Form 1 (F-01-03)

Product Environmental Aspects Declaration

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

No. AD-14-E363
Date of publication
Mar./17/2014

TOSHIBA TEC CORPORATION

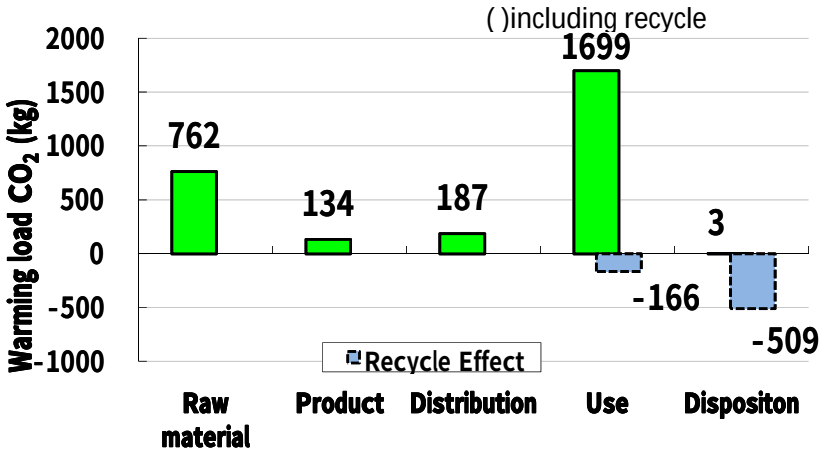
Corporate Quality & Environmental Group
TEL: +81-3-6830-9100

URL http://www.toshibatec.co.jp

e-STUDIO 757

■Marking technologies : Electrophotographic Printer(EP)
■Printing Speed: 75 LTR Pages per minutes (B/W)
■Maximum Paper Size : LD
■Duplex copying : Standard , Document feeding : RADF
The number of copies when used for 5 years is 3,375,000.

Consumption and discharge in a life cycle	All the stage sum totals
Global Warming(CO_2 equivalent)	2,786(2,110)kg
Acidification(SO_2 equivqlent)	4.0(3.1)kg
Energy resources(crude oil equivalent)	56,300(45,400)MJ



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. 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.

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]

・Certified to the international ENERGY STAR Program V2.0
・Manufactured at **ISO14001 certified factories**
・**Plastic housing: halogenated flame retardants are free**

PCR review was conducted by : PCR Deliberation Commitee,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:Toshifumi Nakai *

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.

Form 2 (F-02B-03)

Product Environmental Information Data Sheet (PEIDS)

Document control no.	F-02B-03
Product vendor	TOSHIBA TEC CORPORATION
EcoLeaf registration no.	AD-14-E363

Unit Function DB version	V2.1
Characterization Factor DB version	V2.1

PCR name	EP and IJ Printer		Product type	TOSHIBA MFP e-STUDIO757			
PCR ID	AD-04	Product weight (kg)	203.3	Package (kg)	31.1	Weight total (kg)	234.4

In/Out items \ Life Cycle Stage					Unit	Production		Distribution	Use	Disposition	Recycle effect
						Raw material	Product				
Energy Consumption					MJ	1.21E+04	2.47E+03	2.52E+03	3.92E+04	4.60E+01	-1.09E+04
					Mcal	2.89E+03	5.90E+02	6.02E+02	9.35E+03	1.10E+01	-2.61E+03
Inventory analyses	Resource Consumption from the environment	Exhaustible resources	Energy	Coal	kg	1.65E+02	1.72E+01	5.88E-03	2.04E+02	6.35E-04	-1.79E+02
				Crude oil (for fuel)	kg	8.67E+01	1.96E+01	5.50E+01	3.03E+02	1.00E+00	-6.16E+01
				LNG	kg	1.80E+01	9.30E+00	8.49E-01	9.13E+01	1.58E-02	-9.66E+00
				Uranium ore	kg	1.56E-03	1.16E-03	3.99E-07	1.11E-02	4.29E-08	-2.48E-04
			Material	Crude oil (for material)	kg	3.34E+01	0	0	1.46E+01	0	-4.26E+01
				Iron ore	kg	1.65E+02	0	0	3.32E+01	0	-2.00E+02
				Cu ore	kg	3.43E+00	0	0	0	0	-1.85E+00
				Al ore	kg	2.87E+00	0	0	3.38E+00	0	-5.71E+00
				Ni ore	kg	3.00E-01	0	0	6.72E-02	0	-3.67E-01
				Cr ore	kg	4.61E-01	0	0	1.02E-01	0	-5.65E-01
				Mn ore	kg	8.96E-01	0	0	1.87E-01	0	-2.24E-01
				Pb ore	kg	1.79E-01	0	0	0	0	-1.50E-01
				Sn ore	kg	0	0	0	0	0	0
				Zn ore	kg	1.76E+00	0	0	0	0	-1.48E+00
				Au ore	kg	0	0	0	0	0	0
				Ag ore	kg	0	0	0	0	0	0
				silicasand	kg	5.16E+00	0	0	3.91E-01	0	-3.86E+00
				NaCl	kg	2.03E+01	0	0	3.58E-01	1.29E-04	-1.85E+01
				limestone	kg	3.31E+01	0	0	6.55E+00	0	-3.43E+01
				soda ash	kg	3.01E-01	0	0	0	0	-2.37E-01
		Renewable resources		wood	kg	4.33E+01	0	0	6.44E+01	0	-1.08E+02
				water	kg	3.69E+04	1.34E+04	4.45E+00	1.75E+05	4.79E-01	-1.89E+04
	Emission/Discharge to the environment	to Atmosphere		CO2	kg	7.50E+02	1.34E+02	1.79E+02	1.69E+03	3.24E+00	-6.64E+02
				SOx	kg	4.47E-01	1.02E-01	1.07E-01	1.18E+00	3.98E-03	-4.14E-01
				NOx	kg	7.13E-01	8.14E-02	8.24E-01	1.40E+00	5.00E-02	-6.93E-01
				N2O	kg	4.71E-02	1.51E-03	3.04E-02	3.55E-02	6.01E-05	-4.25E-02
				CH4	kg	4.15E-03	3.10E-03	1.07E-06	3.05E-02	1.15E-07	-5.57E-04
				CO	kg	1.17E-01	1.98E-02	2.09E-01	3.51E-01	1.98E-02	-1.27E-01
				NMVOC	kg	8.11E-03	6.09E-03	2.09E-06	5.98E-02	2.25E-07	-1.09E-03
				CxHy	kg	2.52E-02	3.31E-04	2.51E-02	3.18E-02	1.00E-03	-2.44E-02
				dust	kg	9.60E-02	4.39E-03	7.93E-02	1.31E-01	3.96E-03	-1.01E-01
		to Water system		BOD	kg	—	—	—	—	—	—
				COD	kg	—	—	—	—	—	—
				N total	kg	—	—	—	—	—	—
				P total	kg	—	—	—	—	—	—
				SS	kg	—	—	—	—	—	—
		to Soil system		Unspecified solid waste	kg	5.22E+00	1.35E-02	0	5.84E+00	5.77E+00	-6.03E+00
				Slag	kg	5.40E+01	0	0	1.01E+01	0	-6.22E+01
				Sludge	kg	5.00E+00	0	0	7.24E+00	0	-1.22E+01
				Low emission radioactvity waste	kg	1.10E-03	8.13E-04	2.79E-07	7.98E-03	3.00E-08	-1.74E-04
Impact assessment	by Resource Consumption	Exhaustible resources		Energy resources(Crude oil equivalent)	kg	1.25E+03	0	0	1.06E+02	0	-1.09E+03
				Mineral resources(Iron ore equivalent)	kg	2.27E+02	5.13E+01	5.60E+01	6.35E+02	1.02E+00	-1.90E+02
	by Emission/ Discharge to the environment	to Atmosphere		Global Warming(CO2 equivalent)	kg	7.62E+02	1.34E+02	1.87E+02	1.70E+03	3.26E+00	-6.76E+02
				Acidification(SO2 equivalent)	kg	9.46E-01	1.59E-01	6.84E-01	2.16E+00	3.90E-02	-8.99E-01
					kg	—	—	—	—	—	—
					kg	—	—	—	—	—	—
		to Water system			kg	—	—	—	—	—	—

[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
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

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]

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.

Form 3 (F-03-03)

Document control no.	F-03-03
Product vendor	TOSHIBA TEC CORPORATION
EcoLEaf registration no.	AD-14-E363

PCR name	EP and IJ Printer (PCR ID:AD-04)		Product type	TOSHIBA MFP e-STUDIO757			
LCA/LCIA in units of:	1 Unit	Product weight (kg)	203.3	Package (kg)	31.1	Weight total (kg)	234.4

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	Ordinary steel	1.54E+02	Rubber	5.55E-01	Press molding:Iron	1.93E+02	Parts assembly	2.22E+00
	Stainless steel	1.88E+00	Paper	2.03E+01	ess molding:Nonferrous met	9.25E-01		
	Copper	6.13E+00	Assembled circuit board	2.61E+00	Injection molding	3.94E+01		
	Aluminum	2.20E+00	Medium sized motor	6.15E+00				
	Glass	2.82E+00						
	Thermoplastic Resin	3.81E+01						
	Subtotal	2.05E+02	Subtotal	2.96E+01				
	Total			2.34E+02	Subtotal	2.33E+02	Subtotal	2.22E+00

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	Energy	Material	Material	Material	
	Distribution	Electricity(kWh)	Heavy oil as fuel(kg)	Kerosene as fuel(kg)	Gasoline as fuel(kg)	Furnace urban gas(m3)	Industrial water(kg)	Clean water(kg)	
	Quantity	3.81E+01	1.85E-02	1.40E-03	7.63E-02	8.84E-01	3.30E+02	6.13E+01	
	Note								
Emission/ Discharge	Classification	To Water system							
	Distribution	Sewage(KG)							
	Quantity	4.03E+02							
	Note								

Note

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

Distribution	Means of transportation	Freight by ship	Diesel truck:10ton						
	Conditions	Load(kg・km)	Load(kg・km)						
	Quantity	2.81E+06	4.17E+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

Product	Classification	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption	
	Distribution	Electricity(kWh)	Heavy oil as fuel(kg)	Diesel oil as fuel(kg)	Gasoline as fuel(kg)	Furnace urban gas(m3)	Industrial water(kg)	Clean water(kg)	
	Quantity	2.96E+03	2.86E-02	9.80E-03	7.05E+00	1.73E+03	1.84E+03	3.40E+00	
	Note								
Product	Classification	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption		
	Distribution	Ordinary steel(kg)	Stainless steel(kg)	Aluminum(kg)	Thermoplastic Resin(kg)	Rubber(kg)	cardboard(kg)		
	Quantity								
	Note	3.19E+01	4.21E-01	3.19E+00	8.09E+01	2.52E+00	3.00E+01		
Product	Classification	Processing	Processing	o Water system	Distribution	Distribution			
	Distribution	Press molding:Iron	Injection molding	Sewage(KG)	Freight by ship(Kg・km	Diesel truck:10ton(kg・km)			
	Quantity	2.45E+01	1.15E+00	2.31E+03	6.34E+05	2.06E+05			
	Note								

Note

4.2 Disposition/Recycle information on consumables and replacement parts

Consumables	Classification	Treatment							
	Distribution	Shredding(kg)							
	Quantity	3.21E+00							
	Note								
Consumables	Classification	Treatment	Treatment	Treatment	Treatment	Treatment	Treatment	Treatment	
	Distribution	Recycle to Iron(kg)	Recycle to SUS(kg)	Recycle to Aluminum(kg)	Recycle to plastics(kg)	Recycle to cardboard(kg	Recycle to paper(kg)	Landfill:Industrial waste(kg)	
	Quantity	3.19E+01	4.21E-01	3.19E+00	1.31E+01	2.76E+01	2.49E+00	3.21E+00	
	Note								
Consumables	Classification	Deduction	Deduction	Deduction	Deduction	Deduction	Deduction	Distribution	
	Distribution	Ordinary steel(kg)	Stainless steel(kg)	Aluminum(kg)	Thermoplastic Resin(kg)	cardboard(kg)	paper(kg)	Diesel truck:4ton (kg・km)	
	Quantity	-3.19E+01	-4.21E-01	-3.19E+00	-1.31E+01	-2.76E+01	-2.49E+00	7.92E+03	
	Note								

Notes

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

Scenario	Classification	Distribution	Treatment						
	Distribution	Diesel truck:10ton (kg・km)	Shredding(kg)						
	Quantity	4.17E+04	5.77E+00						
	Note								
Scenario	Classification	Treatment	Treatment	Treatment	Treatment	Treatment	Treatment	Treatment	Treatment
	Distribution	Recycle to Iron(kg)	Recycle to Copper(kg)	Recycle to Aluminum(kg)	Recycle to Glass(kg)	Recycle to plastics(kg)	Recycle to cardboard(kg	Recycle to paper(kg)	Landfill:Industrial waste(kg)
	Quantity	1.62E+02	6.13E+00	2.20E+00	2.82E+00	3.50E+01	1.98E+01	4.94E-01	5.77E+00
	Note								
Scenario	Classification	Deduction	Deduction	Deduction	Deduction	Deduction	Deduction	Deduction	Deduction
	Distribution	Ordinary steel(kg)	Stainless steel(kg)	Copper(kg)	Aluminium(kg)	Glass(kg)	Thermoplastic Resin(kg)	cardboard(kg)	paper(kg)
	Quantity	-1.60E+02	-1.88E+00	-6.13E+00	-2.20E+00	-2.82E+00	-3.50E+01	-1.98E+01	-4.94E-01
	Note								

Notes

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.