

1. Identification

Product identifier	RICOH Enhanced Garment Ink Cartridge White 1 (Hi Yield) Type G2
Other means of identification	
SDS No.	342812
Recommended use	Printing Inks
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Company name	Ricoh USA, Inc.
Address	2 Gatehall Drive, Suite 204 Parsippany, NJ 07054, U.S.A.
Phone	1-973-882-2000 or 1-973-882-5218
Emergency Contact	1-800-336-6737
E-mail	environmentinfo@ricoh-usa.com

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2 (kidney)
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Warning
Hazard statement	May cause drowsiness or dizziness. May cause damage to organs (kidney) through prolonged or repeated exposure.
Precautionary statement	
Prevention	Do not breathe mist/vapors. Use only outdoors or in a well-ventilated area.
Response	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center/doctor if you feel unwell. Get medical advice/attention if you feel unwell.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Ethylene glycol		107-21-1	20 - 30

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).
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4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Convulsions. May cause drowsiness or dizziness. Headache. Nausea, vomiting. Abdominal pain. Edema. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Dry powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. 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 breathe mist/vapors. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	STEL	10 mg/m ³	Aerosol, inhalable.
		50 ppm	Vapor fraction
	TWA	25 ppm	Vapor fraction

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Liquid.
Color	White
Odor	Not significant.
Odor threshold	Not available.
pH	7 - 10
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	201.2 °F (94.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
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)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.16 g/cm ³
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

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	No dangerous reaction known under conditions of normal use.

Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics May cause drowsiness or dizziness. Convulsions. Headache. Nausea, vomiting. Abdominal pain. Edema.

Information on toxicological effects

Acute toxicity Not known.

Product	Species	Test Results
RICOH Enhanced Garment Ink Cartridge White 1 (Hi Yield) Type G2		

Acute

Dermal

LD50 Rat > 2000 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

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

RICOH Enhanced Garment Ink Cartridge White 1 (Hi Yield) Type G2 Result: No irritation
Species: Rabbit

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Skin sensitization

RICOH Enhanced Garment Ink Cartridge White 1 (Hi Yield) Type G2 Result: Non sensitising
Species: Mouse

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Germ cell mutagenicity: Ames test

RICOH Enhanced Garment Ink Cartridge White 1 (Hi Yield) Type G2 Result: Negative

Carcinogenicity Risk of cancer cannot be excluded with prolonged exposure. Titanium dioxide 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 Titanium dioxide from this product. Therefore, this product powdered Titanium dioxide is not released into the air. No carcinogenicity has been observed when ingested through the mouth or skin.

IARC Monographs. Overall Evaluation of Carcinogenicity

Titanium dioxide (CAS 13463-67-7) 2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure	May cause damage to organs (kidney) through prolonged or repeated exposure.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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 established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Ethylene glycol (CAS 107-21-1) 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 Yes

Classified hazard categories Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Ethylene glycol	107-21-1	20 - 30

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Ethylene glycol (CAS 107-21-1)

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

Not regulated.

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.**US state regulations****US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Ethylene glycol (CAS 107-21-1)

Titanium dioxide (CAS 13463-67-7)

California Proposition 65**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Titanium dioxide (airborne, unbound particles of respirable size) (CAS 13463-67-7) Listed: September 2, 2011

California Proposition 65 - CRT: Listed date/Developmental toxin

Ethylene glycol (ingested) (CAS 107-21-1) Listed: June 19, 2015

16. Other information, including date of preparation or last revision**Issue date** 01-18-2024**Version #** 01**List of abbreviations** LD50: Lethal Dose 50%.**Disclaimer** The information in the sheet was written based on the best knowledge and experience currently available.