



Safety Data Sheet (ISO form)

1. Product and Company Identification

Product Name :RICOH Cleaning Cartridge Yellow Type G1
General Use :The Image Formation of Printing Machine

SDS Number :342525

Company Name : Ricoh Company, Ltd.

Department : Product Safety Engineering Department, Safety and Environmental

Engineering Center, Quality Management Division

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2. Composition/Information on Ingredients

Substance or Preparation

Preparation

Chemical Nature

Ingredients	Chemical Formula	CAS. No.	Contents(%)
Glycol	Confidential	Confidential	20-30
Glycerin	СЗН803	56-81-5	<10
Surfactant	Confidential	Confidential	<3
Water	H20	7732-18-5	55-75

This product does not contain any of the following substances as ingredients.

Cadmium, Hexavalent Chromium, Mercury, Lead, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE).

And if it contains any impurities, it does not exceed any of the thresholds of RoHS.

3. Hazards Identification

The Most Important Hazards

Adverse Human Health Effects

There are no significant hazards expected with intended use.

Environmental Effects

There are no significant hazards expected with intended use.

Physical and Chemical Hazards

There are no significant hazards expected with intended use.

Specific Hazards

There are no significant hazards expected with intended use.





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Main Symptoms

Acute Inhalation Toxicity

Under normal use conditions, there is no possibility to inhale the particle of ink.

Acute Oral Toxicity

Low acute toxicity in animal experiment.

Acute Eye Irritation

May be non-irritant.

Acute Skin Irritation

May be non-irritant.

Sensitization

From test no apparent significant hazards are expected.

Chronic Effect

Under normal use conditions, there is no possibility to inhale the particle of ink. Carcinogenicity

This product does not contain the substances classified as carcinogenic by NTP, IARC or OSHA.

The Classification of The Chemical Product

This preparation is not classified as dangerous according to Directive 1999/45/EC

4. First-Aid Measures

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Inhalation
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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.

Notes to a physician

Not applicable

5. Fire-Fighting Measures

Extinguishing Media

CO2, dry chemicals, foam or water.

Extinguishing Media to Avoid

Not applicable.

Specific Hazards

Not applicable

Specific Method

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

Protection of Fire-fighters

Wear gloves, glasses, a mask if necessary.

6. Accidental Release Measures

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.

Methods for Cleaning Up

If spilled, wipe up with paper or cloth.

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RICOH

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7. Handling and Storage
 Handling
  Technical Measures/Precautions
     Not applicable
  Safe Handling Advice
     Keep away from heat, flame or spark. Do not dismantle cartridge.
 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 32
     degrees centigrade for a long time and avoid direct sunlight.
  Packaging Material
     Not applicable
 Specific Use(s)
     The Image Formation of Printing Machine or Copier.
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8. Exposure Controls/Personal Protection

Technical Measures

Use adequate ventilation. None required with intended use.

Control Parameters

USA OSHA PEL (TWA) : Not applicable

ACGIH TLV (TWA) : Not applicable

DFG MAK : Not applicable

Personal Protection

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Use vinyl or rubber gloves if necessary.
  Eye Protection
     Put on goggles if necessary.
   Skin and Body Protection
     Wear chemical-resistant apron or other impervious clothing if necessary.
  Hygiene Measures
     Wash hands after handling.
9. Physical and Chemical Properties
 Appearance
  Physical State Liquid
                  Liquid
  Form
  Colour
                  Colorless
  0dour
                  No odour
 Information
  pH : 9-10.5
                   Measuring Temp (degrees centigrade) : 25
 Specific Temperatures/Temperature Ranges at Which Changes in Physical State Occur
  Boiling Point (degrees
                                  Not available
  centigrade)
  Melting
                        (degrees Not applicable
              Point
  centigrade)
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Respiratory Protections

Hand Protection

None required in normal use.

Decomposition Temperature (degrees Not applicable

centigrade)

Flash Point (degrees centigrade) Not applicable

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Explosion Properties (degrees centigrade) This product is considered a nonexplosive

: material under normal use.



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Vapor Pressure
(Pa)
Vapor
                 Not available
Density(AIR=1)
Density (g/cm3)
                 Approx. 1.05 Measuring Temp (degrees centigrade) : 23
Solubility
 Water Solubility (g/L) Soluble
Octanol/Water Partition Coefficient
                       Not available
Other Information
 Flammability Not flammable
 Viscosity (Pa·s) Approx. 0. 003 Measuring Temp (degrees centigrade) :25
 Volatile (%)
                 60-80
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10. Stability and Reactivity

Stability

 ${\tt Stable}$

Hazardous Reaction

There is no significant hazardous reaction expected with intended use.

Conditions to Avoid

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Not applicable in normal use.

Materials to Avoid

Not applicable in normal use.

Hazardous Decomposition Products

Decomposition products will not occur.
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Toxicity

health.

11. Toxicological Information Acute Toxicity Acute Oral Toxicity (LD50) : 5000 or over [mg/kg] (Rat) Acute Dermal Toxicity: Not available Acute Inhalation Toxicity: Not available Local effects Acute Skin Irritation(PII) : 1.5 or below (Rabbit) (Slight irritation) Acute Eye Irritation: Not available (Ingredients are not classified as dangerous according to Regulation (EC) No 1272/2008.) Sensitization Acute Allergenic Effects: 0 % (Mouse) (None skin sensitization.) Specific Effects Carcinogenicity: This product does not contain the carcinogenic substances which are listed on NTP, IARC and OSHA. Mutagenicity Negative (Ames test) Reproduction : Does not contain substances listed as hazardous to reproductive

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12. Ecological Information

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

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Persistence/Degradabil Not available

ity :

Bioaccumulation Not available

:

Ecotoxicity

Acute Toxicity for Fish Not available

(LC50)

Acute Toxicity for Daphnia Not available

(EC50)

Algae Inhibition Test Not available

(IC50) :

13. Disposal Consideration

General information:

Used product should be disposed in an environmentally appropriate manner and accordance with governmental regulations.

Disposal methods:

Precautions:

Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Confirm disposal procedures with local regulations.

14. 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

The UN Classification : Not applicable

Number

Class : Not applicable

Specific Precautionary Transport Measures and conditions

Avoid direct sunlight in quality.; Do not keep this over 32 degrees centigrade.

15. Regulatory Information

Regulations

EU Information

Information on the label (Regulation (EC) No 1272/2008)

Symbols & : Not required

Indications

R-Phrase : Not required S-Phrase : Not required

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(EC) No 1907/2006 Annex XVII

This product complies with applicable rules and regulations under (EC) No 1907/2006

Annex XVII

(EC) No. 689/2008

Not regulated

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 Title III

313 Reportable Ingredients: Not regulated

California Proposition 65: Not regulated

Canada Information

WHMIS Controlled product: Not a controlled product
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16. Other Information

NFPA Hazard Rating: National Fire Protection Agency (USA)

Health; 1, Flammability; 1, Reactivity; 0

HMIS Rating: The National Paint and Coating Association (USA)

Health; 1, Flammability; 1, Reactivity; 0

Literature References:

ANSI Z400.1-1993

ISO 11014-1

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, pp 280-299

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 DFG List of MAK and BAT Value Symbol (EC) : Regulation (EC) No 1272/2008

91/155/ EEC : EU Directive 91/155/ EEC

(EC) No 1907/2006 : Regulation (EC) No 1907/2006 Annex XVII

Annex XVII

(EC) No. 689/2008 : Regulation (EC) No 689/2008

WHMIS Controlled : Canada Workplace Hazardous Information System

product

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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