



Product Name : Print Cartridge Black SP C360A (Black toner) SDS Number :

408180

Date Prepared : 12/26/2016 Date Modified : 07/10/2017 Date Printed:

02/10/2018

Safety Data Sheet

Section1 : Chemical Product and Company Identification

(a) Product identifier used on the label

Product Name : Print Cartridge Black SP C360A (Black toner)

(b) Other means of identification

SDS Number : 408180

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

| | | |
|----------------------------|--|-----------------------------|
| | SKIN SENSITIZER | Classification not possible |
| | GERM CELL MUTAGENICITY | Classification not possible |
| | CARCINOGENICITY | Classification not possible |
| | 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 |
| ENVIRONMENTAL 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】 | Not applicable |
| 【Storage】 | Not applicable |
| 【Disposal】 | Not applicable |

Specific Hazards

Dust explosion (like most finely grained organic powders)

Section3 : Composition, Information on Ingredients

| Ingredients | Contents (%) |
|-----------------------|--------------|
| CAS No./Chemical name | |
| Confidential | Confidential |
| Polyester Resin | |
| Confidential | 1-5 |
| Wax | |
| Confidential | 1-5 |
| Silica | |

Section4 : First Aid Measures

(a) Necessary measures

Inhalation :

Remove from exposure into fresh air and rinse mouth with water. 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 :

Drink several glasses of water to dilute ingested toner. 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 :

Can form explosive dust-air mixtures when finely dispersed in air.

(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 :

Do not breathe in dust.

Environment Precautions :

Do not flush into sewers or watercourses.

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

Methods for Cleaning Up :

Fine powder may form explosive dust-air mixture. Confirm there is no source of fire and if there is a source, remove it. Sweep up spilled powder slowly and clean remainder with wet cloth. If a vacuum cleaner is used, a dust explosion-proof type must be chosen.

Section7 : Handling and Storage

(a) Precautions for safe handling.

Handling :

Technical Measures/Precautions

Not applicable

Safe Handling Advice

Do not handle in areas where there is wind or draught, this may cause dust to get into eyes.

Avoid breathing in dust.

(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 (1)

| | |
|--|--|
| USA OSHA PEL (TWA) : 15mg/m ³ (Total dust) | 5.0mg/m ³ (Respirable fraction) |
| ACGIH TLV (TWA) : 10mg/m ³ (Inhalable fraction) | 3.0mg/m ³ (Respirable fraction) |
| DFG MAK : 4.0mg/m ³ (Total dust) | 1.5mg/m ³ (Respirable fraction) |

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. If the limit of exposure concentration is exceeded, use authorised respirator.

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 : Solid

Form : Powder

Colour : Black

(b)Odor : Slightly plastic odor

(c)Odor threshold : Not available

(d)pH : Not applicable

(e)Melting point/freezing point : (Softening point) Approx.110

(degrees centigrade)

(f)Initial boiling point and boiling : Not applicable

range

(g)Flash point : Not applicable

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

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

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

limits

(k)Vapor Pressure (Pa) : Not applicable

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

(m)Relative density : Approx.1.2

(n)Solubility(ies)

Water Solubility (g/L) Insoluble

Chloroform Solubility (g/L) Slightly soluble

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

(p)Auto-ignition temperature : Not available

(q)Decomposition : Not available

temperature

(degrees centigrade)

(r)Viscosity (Pa · s) : Not applicable

Section10 : Stability and Reactivity

(a)Reactivity

Hazardous Reaction :

Dust explosion, like most finely grained organic powders.

(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)

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)

Acute Dermal Toxicity :

Not available

Acute Inhalation Toxicity :

Not available

Local effects

Acute Skin Irritation(PII) :

1.0 or below (Rabbit)

Acute Eye Irritation :

Non-irritant (Rabbit)

Sensitization

Acute Allergenic Effects :

Non-skinsensitive

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.

Carbon black contained in this product is classified to Group 2B of IARC as the result of inhalation test in use of rat.

But oral/skin test does not show carcinogenicity.

The toner containing carbon black did not show carcinogenicity in chronic inhalation exposure test in use of rat.

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 classified as toxic (Regulation (EC) No 1272/2008).mg/l/96hr |
| Acute Toxicity for Daphnia (EC50) | : Not classified as toxic (Regulation (EC) No 1272/2008).mg/l/48hr |
| Algae Inhibition Test (IC50) | : Not classified as toxic (Regulation (EC) No 1272/2008).mg/l/72hr |

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

Do not throw the toner cartridge or toner into an open flame. The hot toner may scatter and cause burns or other damage.

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.

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 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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