Product Name : PRINT CARTRIDGE YELLOW SP C252HA (OPC) SDS Number : 407656
Date Prepared : 10/04/2013 Date Modified : 08/10/2017 Date Printed: 01/24/2018

Safety Data Sheet

Section1 : Chemical Product and Company Identification

(a) Product identifier used on the label
Product Name : PRINT CARTRIDGE YELLOW SP C252HA (OPC)

(b) Other means of identification
SDS Number : 407656

(c) Recommended use of the chemical and restrictions on use
General Use : The image formation of printing machine or copier.

(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

Section2 : Hazards Identification

Classification

PHYSICAL HAZARD(S)	EXPLOSIVES	Not Applicable
	FLAMMABLE GASES	Not Applicable
	FLAMMABLE AEROSOLS	Not Applicable
	OXIDIZING GASES	Not Applicable
	GASES UNDER PRESSURE	Not Applicable
	FLAMMABLE LIQUIDS	Not Applicable
	FLAMMABLE SOLIDS	Not Applicable
	SELF-REACTIVE SUBSTANCES AND MIXTURES	Not Applicable
	PYROPHORIC LIQUIDS	Not Applicable
	PYROPHORIC SOLIDS	Not Applicable
	SELF-HEATING SUBSTANCES AND MIXTURES	Not Applicable
	SUBSTANCES AND MIXTURES, WHICH ON CONTACT WITH WATER, EMIT FLAMMABLE GASES	Not Applicable
	OXIDIZING LIQUIDS	Not Applicable
	OXIDIZING SOLIDS	Not Applicable
	ORGANIC PEROXIDES	Not Applicable
	CORROSIVE TO METALS	Not Applicable
HEALTH HAZARD(S)	ACUTE TOXICITY(ORAL)	Not Applicable
	ACUTE TOXICITY(DERMAL)	Not Applicable
	ACUTE TOXICITY (INHALATION - GAS)	Not Applicable
	ACUTE TOXICITY (INHALATION - VAPOUR)	Not Applicable
	ACUTE TOXICITY (INHALATION - DUST AND MIST)	Not Applicable
	SKIN CORROSION/IRRITATION	Not Applicable

	SERIOUS EYE DAMAGE/EYE IRRITATION	Not Applicable
	RESPIRATORY SENSITIZER	Not Applicable
	SKIN SENSITIZER	Not Applicable
	GERM CELL MUTAGENICITY	Not Applicable
	CARCINOGENICITY	Not Applicable
	TOXIC TO REPRODUCTION	Not Applicable
	TARGET ORGAN SYSTEMIC TOXICITY FOLLOWING SINGLE EXPOSURE	Not Applicable
	TARGET ORGAN SYSTEMIC TOXICITY FOLLOWING REPEAT EXPOSURE	Not Applicable
	ASPIRATION HAZARD	Not Applicable
ENVIRONMENTSL HAZARD(S)	ACUTE HAZARDS TO THE AQUATIC ENVIRONMENT	Not Applicable
	CHRONIC HAZARDS TO THE AQUATIC ENVIRONMENT	Not Applicable
	HAZARDOUS TO THE OZONE LAYER	Not Applicable

Label element

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

Specific Hazards

There are no significant hazards expected with intended use.

Section3 : Composition, Information on Ingredients

Ingredients CAS No./Chemical name	Contents (%)
7429-90-5 Al Substrate	>97
Confidential Charge Transport Material	<1
Confidential Organic Pigment	<1
Confidential Metal oxide	<1

Section4 : First Aid Measures

(a) Necessary measures

Inhalation :

Not applicable

Skin Contact :

In case of contact with skin, there is no problem.

Eye Contact :

Not applicable

Ingestion :

Not applicable

(b) Most important symptoms/effects, acute and delayed.
Not available

(c) Indication of immediate medical attention and special treatment needed.
Immediate edical 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 :
Not applicable

Environment Precautions :
Not applicable

(b) Methods and materials for containment and cleaning up.
Methods for Cleaning Up :
Not applicable

Section7 : Handling and Storage

(a) Precautions for safe handling.
Handling :
Technical Measures/Precautions
Not applicable

Safe Handling Advice
For the sake of quality, do not touch surface of photoreceptor.

(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 or copiers.

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 (TWA)	: Not applicable
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
None required in normal use.

Protective Gloves
None required in normal use.

Protective Clothing or Equipment
None required in normal use.

Hygiene Measures
Wash hands after handling.

Section9 : Physical and Chemical Properties

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

Physical state	: Solid
Form	: Drum
Colour	: cobalt green

(b)Odor : No odor

(c)Odor threshold : Not available

(d)pH : Not applicable

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

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

(g)Flash point : Not applicable

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

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

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

(k)Vapor Pressure (Pa) : Not applicable

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

(m)Relative density : 2.5-3.5 (as aluminum)

(n)Solubility(ies)
Water Solubility (g/L) : Insoluble
Other solvent Solubility (g/L) : Not available

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

(p)Auto-ignition temperature : Not applicable

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

(r)Viscosity (Pa・s) : Not applicable

Section10 : Stability and Reactivity

(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.

Section11 : Toxicological Information

(a)Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact)
Not available

(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) :
Not available
Acute Dermal Toxicity :
Not available
Acute Inhalation Toxicity :
Not applicable

Local effects

Acute Skin Irritation(PII) :
Not available
Acute Eye Irritation :
Not applicable

Sensitization
Acute Allergenic Effects :
Not available

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 has no danger of carcinogenicity. Because, as for this product, is a drum form, and is strongly adhered to an aluminum substrate; the particle of photosensitive component needs not to be released.

Section12 : Ecological Information

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

Persistence/Degradability : Not available

Bioaccumulation : Not known in bioaccumulation.

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

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
Keep it in cool and dry storage and avoid direct sun for quality.

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 underEU Regulation 1272/2008 Annex II :
Not required

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

Section16 : Other Information

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 reqired [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 Parliamant 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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