Product Environmental Aspects Declaration

ECO LEAF
製品環境情報
http://www.jemai.or.jp

EP and IJ printer（PCR-ID:AD-04）

No. AD-19-E1134
Date of publication
05/27/2019

KYOCERA

http://www.kyoceradocumentsolutions.co.jp/

Contact us
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TASKalfa 2553ci

Making Technology:Electrophotographic Printer（EP）
Printng Speed: Monoclome 25Pages per minute in A4
　　　　　Color　　　25Pages per minute in A4
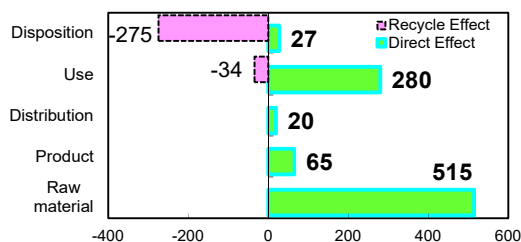Maximum priting paper:　A3
Duplex function: Standard

【The Environmental load for life-cycle】

Consumption and discharge in a life cycle	All the stage sum totals
Global Warming (CO_2 equivalent)	907kg (598kg)
Acidification (SO_2 equivalent)	1.4kg (0.82kg)
Energy resources (crude oil equivalent)	17,508MJ (11,166MJ)

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

Warming load CO_2 equivalent of each stage[kg]

Stage	Recycle Effect	Direct Effect
Disposition	-275	27
Use	-34	280
Distribution		20
Product		65
Raw material		515

Parts located at of top of Main body is document feeder〔DP-7110〕as optional equipment.
It isn't included in the range of calculation.

Use stage: Printing Mono187,500/Col 187,500
　　　　A4 sheets in 5 years.
The environmental load of sheet in"Use" stage
is not included in above data.

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.
5. This declaration was produced using Product Category Rule intended for a product model sold in the Japanese market and using the qualitative and quantitative data collected in Japan.

[Supplemental environmental information]

● Conformed to the International ENERGY STAR® Program.
● Manufactured at ISO14001 certified factories.
● Plastic housing and outer package: halogenated flame retardants are not

PCR review was conducted by : PCR Deliberation Committee,January 01,2008,Name of reprentative：Youji Uchiyama,
Independent verification of the declaration and data, according to ISO14025□internal ■external
Third party verifier: < name of the third party verifier *> Hiroo Sakazaki

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.
  The EcoLeaf is an environmental labeling program that belongs to the ISO-Type Ⅲ category.

Product Environmental Information Data Sheet (PEIDS)

Document control no.	F-02Bs-02
Product vendor	KYOCERA Document Solutions Inc.
EcoLeaf registration no.	AD-19-E1134

Unit Function DB version	v2.1
Characterization Factor DB version	v2.1

PCR name	EP and IJ Printer	Product type		TASKalfa 2553ci	
PCR code	AD-04	Product weight (kg)	97.39	Package (kg)	28.37	Weight total (kg)	125.76

In/Out items / Life Cycle Stage				Unit	Production		Distribution	Use	Disposition	Recycle Effect
					Raw material	Product				
Energy Consumption				MJ	9.14E+03	1.03E+03	2.61E+02	5.23E+03	5.12E+01	-6.17E+03
				Mcal	2.18E+03	2.45E+02	6.23E+01	1.25E+03	1.22E+01	-1.47E+03
Inventory analyses — Impact by Resource Consumption — Exhaustible resources — Energy resources		Coal		kg	6.84E+01	7.43E+00	6.09E-04	2.16E+01	2.03E-01	-4.73E+01
		Crude oil (for fuel)		kg	8.89E+01	8.38E+00	5.69E+00	3.95E+01	7.28E-01	-5.08E+01
		LNG		kg	1.73E+01	3.75E+00	8.79E-02	1.41E+01	1.10E-01	-7.82E+00
		Uranium content of an ore		kg	1.66E-03	5.02E-04	4.13E-08	1.41E-03	1.38E-05	-4.11E-04
	Mineral resources	Crude oil (for material)		kg	3.31E+01	0	0	1.62E+01	0	-4.03E+01
		Iron content of an ore		kg	4.74E+01	0	0	8.71E-01	0	-4.16E+01
		Cu content of an ore		kg	3.71E+00	0	0	1.06E-04	0	-4.96E+00
		Al content of an ore		kg	2.51E+00	0	0	0	0	-1.97E+00
		Ni content of an ore		kg	2.47E-01	0	0	1.77E-05	0	-2.47E-01
		C content of an ore		kg	3.48E-01	0	0	3.23E-04	0	-3.49E-01
		Mn content of an ore		kg	2.56E-01	0	0	4.62E-03	0	-7.07E-02
		Pb content of an ore		kg	2.06E-01	0	0	8.56E-06	0	-4.05E-01
		Sn content of an ore		kg	0	0	0	0	0	0
		Zn content of an ore		kg	2.04E+00	0	0	8.43E-05	0	-3.99E+00
		Au content of an ore		kg	0	0	0	0	0	0
		Ag content of an ore		kg	0	0	0	0	0	0
		Silica Sand		kg	3.64E+00	0	0	1.04E-02	0	-3.28E+00
		Halite		kg	2.75E+01	0	0	3.27E-01	1.68E-02	-2.58E+01
		Limestone		kg	1.00E+01	0	0	1.92E-01	1.09E+00	-7.62E+00
		Natural soda ash		kg	2.79E-01	0	0	1.89E-05	0	-1.85E-01
		Wood		kg	4.01E+01	0	0	2.61E+01	0	-5.00E+01
		Water		kg	4.05E+04	5.62E+03	4.62E-01	1.75E+04	1.70E+02	-1.18E+04
Impact by Emission/Discharge to the environment — to Atmosphere		CO2		kg	5.04E+02	5.77E+01	1.85E+01	2.04E+02	2.77E+01	-2.95E+02
		Sox		kg	3.77E-01	4.40E-02	9.68E-03	1.33E-01	1.53E-02	-2.35E-01
		Nox		kg	6.28E-01	3.49E-02	6.07E-02	1.91E-01	5.03E-02	-4.16E-01
		N2O		kg	4.39E-02	6.32E-04	3.49E-03	1.40E-02	8.15E-05	-2.94E-02
		CH4		kg	4.40E-03	1.34E-03	1.10E-07	3.78E-03	3.68E-05	-1.06E-03
		CO		kg	7.51E-02	8.52E-03	1.05E-02	3.11E-02	9.94E-03	-4.90E-02
		NMVOC		kg	8.61E-03	2.63E-03	2.16E-07	7.39E-03	7.21E-05	-2.07E-03
		CxHy		kg	2.08E-02	1.37E-04	2.22E-03	3.86E-03	3.64E-04	-1.47E-02
		Dust		kg	6.86E-02	1.89E-03	6.44E-03	1.07E-02	1.38E-03	-4.94E-02
	to Water system — to Water domain	BOD		kg	-	3.63E-03	-	-	-	-
		COD		kg	-	-	-	-	-	-
		N total		kg	-	-	-	-	-	-
		P total		kg	-	-	-	-	-	-
		SS		kg	-	-	-	-	-	-
	to Soil system	Unspecified Solid Waste		kg	4.39E+00	3.43E-06	0	7.04E+00	5.49E-04	-4.42E+00
		Slag		kg	1.91E+01	0	0	2.63E-01	0	-1.73E+01
		Sludge		kg	4.23E+00	0	0	0	0	-4.23E+00
		Low level radio-active waste		kg	1.16E-03	3.51E-04	2.88E-08	9.85E-04	9.62E-06	-2.87E-04
Impact assessment — by Res		Energy resources (crude oil equivalent)		kg	1.67E+02	2.18E+01	5.80E+00	8.20E+01	1.10E+00	-9.39E+01
		Mineral resources (Iron ore equivalent)		kg	1.17E+03	0	0	9.94E+00	0	-1.75E+03
	to Atmosphere	Global Warming (CO2 equivalent)		kg	5.16E+02	5.79E+01	1.95E+01	2.07E+02	2.77E+01	-3.03E+02
		Acidification (SO2 equivalent)		kg	8.16E-01	6.84E-02	5.22E-02	2.67E-01	5.05E-02	-5.27E-01
		Ozone Depletion (CFC-11 equivalent)		kg	0	0	0	0	0	0
		Photochemical Oxidant		kg	4.00E-02	1.94E-03	3.51E-03	9.00E-03	7.44E-04	-2.70E-02
		Eutrophication (Phosphate equivalent)		kg	0	0	0	0	0	0

[Notes for readers: EcoLeaf common rules]

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).

  E. "Recycle Effect" illustrates an indirect environmental influences to other products/services by use of reclaimed materials/parts, and/or by supply of used products to other businesses for material reclaim/parts reuse.

  Case 1: Use of reclaimed materials/parts: Sum of increase of environmental impact by collection activities of used materials/parts, and decrease by volume reduction of used materials/parts.

  Case 2: Supply of used products to other businesses for material reclaim/parts reuse: Sum of increase of environmental impact by materials/parts reclaiming process, and decrease by volume reduction of new materials/parts 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 on energy resources are presented based on origin in calorific value. e.g. Data on uranium ore presents weight of uranium concentrate, which is available for use as an atomic fuel.

  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. CO_2 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]

1. We include package and attached articles, such as CD-ROM, operation manual in the product weight. Toner container as standard is included in the use stage, not in the product weight.

2. Production stage: Environmental impacts on main product, toner supplied with and drum are included in this stage. Production of main product is included as China production. Toner and drum are included as Japan production.

3. Transportation stage: Marine transport distance of a main product is 2,600km and domestic transport distance based on PCR provisions is 100km.

4. Use stage: Based on PCR provision, impact on 187,500 sheets monochrome printing and 187,500 sheets color printing by user for five years is considered.

5. Disposal/Recycle: We have calculated on the basis of a performance-based recycle scenario.

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Product data sheet
（Input data and parameters for LCA）

Document control no.	F-03s-02
Product vendor	KYOCERA Document Solutions Inc.
EcoLEaf registration no.	AD-19-E1134

ECO LEAF
製品環境情報
http://www.jemai.or.jp

PCR name	EP & IP Printer（PCR-ID:AD-04）	Product type			TASKalfa 2553ci	
LCA/LCIA in units of:	1 Unit	Product weight (kg)	97.39	Package (kg)	28.37	Weight total (kg)	125.76

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

	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)
Product	Carbon steel(kg)	3.88E+01	Rrubber (kg)	5.98E-02	Press molding:Iron (kg)	4.04E+01	Parts assembly (kg)	1.26E+02
	SUS (kg)	1.56E+00	Paper (kg)	1.12E+01	Press molding:Nonferrous metal (kg)	8.21E+00		
	Cu (kg)	6.56E+00	Wood (kg)	1.56E+01	Injection molding (kg)	3.78E+01		
	Al (kg)	1.87E+00	Assembled circuit board (kg)	3.79E+00	Blow molding (kg)	1.13E-01		
	Other metals (kg)	3.01E-02	Medium-sized motor (kg)	6.08E+00	Glass molding (kg)	2.20E+00		
	Glass (kg)	2.20E+00						
	Thermoplastics resin (kg)	3.69E+01						
	thermosetting resin (kg)	1.03E+00						
	Subtotal	8.90E+01	Subtotal	3.68E+01				
	Total			1.26E+02	Subtotal	8.87E+01	Subtotal	1.26E+02

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 SO$_2$, NO$_2$ equivalent.

	Classification	Energy	Material	Energy					
Consumption	Distribution	Electricity (kWh)	Industrial water (kg)	LNG (kg)					
	Quantity	5.54E+00	9.09E-02	3.73E-02					
	Note								
Emission/Discharge	Classification	Water system							
	Distribution	BOD							
	Quantity	3.63E-03							
	Note								

Note

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

	Means of transportation	Diesel truck:10 ton (kg・km)	Diesel truck:10 ton (kg・km)	Diesel truck:10 ton (kg・km)	Diesel truck:10 ton (kg・km)	Freight by ship (kg・km)	Freight by ship (kg・km)	Freight by ship (kg・km)	Freight by ship (kg・km)
Distribution	Conditions	Mass(kg)	Distance （km）	Loading Ratio(%w)	Load(kg・km)	Mass(kg)	Distance （km）	Loading Ratio(%w)	Load(kg・km)
	Quantity	1.26E+02	1.00E+02	6.54E+01	1.92E+04	1.26E+02	2.60E+03	1.00E+02	3.27E+05
	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	Consumption	Consumption	Process	Process	Process	Process	Consumption	Consumption
Product	Distribution	Electricity (kWh)	Industrial water (kg)	Injection molding (kg)	Blow molding (kg)	Parts assembly (kg)	Diesel truck:2 ton (kg・km)	Carbon steel(kg)	Thermoplastics resin (kg)
	Quantity	3.41E+02	3.78E-01	9.24E+00	5.83E-02	2.16E+01	4.08E+03	8.40E-01	2.04E+01
	Note								
	Classification	Consumption	Consumption	Consumption					
	Distribution	thermosetting resin (kg)	Paper (kg)	Assembled circuit board (kg)					
	Quantity	5.83E-02	1.23E+01	7.64E-04					
	Note								

Note

4.2 Disposition/Recycle information on consumables and replacement parts

	Classification	Process	Process	Process	Process	Process	Deduction	Deduction	Deduction
Consumables	Distribution	Recycle:to copper plate (kg)	Recycle:to Thermoplastic pellet (kg)	Recycle:to corrugated cardboard (kg)	Shredding (kg)	Recycle:to cold-rolled steel (kg)	Carbon steel(kg)	Cu (kg)	Thermoplastics resin (kg)
	Quantity	7.64E-04	9.24E+00	1.23E+01	2.23E+01	8.40E-01	8.40E-01	7.64E-04	9.24E+00
	Note								
	Classification	Deduction							
	Distribution	Paper (kg)							
	Quantity	1.23E+01							
	Note								

Note

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

	Classification	Process	Process	Process	Process	Process	Process	Process	Process
Scenario	Distribution	Diesel truck:10 ton (kg・km)	Diesel truck:2 ton (kg・km)	Electricity (kWh)	Incineration: Industrial waste (kg)	Shredding (kg)	Recycle:to cold-rolled steel (kg)	Recycle:to copper plate (kg)	Recycle:to Aluminum plate (kg)
	Quantity	7.69E+03	2.87E+03	2.80E-01	1.68E+01	1.09E+02	4.04E+01	1.64E+01	1.87E+00
	Note								
	Classification	Process	Process	Process	Deduction	Deduction	Deduction	Deduction	Deduction
	Distribution	Recycle:to Thermoplastic pellet (kg)	Recycle:to corrugated cardboard (kg)	Recycle:to Glass (kg)	Carbon steel(kg)	SUS (kg)	Cu (kg)	Al (kg)	Other metals (kg)
	Quantity	3.69E+01	1.12E+01	2.20E+00	3.88E+01	1.56E+00	1.64E+01	1.87E+00	3.01E-02
	Note								
	Classification	Deduction	Deduction	Deduction					
	Distribution	Glass (kg)	Thermoplastics resin (kg)	Paper (kg)					
	Quantity	2.20E+00	3.69E+01	1.12E+01					
	Note								

Note

6. Others

This declaration was produced using Product Category Rule intended for a product model sold in the Japanese market and using the qualitative and quantitative data collected in Japan.