be done, in order to differentiate to indicate "zero"

(BGD for material production are for production from mineral ore. Those data do not include reclaiming processes like recovery from scrap.)

[Notes for readers: Target product specific]

- A."Raw material" in "Production" includes environmental impacts generated during mining transportation material production phases of the main body of the printer and the toner cartridge enclosed in the printer. The environmental impacts are calculated using the eco-leaf basic unit DB for calculations.
- B. " Product" in "production" includes environmental impacts of processing of the parts (injection, blow-, press- and glass-molding). The environmental impacts from the parts assembly plant which is different from the main body assembly plant (such parts are clacified in "parts C") are calculated using the eco-leaf basic unit DB for calculations.

The impacts from the main body assembly plant are calculated using the quantitative data on environmental impacts in our assembly plant.

C. Regarding the basis and the basic units for calculations during distribution stages

The total distance of the transportation in Japan of 100km is used according to PCR (AD-04) and the transportation overseas includes the transportation by track in China and by ship between China and Japan.

D. Regarding the basis and the basic units for calculations during use and consumption stage

The power consumption is measured by the TEC test procedure according to PCR (AD-04). 3,375,000 sheets are printed in total during the use period of five

The toner consumption is summed up over the five years from the toner consumption data per sheet using our print pattern with 5% coverage.

The production loads and the collection & recycling impacts of the toner cartridges used over the five years are included in this stage.

E. The recycling impacts are calculated assuming that 40% of the end-of-life printers are recovered from users according to PCR (AD-04). The impacts are calculated with the remaining 60% following the disposal senario as general wastes.

F. The impacts of material production of recycled materials are included in the values with minus as a recycling effect.

Product data sheet
(Input data and parameters for LCA)

	(input data and parameters for EGA)
Document control no.	F-03-03
Product vendor	KONIGAMINOLTA, INC.
EcoLeaf registration no.	AD-13-290



PCR name	EP and IJ printer (PCR-ID:AD	Product type	bizhub C754e				
LCA/LCIA in units of:	1	Product weight[kg]	221.0	Package[kg]	38.6	Weight total[kg]	259.6

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

	Break	down of primary materials		Math breakdown of par	rts, which need to appl	y 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	1.57E+02	Rubber	4.23E-01	Press molding:Iron	1.47E+02	Parts assembly	4.94E+00
Stainless steel	1.57E+00	Semiconductor circuit board	it board 3.83E+00 Press molding:Nonferro 5.40E+00				
Aluminium	2.27E+00			Injection molding	5.19E+01		
Other metals	4.10E+00			Blow molding	1.54E-01		
Glass	3.55E+00			Glass molding	3.55E+00		
Thermoplastic resin	5.46E+01						
Wood	1.53E+01						
Paper	1.74E+01						
Subtotal	2.55E+02	Subtotal	4.25E+00				
	Tota	al .	2.60E+02	Subtotal	2.08E+02	Subtotal	4.94E+00

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

50x a	SOx and NOx should be indicated in SO2, NO2 equivalent.											
E	Classification	Energy	Energy	Energy	Material	Material						
ptio	Distribution	Electricity (kWh)	Diesel oil as	Furnace urban	Industrial	Groundwater						
Ē		Licotriony (KVIII)	fuel(kg)	gas (m ³)	water(kg)	(kg)						
Suc	Quantity	1.62E+02	1.29E-03	1.47E+00	7.95E+02	2.25E+02						
ŏ	Note											
Emission/ Discharge	Classification	To Water system										
issi	Distribution	Sewage (kg)										
Em Dis(Quantity	7.42E+02										
	Note											

3. Distribution stage information (per unit): means, distance, loading ratio, consumptions and emissions/discharges.										
	Means of transportation	Freight by ship	Diesel truck	Diesel truck						
io	ivieans or transportation		:20ton	:2ton						
Inqi	Conditions	Load(kg·km)	Load(kg·km)	Load(kg·km)						
Dist	Quantity	4.41E+05	8.12E+04	1.50E+03						
	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

	oudot and doodoo	orics subject to this	o analy olo						
	Classification	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption
펄	Distribution	Electricity (kWh)	Diesel oil as	Gasoline as	Furnace urban	Industrial	Groundwater	Ordinary steel	Stainless steel
Product	Distribution	Electricity (KWII)	fuel(kg)	fuel(kg)	gas (m³)	water(kg)	(kg)	(kg)	(kg)
₫.	Quantity	1.80E+03	1.03E-03	6.85E+00	7.29E+01	6.35E+02	5.84E+03	9.40E+01	9.62E+00
	Note								
	Classification	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption	Processing	Processing
Product	Distribution	Aluminium (kg)	Copper(kg)	Thermoplastic resin(kg)	Wood(kg)	Paper(kg)	Rubber (kg)	Press:Iron(kg)	Press: Nonferrous(kg)
Ę.	Quantity	1.38E+01	1.26E-01	1.99E+02	1.00E+01	4.41E+01	2.13E+00	1.44E+02	5.26E+00
	Note								
	Classification	Processing	To Water system						
Product	Distribution	Injection molding (kg)	Sewage (kg)						
_	Quantity	3.23E+01	4.00E+03						
	Note								
	Classification	Distribution	Distribution	Distribution					
			Diesel truck:	Diesel truck:					
Ę	Distribution	Freight by ship (kg·	20ton	10ton					
Product		km)	(kg•km)	(kg·km)					
4	Quantity	5.74E+05	2.85E+05	3.61E+04					
	Note								

4.2 DIS	Disposition/Recycle information on consumables and replacement parts											
"	Classification	Consumption	Consumption	Treatment	Treatment	Treatment	Treatment	Treatment	Treatment			
Consumables	Distribution	Electricity (kWh)	Kerosene(kg)	Recycle: to iron(kg)	Recycle: to Aluminum(kg)	Recycle: to copper(kg)	Recycle: to plastics(kg)	Recycle: to Paper(kg)	Industrial waste destruction by fire(kg)			
Ş	Quantity	5.93E+00	7.59E-02	4.14E+01	5.51E+00	5.04E-02	3.24E+01	2.16E+01	8.52E-01			
	Note											
"	Classification	Treatment	Treatment	Treatment	Deduction	Deduction	Deduction	Deduction	Deduction			
Consumables	Distribution	Industrial waste inning(kg)	Waste destruction by fire(kg)	Waste inning(kg)	Iron(kg)	Aluminum(kg)	Copper(kg)	Plastics(kg)	Paper(kg)			
Ö	Quantity	3.90E-01	8.28E+01	7.05E+01	-4.14E+01	-5.51E+00	-5.04E-02	-3.24E+01	-2.16E+01			
	Note											
	Classification	Distribution	Distribution									
Consumables	Distribution	Diesel truck: 10ton (kg•km)	Diesel truck: 4ton (kg•km)									
S	Quantity	1.23E+04	1.48E+04									
	Note											

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

Se	Classification	Consumption	Consumption	Treatment	Treatment	Treatment	Treatment	Treatment	Treatment
umables	Distribution	Electricity (kWh)	Kerosene(kg)	Recycle: to iron(kg)	Recycle: to Aluminum(kg)	Recycle: to copper(kg)	Recycle: to Glass(kg)	Recycle: to plastics(kg)	Recycle: to Paper(kg)
nsuc	Quantity	6.02E+00	7.71E-02	6.31E+01	9.09E-01	2.16E+00	1.42E+00	2.16E+01	1.36E+01
8	Note								
	Classification	Treatment	Treatment	Treatment	Treatment	Treatment	Deduction	Deduction	Deduction
sumables	Distribution	Recycle: to Assembled circuit board(kg)	Incineration: Industrial waste(kg)	Landfill: Industrial waste(kg)	Incineration to landfill (as ash)(kg)	Landfill: General waste(kg)	Iron(kg)	Aluminium (kg)	copper(kg)
Consi	Quantity	5.20E-01	1.10E+00	4.16E-01	5.26E+01	1.02E+02	-6.31E+01	-9.09E-01	-2.16E+00
	Note								
	Classification	Deduction	Deduction	Deduction	Deduction	Distribution	Distribution		
sumables	Distribution	Glass(kg)	Plastics(kg)	Paper(kg)	Recycle: to Assembled circuit board(kg)	Diesel truck: 10ton (kg•km)	Diesel truck: 4ton (kg•km)		
Cons	Quantity	-1.42E+00	-2.16E+01	-1.36E+01	-5.20E-01	1.25E+04	1.51E+04		
3	Note								

6. Others

A.Product information:

All the parts mass per unit sorted by materials and by processes/assembly are included. The motor mass is included in ordinary steel.

B.Production site information:

The energy consumption & material use during the main body assemby and cartridge & toner shipment are included.

The environmental impacts that are exhausted from the production site in the atmosphere and the water system are included.

C.Distribution stage information:

The total distance of the transportation in Japan of 100km is used according to PCR (AD-04) and the transportation overseas includes the transportation by track in China and by ship between China and Japan.

D. Product and accessories subject to this analysis:

The power consumption is calculated assuming the use period of five years and 3,375,000 sheets printed during the use period according to the PCR (AD-04).
The toner consumption is summed up over the five years from the toner consumption data per sheet using our print pattern with 5% coverage.
The production impacts of the cartridges and toner used during the use period of five years are included.
The impacts of the maintenance parts used and the transportation impacts of the maintenance during the use period of five years are included.

E. Disposal/Recycle information on the consumables and the maintenance parts during use stage:

The recycling information of the toner, the developer, the drums and the maintainance parts used during the use period of five years are included. The recycling processing impacts are included as plus and the production impacts of the recycled materials are included as minus.

F.Disposal/Recycle stage information:

The information on the products recovered from users is included.

The recycling processing impacts are included as plus and the production impacts of the recycled materials are included as minus.