

Product Name : [RICOH Print Cartridge GC21C](#) SDS Number : [405533](#)  
 Date Prepared : [06/01/2009](#) Date Modified : [08/01/2014](#) Date Printed: [11/11/2016](#)



## Safety Data Sheet

### Section1 : Chemical Product and Company Identification

- (a) Product identifier used on the label  
 Product Name : [RICOH Print Cartridge GC21C](#)
- (b) Other means of identification  
 SDS Number : [405533](#)
- (c) Recommended use of the chemical and restrictions on use  
 General Use : [The Image Formation of Printing Machine](#)
- (d) Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party  
 Company Name : [Ricoh USA, Inc.](#)  
 Department : [Environmental Sustainability and Product Compliance](#)  
 Address : [5 Dedrick Place West Caldwell, NJ 07006 USA](#)
- (e) Emergency phone number.  
 Telephone Number : [1-973-882-2000](#) or [1-973-882-5218](#) (For product information) or  
[1-800-336-6737](#) (for emergencies)  
 Telefax Number : [1-973-882-3959](#)  
 E-mail : [environmentinfo@ricoh-usa.com](mailto:environmentinfo@ricoh-usa.com)

### Section2 : Hazards Identification

#### Classification

PHYSICAL HAZARD(S)	EXPLOSIVES	<a href="#">Not Applicable</a>
	FLAMMABLE GASES	<a href="#">Not Applicable</a>
	FLAMMABLE AEROSOLS	<a href="#">Not Applicable</a>
	OXIDIZING GASES	<a href="#">Not Applicable</a>
	GASES UNDER PRESSURE	<a href="#">Not Applicable</a>
	FLAMMABLE LIQUIDS	<a href="#">Classification not possible</a>
	FLAMMABLE SOLIDS	<a href="#">Not Applicable</a>
	SELF-REACTIVE SUBSTANCES AND MIXTURES	<a href="#">Not Applicable</a>
	PYROPHORIC LIQUIDS	<a href="#">Classification not possible</a>
	PYROPHORIC SOLIDS	<a href="#">Not Applicable</a>
	SELF-HEATING SUBSTANCES AND MIXTURES	<a href="#">Classification not possible</a>
	SUBSTANCES AND MIXTURES, WHICH ON CONTACT WITH WATER, EMIT FLAMMABLE GASES	<a href="#">Classification not possible</a>
	OXIDIZING LIQUIDS	<a href="#">Classification not possible</a>
	OXIDIZING SOLIDS	<a href="#">Not Applicable</a>
	ORGANIC PEROXIDES	<a href="#">Classification not possible</a>
CORROSIVE TO METALS	<a href="#">Classification not possible</a>	
HEALTH HAZARD(S)	ACUTE TOXICITY(ORAL)	<a href="#">Classification not possible</a>
	ACUTE TOXICITY(DERMAL)	<a href="#">Classification not possible</a>
	ACUTE TOXICITY (INHALATION - GAS)	<a href="#">Not Applicable</a>
	ACUTE TOXICITY (INHALATION - VAPOUR)	<a href="#">Not Applicable</a>
	ACUTE TOXICITY (INHALATION - DUST AND MIST)	<a href="#">Classification not possible</a>
	SKIN CORROSION/IRRITATION	<a href="#">Classification not possible</a>
	SERIOUS EYE DAMAGE/EYE IRRITATION	<a href="#">Classification not possible</a>
	RESPIRATORY SENSITIZER	<a href="#">Classification not possible</a>
	SKIN SENSITIZER	<a href="#">Classification not possible</a>
	GERM CELL MUTAGENICITY	<a href="#">Classification not possible</a>
	CARCINOGENICITY	<a href="#">Classification not possible</a>

	TOXIC TO REPRODUCTION	Classification not possible
	TARGET ORGAN SYSTEMIC TOXICITY FOLLOWING SINGLE EXPOSURE	Classification not possible
	TARGET ORGAN SYSTEMIC TOXICITY FOLLOWING REPEAT EXPOSURE	Classification not possible
	ASPIRATION HAZARD	Classification not possible
ENVIRONMENTSL HAZARD(S)	ACUTE HAZARDS TO THE AQUATIC ENVIRONMENT	Classification not possible
	CHRONIC HAZARDS TO THE AQUATIC ENVIRONMENT	Classification not possible
	HAZARDOUS TO THE OZONE LAYER	Classification not possible

## Label element

Pictogram:	
Signal word(s):	not applicable
Hazard statement(s):	not applicable
Precautionary statement(s)	not applicable
	【Prevention】
	【Response】
	【Storage】
	【Disposal】

## Specific Hazards

There are no significant hazards expected with intended use.

## Section3 : Composition, Information on Ingredients

Ingredients CAS No./Chemical name	Contents (%)
Confidential Organic Pigment(Copper compound)	<10
Confidential Glycol	20-30
7732-18-5 Water	45-75

## Section4 : First Aid Measures

## (a) Necessary measures

Inhalation :

Remove from exposure into fresh air if symptoms are experienced. Seek medical advice.

Skin Contact :

Wash thoroughly with soapy water.

Eye Contact :

Flush with a large amount of water until particles are removed. Seek medical advice.

Ingestion :

Make him drink strong salt water, let him vomit. Seek medical advice.

## (b) Most important symptoms/effects, acute and delayed.

Not available

## (c) Indication of immediate medical attention and special treatment needed.

Immediate medical Attention :

Immediate medical attention is not required.

## Section5 : Fire Fighting Measures

## (a) Suitable (and unsuitable) extinguishing media.

Extinguishing Media to Avoid :

Not applicable.

(b) Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products).

Specific Hazards :

Not applicable

(c) Special protective equipment and precautions for fire-fighters.

Fire-Fighting Instructions / Specific Method :

No special fire protecting method is required. Sprinkling or fire extinguishers can be used.

Protection of Firefighters :

Wear gloves, glasses, a mask if necessary.

## Section6 : Accidental Release Measures

(a) Personal precautions, protective equipment, and emergency procedures.

Personal Precautions :

Take off dirty clothes and wash them or have them dry-cleaned before wearing again.

Environment Precautions :

Do not exposure to sewers and watercourses.

(b) Methods and materials for containment and cleaning up.

Methods for Cleaning Up :

If spilled, wipe up with paper or cloth.

## Section7 : Handling and Storage

(a) Precautions for safe handling.

Handling :

Technical Measures/Precautions

Not applicable

Safe Handling Advice

Keep away from heat, flame or spark. Do not dismantle cartridge.

(b) Conditions for safe storage, including any incompatibilities.

Storage :

Technical Measures

Not applicable

Storage Conditions

Keep out of reach of children.

For the sake of quality, store in dry and well-ventilated area it should not exceed 35 degrees centigrade for a long time and avoid direct sunlight.

Packaging material

Not applicable

Specific Use(s) :

Image formation in printing machines.

## Section8 : Exposure Controls/Personal Protection

(a) OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH)

Threshold Limit Value (TLV), and any other exposure limit

Control Parameters

Exposure Limit Value ( I )

USA OSHA PEL : Not applicable  
(TWA)

ACGIH TLV (TWA) : Not applicable

DFG MAK : Not applicable

Personal Protection

(b) Appropriate engineering controls.

Technical measures :

Use adequate ventilation. None required with intended use.

(c) Individual protection measures, such as personal protective equipment.

Respiratory Protections (Specify Type)

None required in normal use.

Eye Protection

Put on goggles if necessary.

Protective Gloves

Use vinyl or rubber gloves if necessary.

Protective Clothing or Equipment

Wear chemical-resistant apron or other impervious clothing if necessary.

Hygiene Measures

Wash hands after handling.

## Section9 : Physical and Chemical Properties

(a) Appearance (physical state, color, etc.)

Physical state : Liquid

Form : Liquid

Colour : Cyan

(b) Odor : No odor

(c) Odor threshold : Not available

(d) pH : 8-10 Measuring Temp (degrees centigrade) : 25

(e) Melting point/freezing point : Not applicable  
(degrees centigrade)

(f) Initial boiling point and boiling range : Not available

(g) Flash point : Not applicable

(h) Evaporation Rate (Butyl Acetate = 1) : Not available

(i) Flammability (solid, gas) : Not flammable

(j) Upper/lower flammability or explosive limits : Upper Not applicable Lower Not applicable

(k) Vapor Pressure (Pa) : Not available Measuring Temp (degrees centigrade) : -

(l) Vapor Density (AIR=1) : Not available

(m) Relative density : Approx.1.1

(n) Solubility(ies)

Water Solubility (g/L) : Soluble

(o) Partition coefficient: n-octanol/water : Not available

(p) Auto-ignition temperature : Not applicable

(q) Decomposition temperature : Not applicable  
(degrees centigrade)

(r) Viscosity (Pa\*s) : Approx.0.008 Measuring Temp (degrees centigrade) : 25

<b>Section10 : Stability and Reactivity</b>
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- (a)Reactivity  
Hazardous Reaction :  
There is no significant hazardous reaction expected with intended use.
- (b)Chemical stability :  
Stable
- (c)Possibility of hazardous reactions :  
Not available
- (d)Condition to Avoid :  
Not applicable in normal use.
- (e)Incompatible materials :  
Not applicable in normal use.
- (f)Hazardous decomposition products :  
Decomposition products will not occur.

<b>Section11 : Toxicological Information</b>
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- (a)Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact)  
ingestion,skin,inhalation,eye contact
- (b)Symptoms related to the physical, chemical and toxicological characteristics  
Not available
- (c)Delayed and immediate effects and also chronic effects from short- and long-term exposure  
Not available
- Acute Toxicity  
Acute Oral Toxicity (LD50) :  
5000 or over [mg/kg] (Rat) (Based on other Ricoh products test results of similar ingredients.)  
Acute Dermal Toxicity :  
Not available  
Acute Inhalation Toxicity :  
Not available
- Local effects  
Acute Skin Irritation(PII) :  
1.0 or below (Rabbit) (Based on other Ricoh products test results of similar ingredients.)  
Acute Eye Irritation :  
Not available (Ingredients are not classified as dangerous according to Directive 67/548/EEC.)
- Sensitization  
Acute Allergenic Effects :  
Not available (Marmot) (None of ingredients is listed on hazardous characteristics list of skin or inhalation sensitization.)
- Mutagenicity : Negative (Ames test)  
Reproduction Toxicity : Does not contain substances listed as hazardous to reproductive health.  
Teratogenic : Not available
- (d)Numerical measures of toxicity (such as acute toxicity estimates)  
Not available
- (e)Whether the hazardous chemical is listed in the National Toxicology Program (NTP)  
Report on Carcinogens (latest edition) or has been found to be a potential carcinogen  
in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA.  
This product does not contain the carcinogenic substances which are listed on NTP, IARC and OSHA.

## Section12 : Ecological Information

Mobility : No data are available on the adverse effect one environment.

Persistence/Degradability : Not available

Bioaccumulation : Not available

### Ecotoxicity

Acute Toxicity for Fish (LC50) : Not available

Acute Toxicity for Daphnia (EC50) : Not available

Algae Inhibition Test (IC50) : Not available

## Section13 : Disposal Consideration

### General information:

Dispose of waste and residues in accordance with local authority requirements.

### Disposal methods:

Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Confirm disposal procedures with local regulations.

### Precautions

Not applicable

## Section14 : Transport Information

### International Regulations

#### Land Transport

RID/ADR : Not applicable

DOT 49 CFR : Not applicable

ADNR : Not applicable

#### Sea Transport

IMDG Code : Not applicable

#### Air Transport

ICAO-TI/IATA-DGR : Not applicable

UN Number : Not applicable

Class : Not applicable

### Specific Precautionary Transport Measures and Conditions

Avoid direct sunlight in quality.; Do not keep this over 35 degrees centigrade.

## Section15 : Regulatory Information

### Regulations

#### US Information

##### Information on the label :

Not required

##### TSCA (Toxic Substances Control Act) :

This product complies with all applicable rules and regulations under TSCA.

##### SARA (Superfund Amendments and Reauthorization Act) Title III

##### 313 Reportable Ingredients :

Not regulated

##### California Proposition 65

Not regulated

## Canada Information

WHMIS Controlled product :  
 Not a controlled product

## EU Information

Information on the label (EU Regulation (EC)No. 1272/2008)  
 Symbol & Indication : Not required  
 Hazard Statement : Not required  
 Precautionary statement : Not required

Special Precautions under EU Regulation 1272/2008 Annex II :  
 Not required

This product complies with applicable rules and regulations under 76/769/EEC

<b>Section 16 : Other Information</b>
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Explanation of Hazardous Materials Identification System [HMIS] & National Fire Protection Association [NFPA] Hazard Rating Systems:

Both the HMIS and NFPA systems use number from "0" to "4" to show the degree of hazard in an uncontrolled situation:

**0=Minimum Hazard 1=Slight Hazard 2=Moderate Hazard 3=Serious Hazard 4=Severe Hazard**

Colors may also be used in both systems:

**Blue**=Health Hazard **Red**=Fire Hazard **Yellow**=Reactivity Hazard **White**=Indicate a special hazard

HMIS will specify any Personal Protective Equipment required [PPE],

NFPA will specify OX(oxidizer), Acid(acid), ALK(Alkali), COR(Corrosive), W(use no water), xx(Radioactive).

## Literature References :

ANSI Z400.1-1993

ISO 11014-1

Commission Directive 91/155/EEC

IARC (1996) "IARC Monograph on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol.65, Printing Process and Printing Inks, Carbon Black and Some Nitro Compounds", Lyon, pp149-261

H.Muhle, B.Bellman, O.Creutzenberg, C.Dasenbrock, H.Emst, R.Kilpper, J.C.MacKenzie, P.Morrow, U.Mohr, S.Takenaka and R.Mermelstein(1991) "Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats" Fundamental and Applied Toxicology 17,pp280-299

IARC (2008) "IARC Monograph on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol.93"

NIOSH CURRENT INTELLIGENCE BULLETIN "Evaluation of Health Hazard and Recommendation for Occupational Exposure to Titanium Dioxide DRAFT"

ACGIH-TLV	: Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices
OSHA Z-Tables	: US Department of Labor, 29CFR Part 1910, Tables Z-1, Z-2, and Z-3
NTP (USA)	: US Department of Health and Human Services National Toxicology Program Annual Report on Carcinogens DFG-MAK (GER): DFG List of MAK and BAT Value
Symbol (EC)	: Regulation (EC)No.1272/2008
91/155/EEC	: EU Directive 91/155/EEC
1999/45/EC	: EU Directive 1999/45/EC
CLP (EC)No.1272/2008	: Regulation (EC)No.1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directive 67/548/EEC and 1999/45/EC, and amending Regulation (EC)No. 1907/2006
EC 304/2003	: Regulation (EC) No 304/2003 of the European Parliament and of the Council of 28 January 2003 concerning the export and import of dangerous chemicals
WHMIS Controlled product	: Canada Workplace Hazardous Information System
OELs-TWA (Australia)	: Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC: 3008 (1995)]

## Abbreviations :

OSHA PEL      PEL (Permissible Exposure Limit) under Occupational Safety and Health Act

ACGIH-TLV	TLV (Threshold Limit Values) under American Conference of Governmental Industrial Hygienists
REACH	EC)No.1907/2006:Council Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals
SVHC	Substances of Very High Concern
ECHA	The European Chemicals Agency
DFG-MAK	MAK (Maximale Arbeitsplatz Konzentrationen) by Deutsche Forschungs Gemeinschaft
RoHS	Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment
TWA	Time Weighted Average
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
WHMIS	Workplace Hazardous Information System
NOHSC	National Occupational Health and Safety Commission Act 1985

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