

1. Identification

Product identifier RICOH Garment Ink Cartridge K Type P1

Other means of identification
SDS No. 342815

Recommended use The Image Formation of Printing Machine or Copier. ink product Ink Cartridge

Recommended restrictions No other uses are advised.

Manufacturer/Importer/Supplier/Distributor information

Company name Ricoh USA, Inc.

Department Environmental Sustainability and Product Compliance

Address 2 Gatehall Drive, Suite 204 Parsippany, NJ 07054, U.S.A.

Phone 1-973-882-2000 or 1-973-882-5218 (For product information)

Emergency Contact 1-800-336-6737

E-mail environmentinfo@ricoh-usa.com

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Not available.

Response Not available.

Storage Not available.

Disposal Not available.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information 3% of the mixture consists of ingredients of unknown acute toxicity.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Water		7732-18-5	30-60
Glycol		Confidential	10-30
Glycerol		56-81-5	7-13
Carbonblack		1333-86-4	1-7
Diethylene glycol monobutyl ether		112-34-5	1-5

Composition comments This product does not contain any of the following RoHS substances as ingredients. Cadmium, Hexavalent Chromium, Mercury, Lead, Polybrominated biphenyls (PBB), Polybrominated diphenylethers (PBDE), Phthalate esters (DEHP, BBP, DBP, and DIBP), SVHC (substances of very high concern: published by ECHA).

4. First-aid measures

Inhalation Move to fresh air. Get medical attention, if needed.

Skin contact Wash off with soap and plenty of water. If skin irritation or rash occurs: Get medical advice/attention.

Eye contact	Rinse with plenty of water. If irritation persists get medical attention.
Ingestion	Rinse mouth thoroughly. Get medical advice/attention if you feel unwell.
Most important symptoms/effects, acute and delayed	Not available.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	Water. Foam. Dry chemicals. Carbon dioxide (CO2).
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	Not applicable.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation.
Methods and materials for containment and cleaning up	Wipe up with absorbent material (e.g. cloth, fleece). For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not use in areas without adequate ventilation. Avoid contact with skin and eyes.
Conditions for safe storage, including any incompatibilities	Store at 5 - 35 °C and protect from sunlight.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Carbonblack (CAS 1333-86-4)	PEL	3.5 mg/m3	
Glycerol (CAS 56-81-5)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Carbonblack (CAS 1333-86-4)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Glycerol (CAS 56-81-5)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Acetone (CAS 67-64-1)	STEL	500 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
	TWA	250 ppm	
Carbonblack (CAS 1333-86-4)	TWA	3 mg/m ³	Inhalable fraction.
Diethylene glycol monobutyl ether (CAS 112-34-5)	TWA	10 ppm	Inhalable fraction and vapor.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m ³ 250 ppm
Carbonblack (CAS 1333-86-4)	TWA	0.1 mg/m ³

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	25 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls Provide adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear appropriate protective goggles.

Skin protection

Hand protection Wear suitable gloves.

Other Wear suitable protective clothing.

Respiratory protection Wear suitable respiratory protection.

Thermal hazards Not applicable.

9. Physical and chemical properties**Appearance**

Physical state Liquid.

Form Not available.

Color Black.

Odor Slight characteristic odor

Odor threshold Not available.

pH >= 7 - <= 10

Melting point/freezing point Not available.

Initial boiling point and boiling range <212 °F (<100 °C)

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Easily soluble

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature	Not available.
Viscosity	<10 mPa·s
Other information	
Density	>= 1.00 - <= 1.20 g/cm3

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	None known.
Conditions to avoid	Sunlight. High temperatures.
Incompatible materials	None known.
Hazardous decomposition products	No dangerous reaction known under conditions of normal use.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Not available.
Skin contact	Not available.
Eye contact	Not available.
Ingestion	Not available.

Symptoms related to the physical, chemical and toxicological characteristics Not available.

Information on toxicological effects

Acute toxicity Oral 2000<ATE<= 5000 mg/kg
3% of ingredients of unknown oral acute toxicity.

Skin corrosion/irritation

Irritation Corrosion - Skin: P.I.I. value

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Result: Non-irritant
Notes: OECD guidelines No.404

Serious eye damage/eye irritation

Irritation Corrosion - Eye

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Result: Non-irritant
Notes: OECD guidelines No.405

Respiratory or skin sensitization

Skin sensitization

Skin sensitization

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Result: Non-skingsensitive
Notes: OECD Guidelines No.406 Buehler Test

Germ cell mutagenicity Not available.

Germ cell mutagenicity: Ames test

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Result: Negative
Notes: Results of an assay using five bacterial strains and six concentrations. Not conducted dose range-finding test.

Carcinogenicity

The carbon black contained in this product falls under IARC rank 2B of carcinogens. This classification is based on the results of an inhalation test on rats, but no carcinogenicity was observed in dermal and oral ingestion tests on rats. Also, there is no possibility of inhaling carbon black from this product. Therefore, this product Powdered carbon black is not released into the air. No carcinogenicity has been observed when ingested through the mouth or skin.

IARC Monographs. Overall Evaluation of Carcinogenicity

Carbonblack (CAS 1333-86-4)

2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Carbonblack (CAS 1333-86-4)

Known To Be Human Carcinogen.

Reproductive toxicity Not available.
Specific target organ toxicity - single exposure Not available.
Specific target organ toxicity - repeated exposure Not available.
Aspiration hazard Not available.

12. Ecological information

Ecotoxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment.
Persistence and degradability Not available.
Bioaccumulative potential Not available.
Mobility in soil Not available.
Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations.
Waste from residues / unused products Not available.
Contaminated packaging Not available.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations

Toxic Substances Control Act (TSCA) Toxic Substances Control Act (TSCA) Section 4(a) Final Test Rules & Testing Consent Orders (40 CFR 799, Subpts B-D) Aceton (CAS 67-64-1) Diethylene glycol monobutyl ether (CAS 112-34-5)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1) Listed.

Diethylene glycol monobutyl ether (CAS 112-34-5) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Diethylene glycol monobutyl ether	112-34-5	1-5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Diethylene glycol monobutyl ether (CAS 112-34-5)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1) 6532

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1) 35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1) 6532

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Acetone (CAS 67-64-1) Low priority

Glycerol (CAS 56-81-5) Other Flavoring Substances with OSHA PEL's

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Acetone (CAS 67-64-1)

Carbonblack (CAS 1333-86-4)

Diethylene glycol monobutyl ether (CAS 112-34-5)

California Proposition 65

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Carbon black (airborne, unbound particles of respirable size [≤ 10 micrometers]) (CAS 1333-86-4) Listed: February 21, 2003

16. Other information, including date of preparation or last revision

Issue date 03-03-2023

Version # 01

References

ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

HSDB® - Hazardous Substances Data Bank

Japan Society for Occupational Health, Recommendation of Occupational Exposure Limits

JIS Z 7252:2019 Classification of chemicals based on "Globally Harmonized System of

Classification and Labelling of Chemicals (GHS)"

JIS Z 7253:2019 Hazard communication of chemicals based on GHS - Labelling and Safety Data Sheet (SDS)

Taiwan. OELs. (Standards on Workplace Atmosphere of Dangerous and Hazardous Materials)

National Toxicology Program (NTP) Report on Carcinogens

US. IARC Monographs on Occupational Exposures to Chemical Agents

Disclaimer

Not available.