



Safety Data Sheet (Canada)

Section1 : Identification

Product Name : [Print Cartridge Black IM 2500 \(Black toner\) \(Black toner\)](#)
 General Use : [The Image Formation of Printing Machine or Copier](#)
 Product Description : [Toner Cartridge](#)
 SDS Number : [842307](#)
 Company / Undertaking Identification
 Company Name : [Ricoh Canada, Inc.](#)
 Department : [Environmental Sustainability and Product Compliance](#)
 Address : [5560 Explorer Drive, Suite 100, Mississauga, ON, Canada L4W 5M3](#)
 Telephone Number : [1-888-742-6417](#)
 Emergency Telephone Number : [1-800-336-6737](#)
 E-mail : environmentinfo@ricoh-usa.com

Section2 : Hazards Identification

Classification
 Physical hazards [None](#)
 Health hazards [None](#)
 Environmental hazards [None](#)
 Other Hazards
 Combustible Dust [Dust explosion \(like most finely divided organic powders\).](#)
 Label element [None](#)

Section3 : Composition/Information on Ingredients

Substance or Preparation
 Preparation
 Chemical Nature

Ingredients	Chemical Formula	CAS.No.	Contents(%)
Polyester Resin	Confidential	Confidential	60-90
Wax	Confidential	Confidential	1-20
Carbon Black	C	1333-86-4	1-20
Titan Oxide	TiO2	13463-67-7	0.1-1
Silica	O2Si	7631-86-9	<10

Section4 : Aid Measures

Inhalation
Remove from exposure to 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 particle is removed. Seek medical advice.

Ingestion
Drink several glasses of water to dilute ingested toner. Seek medical advice.

Notes to a physician
Not applicable

Most important symptoms/effects, acute, and delayed
Not applicable

Indication of immediate medical attention and special treatment needed, if necessary
Immediate medical attention is not required.

Section5 : Fighting Measures

Extinguishing Media
CO₂, dry chemicals, foam or water.

Extinguishing Media to Avoid
Not applicable

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

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.
Wear full bunker gear in case of burning in large quantities.

Section6 : Accidental Release Measures

Personal Precautions
Do not breathe in dust.

Environment Precautions
Do not flush into sewers or watercourses.

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

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.

Storage
Technical Measures
Not applicable

Storage Conditions
Keep out of reach of children.
Store in dry, well-ventilated area, to maintain quality the temperature should not exceed 35°C for a long time. Avoid direct sunlight.

Packaging Material
Not applicable

Specific Use(s)
Image formation in printing machines or copiers.

Section8 : Exposure Controls/Personal Protection

Technical Measures
Use adequate ventilation. None required with intended use.

Control Parameters
USA OSHA PEL (TWA) : 15mg/m³ (Total dust) 5.0mg/m³ (Respirable fraction)

ACGIH TLV (TWA) : 10mg/m3 (Inhalable fraction) 3.0mg/m3 (Respirable fraction)
DFG MAK : 4.0mg/m3 (Total dust) 1.5mg/m3 (Respirable fraction)

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m ³	Inhalable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m ³	

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m ³	
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m ³	

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m ³	Inhalable
Titanium dioxide (CAS 13463-67-7)	TWA	3 mg/m ³ 10 mg/m ³	Respirable fraction. Total dust.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m ³	Inhalable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m ³	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m ³	
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m ³	Total dust.

Canada. Quebec OELs. (Ministry of Labor – Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m ³	
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m ³	Total dust.

Personal Protection

Respiratory Protections

None required in normal use. If the limit of exposure concentration is exceeded, use authorised respirator.

Hand Protection

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

Section9 : Physical and Chemical Properties

Appearance

Physical State : **Solid**
Form : **Powder**
Colour : **Black**
Odour : **Slightly plastic odour**
Odour Threshold : **Not available**

Information

pH : **Not applicable**

Specific Temperatures/Temperature Ranges at Which Changes in Physical State Occur

Boiling Point (degrees centigrade) : **Not applicable**
Melting Point (degrees centigrade) : **(Softening point) Approx.90**

Auto-Ignition Temperature : **Not available**
Decomposition Temperature (degrees centigrade) : **Not available**
Flash Point (degrees centigrade) : **Not applicable**
Explosion Properties (degrees centigrade) : **This product is considered a nonexplosive material under normal use.**

Evaporation Rate : **Not applicable**
Vapor Pressure (Pa) : **Not applicable**
Vapor Density(AIR=1) : **Not applicable**
Density (g/cm3) : **Approx.1.2** Measuring Temp (degrees centigrade) : **25**

Solubility

Water Solubility (g/L) : **Insoluble**
Chloroform Solubility (g/L) : **Slightly soluble**

Octanol/Water Partition Coefficient

Not available

Other Information

Flammability : **Not flammable**
Upper/Lower Flammability or Explosive Limits
Upper Flammability or Explosive Limits (g/m3) : **Not available**
Lower Flammability or Explosive Limits (g/m3) : **Not available**
Viscosity (Pa·s) : **Not applicable**
Volatile (%) : **0.2 or below**

Section10 : Stability and Reactivity

Stability

Stable

Hazardous Reaction

Dust explosion, like most finely grained organic powders.

Conditions to Avoid

Not applicable in normal use.

Materials to Avoid

Not applicable in normal use condition.

Hazardous Decomposition Products

Decomposition products will not occur.

Section11 : Toxicological Information

Acute Toxicity

Acute Oral Toxicity (LD50) :

5000 or over [mg/kg] (Rat)

Acute Dermal Toxicity :

Not available

Acute Inhalation Toxicity :

Not applicable (Based on other Ricoh products test results of similar ingredients.)

Local effects

Acute Skin Irritation(PII) :

1.0 or below (Rabbit) (Based on other Ricoh products test results of similar ingredients.)

Acute Eye Irritation :

Non-irritant (Rabbit) (Based on other Ricoh products test results of similar ingredients.)

Sensitization

Acute Allergenic Effects :

Non-skinsensitive (Mouse) (Based on other Ricoh products test results of similar ingredients.)

Specific Effects

Carcinogenicity :

Carbon black and titanium dioxide contained in this product are 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.

In the animal experiment with very high concentration of titanium dioxide (excessive burden of rat's lungs clearance mechanism (overload phenomenon)), the rat alone showed lung tumor. Under a normal use practice, the concentration should be far lower than the above; and it is assumed that there is no such use.

Also, relation between respiratory disease and work exposure of titanium dioxide is not observed with epidemiological survey.

Mutagenicity : Negative (Ames test)

Reproduction Toxicity : Does not contain substances listed as hazardous to reproductive health.

Spacific target organ

toxicity-single exposure

Spacific target organ

toxicity-repeated exposure

Aspiration hazard

Does not contain substances listed as hazardous to reproductive health.

Symptoms related to the physical, chemical and toxicological characteristics

Not available

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).

Acute Toxicity for Daphnia (EC50) : Not classified as toxic (Regulation (EC) No 1272/2008).

Algae Inhibition Test (IC50) : Not classified as toxic (Regulation (EC) No 1272/2008).

Other Advers Effects : Not available

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

The UN Classification Number : Not applicable

UN Proper Shipping Name : Not applicable

Class : Not applicable

Packing Group, If Applicable : 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 ((EC) No.1272/2008))

Symbol & Indication : Not required

R-Phrase : Not required

S-Phrase : Not required

(EU) No.1907/2006 Annex XVII

This product complies with applicable rules and regulations under (EU) No.1907/2006 Annex XII

Section16 : Other Information

Issue Date : 22/June/2018

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

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

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

Disclaimer(S) :

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Ricoh Canada, Inc.

It relates only to the specific material designated herein, and does not relate to use in combination with any other material or process.

Ricoh Canada, Inc. assumes no legal responsibility for use or reliance upon this information.



Safety Data Sheet (Canada)

Section1 : Identification

Product Name : [Print Cartridge Magenta IM C2500H \(Magenta toner\)](#) (Magenta toner)
 General Use : [The Image Formation of Printing Machine or Copier](#)
 Product Description : [Toner Cartridge](#)
 SDS Number : [842309](#)
 Company / Undertaking Identification
 Company Name : [Ricoh Canada, Inc.](#)
 Department : [Environmental Sustainability and Product Compliance](#)
 Address : [5560 Explorer Drive, Suite 100, Mississauga, ON, Canada L4W 5M3](#)
 Telephone Number : [1-888-742-6417](#)
 Emergency Telephone Number : [1-800-336-6737](#)
 E-mail : environmentinfo@ricoh-usa.com

Section2 : Hazards Identification

Classification
 Physical hazards [None](#)
 Health hazards [None](#)
 Environmental hazards [None](#)
 Other Hazards
 Combustible Dust [Dust explosion \(like most finely divided organic powders\).](#)
 Label element [None](#)

Section3 : Composition/Information on Ingredients

Substance or Preparation
 Preparation
 Chemical Nature

Ingredients	Chemical Formula	CAS.No.	Contents(%)
Polyester Resin	Confidential	Confidential	60-90
Wax	Confidential	Confidential	1-20
Organic Pigment	Confidential	Confidential	1-20
Titan Oxide	TiO2	13463-67-7	0.1-1
Silica	O2Si	7631-86-9	<10

Section4 : Aid Measures

Inhalation
Remove from exposure to 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 particle is removed. Seek medical advice.

Ingestion
Drink several glasses of water to dilute ingested toner. Seek medical advice.

Notes to a physician
Not applicable

Most important symptoms/effects, acute, and delayed
Not applicable

Indication of immediate medical attention and special treatment needed, if necessary
Immediate medical attention is not required.

Section5 : Fighting Measures

Extinguishing Media
CO₂, dry chemicals, foam or water.

Extinguishing Media to Avoid
Not applicable

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

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.
Wear full bunker gear in case of burning in large quantities.

Section6 : Accidental Release Measures

Personal Precautions
Do not breathe in dust.

Environment Precautions
Do not flush into sewers or watercourses.

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

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.

Storage
Technical Measures
Not applicable

Storage Conditions
Keep out of reach of children.
Store in dry, well-ventilated area, to maintain quality the temperature should not exceed 35°C for a long time. Avoid direct sunlight.

Packaging Material
Not applicable

Specific Use(s)
Image formation in printing machines or copiers.

Section8 : Exposure Controls/Personal Protection

Technical Measures
Use adequate ventilation. None required with intended use.

Control Parameters
USA OSHA PEL (TWA) : 15mg/m³ (Total dust) 5.0mg/m³ (Respirable fraction)

ACGIH TLV (TWA) : 10mg/m3 (Inhalable fraction) 3.0mg/m3 (Respirable fraction)
DFG MAK : 4.0mg/m3 (Total dust) 1.5mg/m3 (Respirable fraction)

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	3 mg/m3 10 mg/m3	Respirable fraction. Total dust.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	Total dust.

Canada. Quebec OELs. (Ministry of Labor – Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	Total dust.

Personal Protection

Respiratory Protections

[None required in normal use. If the limit of exposure concentration is exceeded, use authorised respirator.](#)

Hand Protection

[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](#)

Section9 : Physical and Chemical Properties

Appearance

Physical State : **Solid**
Form : **Powder**
Colour : **Magenta**
Odour : **Slightly plastic odour**
Odour Threshold : **Not available**

Information

pH : **Not applicable**

Specific Temperatures/Temperature Ranges at Which Changes in Physical State Occur

Boiling Point (degrees centigrade) : **Not applicable**
Melting Point (degrees centigrade) : **(Softening point) Approx.90**

Auto-Ignition Temperature : **Not available**
Decomposition Temperature (degrees centigrade) : **Not available**
Flash Point (degrees centigrade) : **Not applicable**
Explosion Properties (degrees centigrade) : **This product is considered a nonexplosive material under normal use.**

Evaporation Rate : **Not applicable**
Vapor Pressure (Pa) : **Not applicable**
Vapor Density(AIR=1) : **Not applicable**
Density (g/cm3) : **Approx.1.2** Measuring Temp (degrees centigrade) : **25**

Solubility

Water Solubility (g/L) : **Insoluble**
Chloroform Solubility (g/L) : **Slightly soluble**

Octanol/Water Partition Coefficient

Not available

Other Information

Flammability : **Not flammable**
Upper/Lower Flammability or Explosive Limits
Upper Flammability or Explosive Limits (g/m3) : **Not available**
Lower Flammability or Explosive Limits (g/m3) : **Not available**
Viscosity (Pa·s) : **Not applicable**
Volatile (%) : **0.2 or below**

Section10 : Stability and Reactivity

Stability

Stable

Hazardous Reaction

Dust explosion, like most finely grained organic powders.

Conditions to Avoid

Not applicable in normal use.

Materials to Avoid

Not applicable in normal use condition.

Hazardous Decomposition Products

Decomposition products will not occur.

Section11 : Toxicological Information

Acute Toxicity

Acute Oral Toxicity (LD50) :

5000 or over [mg/kg] (Rat)

Acute Dermal Toxicity :

Not available

Acute Inhalation Toxicity :

Not applicable (Based on other Ricoh products test results of similar ingredients.)

Local effects

Acute Skin Irritation(PII) :

1.0 or below (Rabbit) (Based on other Ricoh products test results of similar ingredients.)

Acute Eye Irritation :

Non-irritant (Based on other Ricoh products test results of similar ingredients.)

Sensitization

Acute Allergenic Effects :

Non-skinsensitive (Mouse) (Based on other Ricoh products test results of similar ingredients.)

Specific Effects

Carcinogenicity :

Titanium dioxide contained in this product are classified to Group 2B of IARC as the result of inhalation test in use of rat.

But oral/skin test does not show carcinogenicity.

In the animal experiment with very high concentration of titanium dioxide (excessive burden of rat's lungs clearance mechanism (overload phenomenon)), the rat alone showed lung tumor. Under a normal use practice, the concentration should be far lower than the above; and it is assumed that there is no such use.

Also, relation between respiratory disease and work exposure of titanium dioxide is not observed with epidemiological survey.

Mutagenicity : Negative (Ames test)

Reproduction Toxicity : Does not contain substances listed as hazardous to reproductive health.

Spacific target orgen

toxicity-single exposure

Spacific target orgen

toxicity-repeated exposure

Aspiration hazard

Does not contain substances listed as hazardous to reproductive health.

Symptoms related to the physical, chemical and toxicological characteristics

Not available

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).

Acute Toxicity for Daphnia (EC50) : Not classified as toxic (Regulation (EC) No 1272/2008).

Algae Inhibition Test (IC50) : Not classified as toxic (Regulation (EC) No 1272/2008).

Other Advers Effects : Not available

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

The UN Classification Number : Not applicable

UN Proper Shipping Name : Not applicable

Class : Not applicable

Packing Group, If Applicable : 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 ((EC) No.1272/2008))

Symbol & Indication : Not required

R-Phrase : Not required

S-Phrase : Not required

(EU) No.1907/2006 Annex XVII

This product complies with applicable rules and regulations under (EU) No.1907/2006 Annex XII

Section16 : Other Information

Issue Date : **22/June/2018**

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

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

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

Disclaimer(S) :

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Ricoh Canada, Inc.

It relates only to the specific material designated herein, and does not relate to use in combination with any other material or process.

Ricoh Canada, Inc. assumes no legal responsibility for use or reliance upon this information.

Safety Data Sheet (Canada)

Section1 : Identification

Product Name : [Print Cartridge Yellow IM C2500H \(Yellow toner\) \(Yellow toner\)](#)
 General Use : [The Image Formation of Printing Machine or Copier](#)
 Product Description : [Toner Cartridge](#)
 SDS Number : [842308](#)
 Company / Undertaking Identification
 Company Name : [Ricoh Canada, Inc.](#)
 Department : [Environmental Sustainability and Product Compliance](#)
 Address : [5560 Explorer Drive, Suite 100, Mississauga, ON, Canada L4W 5M3](#)
 Telephone Number : [1-888-742-6417](#)
 Emergency Telephone Number : [1-800-336-6737](#)
 E-mail : environmentinfo@ricoh-usa.com

Section2 : Hazards Identification

Classification
 Physical hazards [None](#)
 Health hazards [None](#)
 Environmental hazards [None](#)
 Other Hazards
 Combustible Dust [Dust explosion \(like most finely divided organic powders\).](#)
 Label element [None](#)

Section3 : Composition/Information on Ingredients

Substance or Preparation
 Preparation
 Chemical Nature

Ingredients	Chemical Formula	CAS.No.	Contents(%)
Polyester Resin	Confidential	Confidential	60-90
Wax	Confidential	Confidential	1-20
Organic Pigment	Confidential	Confidential	1-20
Titan Oxide	TiO2	13463-67-7	0.1-1
Silica	O2Si	7631-86-9	<10

Section4 : Aid Measures

Inhalation
Remove from exposure to 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 particle is removed. Seek medical advice.

Ingestion
Drink several glasses of water to dilute ingested toner. Seek medical advice.

Notes to a physician
Not applicable

Most important symptoms/effects, acute, and delayed
Not applicable

Indication of immediate medical attention and special treatment needed, if necessary
Immediate medical attention is not required.

Section5 : Fighting Measures

Extinguishing Media
CO₂, dry chemicals, foam or water.

Extinguishing Media to Avoid
Not applicable

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

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.
Wear full bunker gear in case of burning in large quantities.

Section6 : Accidental Release Measures

Personal Precautions
Do not breathe in dust.

Environment Precautions
Do not flush into sewers or watercourses.

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

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.

Storage
Technical Measures
Not applicable

Storage Conditions
Keep out of reach of children.
Store in dry, well-ventilated area, to maintain quality the temperature should not exceed 35°C for a long time. Avoid direct sunlight.

Packaging Material
Not applicable

Specific Use(s)
Image formation in printing machines or copiers.

Section8 : Exposure Controls/Personal Protection

Technical Measures
Use adequate ventilation. None required with intended use.

Control Parameters
USA OSHA PEL (TWA) : 15mg/m³ (Total dust) 5.0mg/m³ (Respirable fraction)

ACGIH TLV (TWA) : 10mg/m3 (Inhalable fraction) 3.0mg/m3 (Respirable fraction)
DFG MAK : 4.0mg/m3 (Total dust) 1.5mg/m3 (Respirable fraction)

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	3 mg/m3 10 mg/m3	Respirable fraction. Total dust.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	Total dust.

Canada. Quebec OELs. (Ministry of Labor – Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	Total dust.

Personal Protection

Respiratory Protections

[None required in normal use. If the limit of exposure concentration is exceeded, use authorised respirator.](#)

Hand Protection

[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](#)

Section9 : Physical and Chemical Properties

Appearance

Physical State : **Solid**
Form : **Powder**
Colour : **Yellow**
Odour : **Slightly plastic odour**
Odour Threshold : **Not available**

Information

pH : **Not applicable**

Specific Temperatures/Temperature Ranges at Which Changes in Physical State Occur

Boiling Point (degrees centigrade) : **Not applicable**
Melting Point (degrees centigrade) : **(Softening point) Approx.90**

Auto-Ignition Temperature

: **Not available**

Decomposition Temperature (degrees centigrade)

: **Not available**

Flash Point (degrees centigrade)

: **Not applicable**

Explosion Properties (degrees centigrade)

: **This product is considered a nonexplosive material under normal use.**

Evaporation Rate : **Not applicable**

Vapor Pressure (Pa) : **Not applicable**

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

Density (g/cm³) : **Approx.1.2** Measuring Temp (degrees centigrade) : **25**

Solubility

Water Solubility (g/L) : **Insoluble**

Chloroform Solubility (g/L) : **Slightly soluble**

Octanol/Water Partition Coefficient

Not available

Other Information

Flammability : **Not flammable**

Upper/Lower Flammability or Explosive Limits

Upper Flammability or Explosive Limits (g/m³) : **Not available**

Lower Flammability or Explosive Limits (g/m³) : **Not available**

Viscosity (Pa·s) : **Not applicable**

Volatile (%) : **0.2 or below**

Section10 : Stability and Reactivity

Stability

Stable

Hazardous Reaction

Dust explosion, like most finely grained organic powders.

Conditions to Avoid

Not applicable in normal use.

Materials to Avoid

Not applicable in normal use condition.

Hazardous Decomposition Products

Decomposition products will not occur.

Section11 : Toxicological Information

Acute Toxicity

Acute Oral Toxicity (LD50) :

5000 or over [mg/kg] (Rat)

Acute Dermal Toxicity :

Not available

Acute Inhalation Toxicity :

Not applicable (Based on other Ricoh products test results of similar ingredients.)

Local effects

Acute Skin Irritation(PII) :

1.0 or below (Rabbit) (Based on other Ricoh products test results of similar ingredients.)

Acute Eye Irritation :

Non-irritant (Rabbit) (Based on other Ricoh products test results of similar ingredients.)

Sensitization

Acute Allergenic Effects :

Non-skinsensitive (Mouse) (Based on other Ricoh products test results of similar ingredients.)

Specific Effects

Carcinogenicity :

Titanium dioxide contained in this product are classified to Group 2B of IARC as the result of inhalation test in use of rat.

But oral/skin test does not show carcinogenicity.

In the animal experiment with very high concentration of titanium dioxide (excessive burden of rat's lungs clearance mechanism (overload phenomenon)), the rat alone showed lung tumor. Under a normal use practice, the concentration should be far lower than the above; and it is assumed that there is no such use.

Also, relation between respiratory disease and work exposure of titanium dioxide is not observed with epidemiological survey.

Mutagenicity : Negative (Ames test)

Reproduction Toxicity : Does not contain substances listed as hazardous to reproductive health.

Spacific target orgen

toxicity-single exposure

Spacific target orgen

toxicity-repeated exposure

Aspiration hazard

Does not contain substances listed as hazardous to reproductive health.

Symptoms related to the physical, chemical and toxicological characteristics

Not available

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).

Acute Toxicity for Daphnia (EC50) : Not classified as toxic (Regulation (EC) No 1272/2008).

Algae Inhibition Test (IC50) : Not classified as toxic (Regulation (EC) No 1272/2008).

Other Advers Effects : Not available

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

The UN Classification Number : Not applicable

UN Proper Shipping Name : Not applicable

Class : Not applicable

Packing Group, If Applicable : 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 ((EC) No.1272/2008))

Symbol & Indication : Not required

R-Phrase : Not required

S-Phrase : Not required

(EU) No.1907/2006 Annex XVII

This product complies with applicable rules and regulations under (EU) No.1907/2006 Annex XII

Section16 : Other Information

Issue Date : **22/June/2018**

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

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

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

Disclaimer(S) :

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Ricoh Canada, Inc.

It relates only to the specific material designated herein, and does not relate to use in combination with any other material or process.

Ricoh Canada, Inc. assumes no legal responsibility for use or reliance upon this information.



Safety Data Sheet (Canada)

Section1 : Identification

Product Name : [Print Cartridge Cyan IM C2500H \(Cyan toner\) \(Cyan toner\)](#)
 General Use : [The Image Formation of Printing Machine or Copier](#)
 Product Description : [Toner Cartridge](#)
 SDS Number : [842310](#)
 Company / Undertaking Identification
 Company Name : [Ricoh Canada, Inc.](#)
 Department : [Environmental Sustainability and Product Compliance](#)
 Address : [5560 Explorer Drive, Suite 100, Mississauga, ON, Canada L4W 5M3](#)
 Telephone Number : [1-888-742-6417](#)
 Emergency Telephone Number : [1-800-336-6737](#)
 E-mail : environmentinfo@ricoh-usa.com

Section2 : Hazards Identification

Classification
 Physical hazards [None](#)
 Health hazards [None](#)
 Environmental hazards [None](#)
 Other Hazards
 Combustible Dust [Dust explosion \(like most finely divided organic powders\).](#)
 Label element [None](#)

Section3 : Composition/Information on Ingredients

Substance or Preparation
 Preparation
 Chemical Nature

Ingredients	Chemical Formula	CAS.No.	Contents(%)
Polyester Resin	Confidential	Confidential	60-90
Wax	Confidential	Confidential	1-20
Organic Pigment	C32H16CuN8	147-14-8	1-20
Titan Oxide	TiO2	13463-67-7	0.1-1
Silica	O2Si	7631-86-9	<10

Section4 : Aid Measures

Inhalation
Remove from exposure to 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 particle is removed. Seek medical advice.

Ingestion
Drink several glasses of water to dilute ingested toner. Seek medical advice.

Notes to a physician
Not applicable

Most important symptoms/effects, acute, and delayed
Not available

Indication of immediate medical attention and special treatment needed, if necessary
Immediate medical attention is not required.

Section5 : Fighting Measures

Extinguishing Media
CO₂, dry chemicals, foam or water.

Extinguishing Media to Avoid
Not applicable

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

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.
Wear full bunker gear in case of burning in large quantities.

Section6 : Accidental Release Measures

Personal Precautions
Do not breathe in dust.

Environment Precautions
Do not flush into sewers or watercourses.

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

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.

Storage
Technical Measures
Not applicable

Storage Conditions
Keep out of reach of children.
Store in dry, well-ventilated area, to maintain quality the temperature should not exceed 35°C for a long time. Avoid direct sunlight.

Packaging Material
Not applicable

Specific Use(s)
Image formation in printing machines or copiers.

Section8 : Exposure Controls/Personal Protection

Technical Measures
Use adequate ventilation. None required with intended use.

Control Parameters
USA OSHA PEL (TWA) : 15mg/m³ (Total dust) 5.0mg/m³ (Respirable fraction)

ACGIH TLV (TWA) : 10mg/m3 (Inhalable fraction) 3.0mg/m3 (Respirable fraction)
DFG MAK : 4.0mg/m3 (Total dust) 1.5mg/m3 (Respirable fraction)

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	3 mg/m3 10 mg/m3	Respirable fraction. Total dust.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	Total dust.

Canada. Quebec OELs. (Ministry of Labor – Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	Total dust.

Personal Protection

Respiratory Protections

[None required in normal use. If the limit of exposure concentration is exceeded, use authorised respirator.](#)

Hand Protection

[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](#)

Section9 : Physical and Chemical Properties

Appearance

Physical State : Solid
Form : Powder
Colour : Cyan
Odour : Slightly plastic odour
Odour Threshold : Not available

Information

pH : Not applicable

Specific Temperatures/Temperature Ranges at Which Changes in Physical State Occur

Boiling Point (degrees centigrade) : Not applicable
Melting Point (degrees centigrade) : (Softening point) Approx.90

Auto-Ignition Temperature : Not available
Decomposition Temperature (degrees centigrade) : Not available
Flash Point (degrees centigrade) : Not applicable
Explosion Properties (degrees centigrade) : This product is considered a nonexplosive material under normal use.

Evaporation Rate : Not applicable
Vapor Pressure (Pa) : Not applicable
Vapor Density(AIR=1) : Not applicable
Density (g/cm³) : Approx.1.2 Measuring Temp (degrees centigrade) : 25

Solubility

Water Solubility (g/L) : Insoluble
Chloroform Solubility (g/L) : Slightly soluble

Octanol/Water Partition Coefficient

Not available

Other Information

Flammability : Not flammable
Upper/Lower Flammability or Explosive Limits
Upper Flammability or Explosive Limits (g/m³) : Not available
Lower Flammability or Explosive Limits (g/m³) : Not available
Viscosity (Pa·s) : Not applicable
Volatile (%) : 0.2 or below

Section10 : Stability and Reactivity

Stability

Stable

Hazardous Reaction

Dust explosion, like most finely grained organic powders.

Conditions to Avoid

Not applicable in normal use.

Materials to Avoid

Not applicable in normal use condition.

Hazardous Decomposition Products

Decomposition products will not occur.

Section11 : Toxicological Information

Acute Toxicity

Acute Oral Toxicity (LD50) :

5000 or over [mg/kg] (Rat)

Acute Dermal Toxicity :

Not available

Acute Inhalation Toxicity :

Not applicable (Based on other Ricoh products test results of similar ingredients.)

Local effects

Acute Skin Irritation(PII) :

1.0 or below (Rabbit) (Based on other Ricoh products test results of similar ingredients.)

Acute Eye Irritation :

Non-irritant (Rabbit) (Based on other Ricoh products test results of similar ingredients.)

Sensitization

Acute Allergenic Effects :

Non-skinsensitive (Mouse) (Based on other Ricoh products test results of similar ingredients.)

Specific Effects

Carcinogenicity :

Titanium dioxide contained in this product are classified to Group 2B of IARC as the result of inhalation test in use of rat.

But oral/skin test does not show carcinogenicity.

In the animal experiment with very high concentration of titanium dioxide (excessive burden of rat's lungs clearance mechanism (overload phenomenon)), the rat alone showed lung tumor. Under a normal use practice, the concentration should be far lower than the above; and it is assumed that there is no such use.

Also, relation between respiratory disease and work exposure of titanium dioxide is not observed with epidemiological survey.

Mutagenicity : Negative (Ames test)

Reproduction Toxicity : Does not contain substances listed as hazardous to reproductive health.

Spacific target orgen

toxicity-single exposure

Spacific target orgen

toxicity-repeated exposure

Aspiration hazard

Does not contain substances listed as hazardous to reproductive health.

Symptoms related to the physical, chemical and toxicological characteristics

Not available

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).

Acute Toxicity for Daphnia (EC50) : Not classified as toxic (Regulation (EC) No 1272/2008).

Algae Inhibition Test (IC50) : Not classified as toxic (Regulation (EC) No 1272/2008).

Other Advers Effects : Not available

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

The UN Classification Number : Not applicable

UN Proper Shipping Name : Not applicable

Class : Not applicable

Packing Group, If Applicable : 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 ((EC) No.1272/2008))

Symbol & Indication : Not required

R-Phrase : Not required

S-Phrase : Not required

(EU) No.1907/2006 Annex XVII

This product complies with applicable rules and regulations under (EU) No.1907/2006 Annex XII

Section16 : Other Information

Issue Date : **22/June/2018**

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

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

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

Disclaimer(S) :

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Ricoh Canada, Inc.

It relates only to the specific material designated herein, and does not relate to use in combination with any other material or process.

Ricoh Canada, Inc. assumes no legal responsibility for use or reliance upon this information.