Product Environmental Aspects Declaration

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



No. AD-20-E1183 Date of publication 2/3/2020



TASKalfa 8353ci

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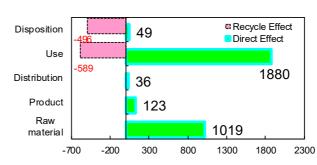
Making Technology:Electrophotographic Printer (EP) Printng Speed: Monoclome 83Pages per minute in A4 Color 70Pages per minute in A4 Maximum priting paper: A3 Duplex function: Standard

[The Environmental load for life-cycle]

<u> </u>
All the stage sum totals
3107kg (2021kg)
5.1kg (2.9kg)
64,843MJ (43,792MJ)

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

Warming load CO₂ equivalent of each stage[kg]



Use stage: Printing Mono 2066700/Color 1470000 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.
- Unified rules and requirements for EcoLeaf LCA, for intended product category, are available as a PCR: Product Specification Criteria.
 Visit EcoLeaf website under homepage at http://www.ecoleaf-jemai.jp/eng/pcr.html for detail. 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]

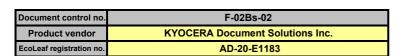
- ●Conformed to the International ENERGY STAR® Program .
- Manufactured at ISO14001 certified factories.
- Plastic housing and outer package: halogenated flame retardants are not used.

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 ISO14025:2006 ☐ internal ■ external Third party verifier: < name of the third party verifier *> Hiroo Sakazaki

Programme operatorSustainable Management Promotion Organization ecoleaf@sumpo.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)





PCR name	EP and IJ Print	Product type	TASKalfa 8353ci				
PCR code	AD-04	Product weight (kg)	186.8	Package (kg)	38.3	Weight total (kg)	225.1

	_	_		Life Cycle Stage		Produ	uction	5		- W	Recycle
In/O	ut iten	ns			Unit	Raw material	Product	Distribution	Use	Disposition	Effect
		Er	neray (Consumption	MJ	1.75E+04	2.22E+03	4.90E+02	4.44E+04	2.17E+02	-2.11E+04
		Li	iergy c	onsumption	Mcal	4.17E+03	5.30E+02	1.17E+02	1.06E+04	5.17E+01	-5.03E+03
			ces	Coal	kg	1.52E+02	1.56E+01	1.14E-03	1.96E+02	3.02E-01	-1.67E+02
			nosa	Crude oil (for fuel)	kg	1.61E+02	1.79E+01	1.07E+01	3.78E+02	4.13E+00	-1.81E+02
			rgy r	LNG	kg	3.28E+01	7.80E+00	1.65E-01	1.12E+02	2.11E-01	-2.55E+01
			E E	Uranium content of an ore	kg	3.25E-03	1.05E-03	7.76E-08	9.50E-03	2.05E-05	-8.72E-04
	'n			Crude oil (for material)	kg	5.57E+01	0	0	1.63E+02	0	-1.31E+02
	otic	ဟု		Iron content of an ore	kg	1.12E+02	0	0	3.44E+01	0	-1.37E+02
	ш	ec.		Cu content of an ore	kg	3.80E+00	0	0	5.67E-01	0	-6.88E+00
	Consumption	nc		Al content of an ore	kg	5.33E+00	0	0	1.03E+01	0	-1.49E+01
	Sor	es	S	Ni content of an ore	kg	6.17E-01	0	0	8.28E-01	0	-1.45E+00
		0	ဋ	C content of an ore	kg	8.71E-01	0	0	1.13E+00	0	-2.00E+00
	roe S	iple	no	Mn content of an ore	kg	6.50E-01	0	0	3.08E-01	0	-3.22E-01
	ono	ısti	es	Pb content of an ore	kg	1.89E-01	0	0	3.22E-02	0	-5.70E-01
	by Resource	Exhaustible resources	Mineral resources	Sn content of an ore	kg	0	0	0	0	0	0
	R/	ᅕ	ers	Zn content of an ore	kg	1.88E+00	0	0	3.69E-01	0	-5.67E+00
	þγ	ш	ij.	Au content of an ore	kg	0	0	0	0	0	0
	act		2	Ag content of an ore	kg	0	0	0	0	0	0
S	Impact I			Silica Sand	kg	5.37E+00	0	0	7.82E-01	0	-4.45E+00
anaiyses	드			Halite	kg	2.92E+01	0	0	1.01E+01	2.38E-02	-3.33E+01
ia.				Limestone	kg	2.42E+01	0	0	7.20E+00	1.54E+00	-2.36E+01
				Natural soda ash	kg	3.97E-01	0	0	3.58E-02	0	-1.91E-01
Inventory				Wood	kg	5.17E+01	0	0	2.86E+02	0	-3.16E+02
ŧ			j	Water	kg	8.34E+04	1.21E+04	8.66E-01	1.50E+05	2.53E+02	-5.34E+04
l ≥	ent			CO2	kg	9.96E+02	1.22E+02	3.48E+01	1.83E+03	4.94E+01	-1.06E+03
=	ıne		ø	Sox	kg	7.38E-01	9.29E-02	1.93E-02	1.44E+00	3.40E-02	-9.98E-01
	environment		je	Nox	kg	1.18E+00	7.56E-02	1.34E-01	2.33E+00	2.25E-01	-1.70E+00
	ī		g	N2O	kg	8.11E-02	1.53E-03	6.28E-03	1.88E-01	2.97E-04	-1.11E-01
	0		ĕ	CH4	kg	8.59E-03	2.82E-03	2.07E-07	2.52E-02	5.48E-05	-2.04E-03
	ţ		₽	CO	kg	1.58E-01	1.80E-02	2.88E-02	3.71E-01	7.32E-02	-2.15E-01
	to to		to Atmosphere	NMVOC	kg	1.68E-02	5.53E-03	4.06E-07	4.93E-02	1.07E-04	-4.00E-03
	rge		_	СхНу	kg	3.91E-02	3.94E-04	4.48E-03	5.92E-02	3.61E-03	-5.27E-02
	Emission/Discharge to the			Dust	kg	1.36E-01	4.24E-03	1.35E-02	1.70E-01	1.42E-02	-1.88E-01
	Jisc	tem	Jain	BOD	kg	-	1.89E-02	-	-	-	-
	n/L	system	domain	COD	kg	-	-	-	-	-	-
	sio	ater		N total	kg	-	-	-	-	-	-
	nis	to Water	to Water	P total	kg	-	-	-	-	-	-
				SS	kg	7.475.00	- 0.75 02	- 0	7.645.04	7 70 04	4 545 +04
	by		system	Unspecified Solid Waste	kg	7.47E+00	9.27E-03	·	7.61E+01	7.78E-04	-1.51E+01
	act		ll sy	Slag	kg	3.79E+01	0	0	1.14E+01	0	-4.88E+01
	Impact I		Soil	Sludge	kg	1.00E+01	0 7 27E 04	0 5.42E-08	2.19E+01	0	-3.19E+01
- 2	=		9	Low level radio-active waste	kg	2.27E-03	7.37E-04 4.59E+01		6.63E-03	1.43E-05	-6.09E-04
smen	A. Constitution of the Con		-	Energy resources (crude oil equivalent)	kg	3.25E+02	4.59E+01	1.09E+01	7.16E+02	4.75E+00	-3.26E+02
asses			9	Mineral resources (Iron ore equivalent)	kg	1.52E+03	0	0	9.52E+02	0 4.94E+01	-3.48E+03
pact a			Prospira	Global Warming (CO2 equivalent)	kg	1.02E+03	1.23E+02	3.65E+01	1.88E+03 3.07E+00		-1.09E+03 -2.19E+00
[Nete	2		3 aal aaf a	Acidification (SO2 equivalent)	kg	1.56E+00	1.46E-01	1.13E-01	3.07 ⊑ ₹00	1.91E-01	-Z. ISETUU

[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.

- 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).

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

- A. Exponential notation, after the decimal point to two, should be used.
- B. Indicate "O" 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 2,066,700 sheets monochrome,1,470,000 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.
- 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.

Product data sheet

Input data and parameters for LCA

	(Iliput data aliu paralileteis ioi LCA)
Document control no.	F-03s-02
Product vendor	KYOCERA Document Solutions Inc.
EcoLEaf registration no.	AD-20-E1183



PCR name	EP and IJ Printer (PCR-ID:AD-04)	Product type	TASKalfa 8353ci				
LCA/LCIA in units of:	1 Unit	Product weight (kg)	186.8	Package (kg)	38.3	Weight total (kg)	225.1

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

	Bre	eakdown of p	rimary 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)	
	Carbon steel(kg)	9.89E+01	Rubber (kg)	1.45E-01	Press molding:Iron (kg)	1.03E+02	Parts assembly (kg)	2.24E+02	
	SUS (kg)	3.89E+00	Paper (kg)	1.41E+01	Press molding:Nonferrous metal (kg)	7.43E+00			
	Cu (kg)	3.70E+00	Wood (kg)	2.10E+01	Injection molding (kg)	6.02E+01			
roduct	Al (kg)	4.41E+00	Assembled circuit board (kg)	8.58E+00	Blow molding (kg)	3.89E-01			
Š.	Other metals (kg)	3.62E-02	Medium-sized motor (kg)	7.58E+00	Glass molding (kg)	2.19E+00			
_	Glass (kg)	2.19E+00							
	Thermoplastics resin (kg)	5.97E+01							
	Thermosetting resin (kg)	9.54E-01							
	Subtotal	1.74E+02	Subtotal	5.14E+01					
		Total		2.25E+02	Subtotal	1.73E+02	Subtotal	2.24E+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 SO₂, NO₂ equivalent.

ion	Classification	Energy	Material	Energy	Energy		
Consumpti	Distribution	Electricity (kWh)	Industrial water (kg)	Heavy oil as fuel (kg)	Gasoline as fuel (kg)		
	Quantity	3.71E+01	2.46E+02	3.12E-01	3.60E-03		
	Note						
arge	Classification	Water system					
Disch	Distribution	BOD					
Emission//	Quantity	1.89E-02					
	Note				·		

Note

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

Distribution	Means of transportation	Diesel truck:10 ton (kg·km)	Freight by ship (kg·km)						
	Conditions	Mass(kg)	Distance (km)	Loading Ratio(%w)	Load(kg·km)	Mass(kg)	Distance (km)	Loading Ratio(%w)	Load(kg·km)
	Quantity	2.25E+02	1.00E+02	4.05E+01	5.56E+04	2.25E+02	2.60E+03	1.00E+02	5.85E+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	Process	Consumption	Consumption	Process	Process	Process	Process	Process
	Distribution	Diesel truck:2 ton (kg·km)	Electricity (kWh)	Industrial water (kg)	Injection molding (kg)	Blow molding (kg)	Parts assembly (kg)	Press molding:Iron (kg)	Press molding:Nonferrous metal (kg)
	Quantity	7.78E+04	1.93E+03	2.40E+00	8.41E+01	8.65E-01	2.62E+02	3.12E+01	8.60E+00
	Note								
	Classification	Process	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption
Product	Distribution	Glass molding (kg)	Carbon steel(kg)	SUS (kg)	Cu (kg)	Al (kg)	Other metals (kg)	Glass (kg)	Thermoplastics resin (kg)
Ĕ	Quantity	8.54E-02	3.01E+01	5.24E+00	4.62E-01	9.64E+00	1.09E-01	8.54E-02	2.08E+02
_	Note								
	Classification	Consumption	Consumption	Consumption	Consumption	Consumption			
	Distribution	Thermosetting resin (kg)	Rrubber (kg)	Paper (kg)	Assembled circuit board (kg)	Medium-sized motor (kg)			
	Quantity	1.49E+00	2.86E-01	1.34E+02	1.16E+00	1.35E+00			
	Note								

Note

4.2 Disposition/Recycle information on consumables and replacement parts

	Classification	Process	Process	Process	Process	Process	Process	Process	Deduction
nables	Distribution	Shredding (kg)	Recycle:to copper plate (kg)	Recycle:to Thermoplastic pellet (kg)	Recycle:to corrugated cardboard (kg)	Recycle:to cold-rolled steel (kg)	Recycle:to Aluminum plate (kg)	Recycle:to Glass (kg)	Carbon steel(kg)
	Quantity	2.66E+02	2.97E+00	8.35E+01	1.34E+02	3.54E+01	9.64E+00	8.54E-02	3.01E+01
	Note								
l IIS	Classification	Deduction	Deduction	Deduction	Deduction	Deduction	Deduction	Deduction	
S	Distribution	SUS (kg)	Cu (kg)	Al (kg)	Other metals (kg)	Glass (kg)	Thermoplastics resin (kg)	Paper (kg)	
	Quantity	5.24E+00	2.97E+00	9.64E+00	1.09E-01	8.54E-02	8.35E+01	1.34E+02	
	Note								

Note

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

	Classification	Process	Process	Process	Consumption	Process	Process	Process	Process
	Distribution	Diesel truck:10 ton (kg·km)	Diesel truck:2 ton (kg·km)	Incineration: Industrial waste (kg)	Electricity (kWh)	Shredding (kg)	Recycle:to cold-rolled steel (kg)	Recycle:to copper plate (kg)	Recycle:to Aluminum plate (kg)
	Quantity	2.22E+04	5.78E+04	2.38E+01	6.60E-01	2.03E+02	1.03E+02	1.99E+01	4.41E+00
	Note								
	Classification	Process	Process	Process	Deduction	Deduction	Deduction	Deduction	Deduction
Scenario	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)
cer	Quantity	5.97E+01	1.41E+01	2.19E+00	9.89E+01	3.89E+00	1.99E+01	4.41E+00	3.62E-02
S	Note								
	Classification	Deduction	Deduction	Deduction					
	Distribution	Glass (kg)	Thermoplastics resin (kg)	Paper (kg)					
	Quantity	2.19E+00	5.97E+01	1.41E+01					
	Note								

Note

6. Others