RICOH
imagine. change.

Product ENVIRONMENTAL INFORMATION

Model # PRO 8310S

EPEAT Status GOLD **www.epeat.net**

EXECUTIVE SUMMARY

Environmental Highlights

- The PRO 8310S energy-efficiency credentials include EPEAT® Gold (EPEAT is a global environmental rating system for electronic products) and ENERGY STAR®.
- The PRO 8310S energy-efficiency credentials include ENERGY STAR® rated.
- Designed to optimize energy efficiency, maximize recyclability, reduce resource consumption, maintain air quality, and to comply with all EPA standards.
- You can easily recycle with the toner recycling programs.

1. POWER CONSUMPTION & PERFORMANCE

• TEC (Typical Electricity Consumption)	14196 Wh
• Operating Mode	1861 W
• Ready Mode	377 W
• Energy Saver Mode	205 W
• Energy Saver Mode - Default Time	15 minutes
• Energy Saver Mode - Recovery Time	36 seconds
• Auto Off Mode	1.7 W
• Auto Off Mode - Default Time	60 minutes
• Auto Off Mode - Recovery Time	278 seconds
• Plug-in Energy Mode (Main Power Switch Off)	0.86 W

2. ECO-LABELS

• ENERGY STAR (Yes/No)	YES
• EPEAT (US)	YES
• Eco-Logo (CDA)	Certification Pending

3. MANUFACTURING

• ISO 14001:2004 (Env. Mgmt. System)	YES
• ISO 9001:2008 (Quality Mgmt. System)	YES

4. MATERIAL EMISSIONS

Ricoh standards		
	Color (mg/h)	Monochrome (mg/h)
TVOC – Ready Mode	n/a	0.13
TVOC – Printing Phase	n/a	2.9
Benzene – Printing Phase	n/a	0.054
Styrene – Printing Phase	n/a	<0.032
Ozone – Printing Phase	n/a	<0.4
Dust – Printing Phase	n/a	<0.5
Ozone Filter	Attached	

5. CONTROL OF ENVIRONMENTALLY SENSITIVE SUBSTANCES

• RoHS Compliant	YES

6. RECYCLED PAPER COMPATIBILITY

Ricoh products are capable of supporting 100% post consumer waste (PCW) recycled paper in many countries around the world. The difficult shortcoming in the US is the paper manufacturing process which keeps the EPA standards at 50% post consumer waste content. Several Ricoh customers are using 100% PCW recycled paper including the state and local governments of Washington, California and Minnesota and the list continues to expand.

7. CONSUMABLES

Product Name	PCR*	Yield
K (Black)	0%	82,000

* Post Consumer Resin

8. RECYCLED CONTENT – PACKAGING

Category	Comments/ Examples	Total Recovered Fiber Content %
Paperboard	Boxboard, Chipboard, Barrier board, Carton board	80%
Corrugated Fiberboard	Containerboard, Linerboard, Corrugated Medium	25%
Solid Fiberboard		40%
Spiral Bound Tubes	Comprised of paper only	90%

9. END-OF-LIFE MANAGEMENT - DESKTOP PRINTER/ CAMERA/ PROJECTOR

• Provision of Printer/Camera/Projector take-Back Service

In keeping with Ricoh's long-standing practice of responsible environmental stewardship, we offer customers convenient recycling options for Ricoh desktop printers, scanners, facsimile machines, cameras, and projectors. The Ricoh Nationwide DESKTOP PRINTER/CAMERA/ PROJECTOR END-OF-LIFE RECYCLING PROGRAM is free and easy to use. The program operates in accordance with all 50 states' recycling laws. To recycle any of the various items described above, simply follow the link below:
http://www.ricoh-usa.com/about/environment/equipment_takeback_program.aspx?alnv=env&cpt=Equipment   Ricoh Canada:http://www.ricoh.ca/en-Ca/About-Ricoh/Environment/Ricoh-Equipment-Recycling-Program.html

10. END OF LIFE MANAGEMENT - FLOOR STANDING

• Provision of Floor Standing Take-Back Service

For those customers that would like to recycle the larger Ricoh, Savin, and Lanier products, Ricoh has established a specialized program. The customer must contact Ricoh at 1-973-882-5246 during standard business hours and provide their name, address, model(s), serial number(s), etc. to receive an RMA number and a ship to address. The customer is responsible for the cost to ship the unit(s) and must include the RMA information on the bill of lading to Ricoh's designated Recycling Center. The customer must make their own transportation and payment arrangements with the carrier of their choice; "Freight Collect" shipments will NOT be accepted. Ricoh will absorb the de-manufacturing cost to have Ricoh, Savin and Lanier equipment recycled when properly returned and received by Ricoh's designated Recycling Center. In the event that the customer is unfamiliar with sourcing trucking firms, as a courtesy, Ricoh has provided information on a nationwide carrier that anyone can use to return their end-of-life equipment. Please contact TTR Shipping at 1-888-333-6865 and request the Ricoh Americas Corporation rate schedule. Ricoh Canada:http://www.ricoh.ca/en-Ca/About-Ricoh/Environment/Ricoh-Equipment-Recycling-Program.html

11. END OF LIFE MANAGEMENT - CONSUMABLES

• Consumable Take-Back Programs

Ricoh offers several programs for consumable take-back:
1: If the cartridge box contains a pre-paid shipping label, use it to return the package.
2: Place the empty toner cartridge in the box as described in the Toner Container Return Box program (details found on the Environmental webpage).
3: Use your own carton box and print a pre-paid label from the Environmental web page.
4: To recycle multiple containers in their original carton boxes by printing a pre-paid label, visit the Ricoh website: http://www.ricoh-usa.com/recycling. Ricoh Cda Program: http://www.ricoh.ca/en-Ca/About-Ricoh/Environment/Toner-Bottle-and-Cartridge-Recycling.html

12. ELECTRICAL SAFETY

The basic standard used to investigate Ricoh products is ANSI/UL 60950-1, "Information Technology Equipment - Safety - Part 1: General Requirements"

13. NOISE LEVEL

Sound Power Level	Lwa:dB(A)
• Standby	59.5
• Operating mode (monochrome/color)	71.9
• Full System	78.9

14. ELECTRO-MAGNETIC COMPATIBILITY (EMC)

Ricoh devices comply with Title 47 Code of Federal Regulations (CFR) Part 15 Radio Frequency Devices

15. OPERATING ENVIRONMENT

• Room air turn over at least (times/hr/person)	3

16. HEAT EMISSION

Mode	BTU
Stand by	1281.8568

17. DUPLEX COPY/PRINT PRODUCTIVITY

Tested Simplex to Duplex PPM Type	PPM #
ASTM F1318-90	n/a
BLI	n/a
Continuous Copy/Print Speed Productivity	100%

1. Power Consumption & Performance:

Power Save Modes: There are two power save modes in many of Ricoh's products. Low Power* and Sleep Modes** switch off certain internal components to reduce power consumption. After a certain period of inactivity, the machine goes to these modes to save energy. In order for the machine to come back to Standby/Ready condition, it takes some Recovery Time. Sleep Mode consumes less energy than that of Low Power, however it usually takes more time to come back to Standby/Ready condition.

The combination of Power Save modes & Recovery Times is a critical key for real-life energy conservation (if customers don't want to wait for the longer recovery time, they will end up disabling modes, resulting in much higher energy consumption). Ricoh has been working on achieving these two factors, and this is one of our strong technological advantages.

* Lower Power = Energy Saver
** Sleep Mode = Auto Off

TEC (Typical Electricity Consumption) Approach. TEC is a method of product energy performance via an evaluation of typical electricity consumption during normal operation over a specific period of time - measured in kilowatt-hours (kWh).

2. Eco-Labels:

Environmental Labels: Three types of environmental labels to indicate environmentally-friendly products have been established or are currently under discussion by the ISO (International Organization for Standardization). The Ricoh group has been actively promoting the use of these labels to help our customers, who are concerned with environmental conservation within the North American Market.

Type I

A third party organization specifies the standards for environmentally-friendly products for Type I label certification. EPEAT (United States), Energy Star (United States), Eco-Logo (Canada) belong to this type. Ricoh has been actively working on certification of their products for these environmental labels.

3. Manufacturing:

ISO 14001:2004
ISO 14001 is the internationally recognized standard that provides the framework for an organization to develop its own Environmental Management System. It offers a systematic way to help reduce the risk an individual product or organization may have on the environment, with special focus on energy consumption, use of natural resources, and the paper handling and treatment of waste. It is the only standard that offers actual certification to organizations of all types and sizes worldwide.
*ISO 14001 Certificates are available upon request

ISO 9001:2008

ISO 9001 is the internationally recognized standard for Quality Management Systems (QMS). It provides Ricoh with the framework and set of principles that ensure a common approach to the management of business activities to consistently achieve customer satisfaction.
• Benefits of implementing an ISO 9001 include: Customer satisfaction, Reduced operating costs, Improved stakeholder relationships, Legal compliance, Improved risk management, Proven business credentials and Ability to win more business.
• ISO 9001 Certificates are available upon request

4. Material Emissions:

The Blue Angel is the first and the most well-known eco-label worldwide. Since 1978 it has set the standard for eco-friendly products and services selected by an independent jury in line with defined criteria.

Ricoh rigorously tests its worldwide products against stringent standards, which are equivalent to Germany's renowned Blue Angel program, for emissions of dust and substances such as ozone. The Blue Angel program is considered one of the most advanced environmental testing programs in the world.

Ricoh stands behind the safety of its products. Material Safety Data Sheets, which provide environmental, health and safety information, are available for all Ricoh products. Customers can access this data on the Ricoh website at http://www.ricoh-usa.com (search "MSDS" and select the link to the MSDS database) or by calling 1-800-336-MSDS (6737).

5. Control of Environmentally Sensitive Substances:

Restriction of Hazardous Substances (RoHS): The Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment 2002/95/EC; commonly referred to as the Restriction of Hazardous Substances Directive or RoHS) was adopted in February 2003 by the European Union. The RoHS directive took effect on 1 July 2006, and is required to be enforced and become law in each member state. This directive restricts the use of six hazardous materials in the manufacture of various types of electronic and electrical equipment. RoHS restricts the use of the following six substances:
1. Lead (Pb)
2. Mercury (Hg)
3. Cadmium (Cd)
4. Hexavalent chromium (Cr6+)
5. Polybrominated biphenyls (PBB)
*6. Polybrominated diphenyl ether (PBDE)
**PBB and PBDE are flame retardants used in several plastics.

6. Recycled Paper Compatibility:

GSA requires all imaging equipment to handle 30% recycled content. This is not an arbitrary figure but a recommendation based on testing done by the federal government in cooperation with all copier manufactures.

7. Consumables:

Post Consumer Resin (PCR) as a sustainable solution for environmentally friendly packaging: PCR plastic consists of a blend of recycled resins that would have otherwise ended up in landfills, and replaces the use of virgin polypropylene resins

12. Electrical Safety:

This standard is applicable to main-powered or battery-powered information technology equipment, including electrical business equipment and associated equipment, with a RATED VOLTAGE not exceeding 600 V and designed to be installed in accordance with the Canadian Electrical Code, Part I, CSA C22.1; CSA C22.2 No. 0; the National Electrical Code, NFPA 70; and the National Electrical Safety Code, IEEE C2.

13. Noise Level:

The Lwa value is measured based on ISO 7779. Acoustics – Measurement of airborne noise emitted by information technology and telecommunications equipment

14. Electro-Magnetic Compatibility (EMC):

Title 47, Part 15 (47 CFR 15) is part of the Federal Communications Commission (FCC) rules and regulations regarding unlicensed transmissions. It is a part of Title 47 of the Code of Federal Regulations (CFR), and regulates everything from spurious emissions to unlicensed low-power broadcasting. Nearly every telecommunications device sold inside the United States, whether it radiates intentionally or unintentionally, must comply with Part 15.

15. Operating Environment:

The Btu (British thermal unit) per hour (Btu/h) is the unit of power most commonly associated with the Btu. 1 Btu is approximately 0.29307 Wh 1 watt is approximately 3.41214 Btu/h.