Product Name: TONER (BLACK)

Prepared Date:20-Jan-2006
Revised Date: 10-Aug-2006

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: TONER (BLACK)
used for: magicolor5570series/5550series

Supplier Identification:

Konica Minolta Business Technologies, INC.
Marunouchi Center Building 1-6-1, Marunouchi, Chiyoda-Ku, Tokyo 100-0005 JAPAN
Telephone: +81-3-6250-2250 Facsimile: +81-3-3218-1379

Contact Point:

Chemical Products Development Center
Chemical Products Business Headquaters
No.2970 ishikawa-machi, hachioji-shi Tokyo 192-8505, Japan
Tel: +81-42-660-9093 Fax: +81-42-660-9094

2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance [ ] Preparation [X]

Major Ingredients:

[Generic Name]	[CAS No.]	[%]
Styrene acrylic resin	+++	75-85
Wax	+++	10-20
Carbon black	1333-86-4	1-10
Amorphous silica	7631-86-9	1-10

+++: Supplier’s confidential information

Hazardous Ingredients:

Chemical Name: Carbon black (1-10%)

CAS No.: 1333-86-4 EEC-No.: 215-609-9
OSHA Z-Tables(USA): 3.5mg/m3 ACGIH-TLV(USA): 3.5mg/m3
NTP(USA): Not listed IARC Monographs: Group 2B
California Proposition 65(USA): Listed
Symbol(EC): Not listed R-Phrase(EC): Not listed
DFG-MAK(GER): III 3B Worksafe-TWA(Austl): 3mg/m3

Product Name: TONER (BLACK)

Prepared Date:20-Jan-2006
Revised Date: 10-Aug-2006

3. HAZARDS IDENTIFICATION

Emergency Overview: Black powder (mean dia. is 5-10um by volume). Almost oderless.

Classification: Not classified as dangerous. (1999/45/EC)

Most Important Hazards and Effects of the Products

Ingestion Effect: None currently known.

Inhalation Effect: None currently known. Minimal respiratory tract irritation may occur as with exposure to large amount of any non-toxic dust.

Eye Effect: None currently known.

Skin Effect: None currently known.

Chronic Effects: Prolonged inhalation of excessive dusts may cause lung damage. Use of this product, as intended, does not result in inhalation of excessive dust.

Environment Hazards: No data are available on the adverse effects of this product on the environment.

Specific Hazards: Dust explosion(like most finely divided organic powders)

4. FIRST-AID MEASURES

Ingestion: Wash out mouth with water. Drink one or two glasses of water. If symptoms occur, get medical attention.

Inhalation: Move victim to fresh air immediately. If symptoms occur, get medical attention.

Eye Contact: Immediately flush eyes with plenty of water for 15 minutes. If symptoms occur, get medical attention.

Skin Contact: Wash with water and mild soap.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: CO2, water spray, foam and dry chemical

Extinguishing Media to Avoid: Full water jet

Fire and Explosion Hazards: If dispersed in air, like most finely divided organic powders, may form an explosive mixture.

Protection of Firefighters: Use self-contained breathing apparatus(SCBA).

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: None

Environmental Precautions: None

Methods for Cleaning Up: Wear personal protective equipment (See Section 8). Vacuum or sweep material and place in a bag and hold for waste disposal. Use vacuum equipped with High Efficiency Particulate Air(HEPA) filter. Vacuum should be electrically bonded and grounded to dispel static electricity. To avoid dust generation, do not sweep dry.

Product Name: TONER (BLACK)

Prepared Date:20-Jan-2006
Revised Date: 10-Aug-2006

7. HANDLING AND STORAGE

Handling

Technical Measures: None

Precautions: Do not breathe dust. Avoid contact with eyes.

Safe Handling Advice: Try not to disperse the particulates.

Storage

Technical Measures: None

Storage Conditions: Keep container closed. Store in a cool and dry place. Keep out of reach of children.

Incompatible Products: None

Packaging Materials: Bottles or Cartridge designated by Konica Minolta.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures

Ventilation: None required with intended use.

Control Parameters(As total dust)

OSHA-PEL(USA): 15mg/m3 ACGIH-TLV(USA): 10mg/m3

DFG-MAK(GER): 4mg/m3 Worksafe-TWA(Austl.): 10mg/m3

Personal Protective Equipment

Not required under normal conditions. For use other than in normal operating procedures (such as in the event of large spill), goggles and respirators may be required.

Hygiene Measures: Wash hands after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State: Solid Color: Black

Form: Powder (mean dia. is 5-10um by volume)

Odor: Almost oderless

PH Not applicable

Boiling Point(°C): Not applicable

Melting Point(°C)/[F]: Around No data available /[] (Softening Point)

Flash Point(°C): Not applicable

Ignition Temperature(°C): No data available

Explosion Properties:

Vapor Pressure: Not applicable

Specific Gravity: 1.2

Solubility: Insoluble in water.

Partition Coefficient, n-Octanol/Water: Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable except above 200C(392F).
Hazardous Reactions: Dust explosion, like most finely divided organic powders.
Conditions to avoid: Electric discharge, throwing into fire.
Materials to Avoid: Oxidizing materials.
Hazardous Decomposition Products: CO, CO2, NOx and smoke.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:
Ingestion(oral), LD50(mg/kg): >2500(Rat)
Dermal, LD50(mg/kg): No data available
Inhalation, LC50(mg/l): >5.10(Rat)
(This was the highest attainable concentration.)
Eye irritation: Non irritant(Rabbit)
Skin irritation: Non irritant(Rabbit)
Skin sensitizer: Non sensitizer (Guinea pig)
Local Effects: see Chronic Toxicity or Long term Toxicity
Chronic Toxicity or Long Term Toxicity:

In a two-year inhalation study of chronic toxicity and carcinogenicity using a typical toner in rats, there were no lung changes at all in the lowest exposure level (1mg/m3), the most relevant level to potential human exposures. A minimal to mild degree of fibrosis was noted in 22% of the animals at the middle exposure level (4mg/m3), and a mild to moderate degree of fibrosis was observed in 92% of the rats at the highest exposure level(16mg/m3). The lung changes observed in the higher exposure groups are interpreted in terms of "lung overloading", a series of generic responses to the presence of large quantities of respirable, insoluble and relatively benign dusts retained for extended time periods in the lungs. Lung tumor frequency was unchanged among rats exposed to toner at the three exposure levels, and for air-only control rats.

Carcinogenicity

In 1996 the IARC reevaluated carbon black as a Group 2B carcinogen (possible human carcinogen). This evaluation is given to Carbon Black for which there is inadequate human evidence, but sufficient animal evidence. The latter is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung.

Studies performed in animal models other than rats have not demonstrated an association between carbon black and lung tumors. Moreover, a two-year cancer bioassay using a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development in rats.

Mutagenicity: Negative(AMES test)
(*= Based on data for other Konica Minolta Products with similar ingredients)

12. ECOLOGICAL INFORMATION

No data are available on the adverse effects of this material on the environment.

Ecotoxicity: No data available
Mobility: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available

13. DISPOSAL CONSIDERATION

When disposing of the waste or recovered material, consult federal, state and/or local regulations for the proper disposal method.

14. TRANSPORT INFORMATION

Information on Code and Classifications According to International Regulations

UN Classification: None

15. REGULATORY INFORMATION

US Information

Information on the label: Not required

TSCA(Toxic Substances Control Act):

All chemical substances in this product comply with all applicable rules or order under TSCA.

California Proposition 65:

Ingredient carbon black subject to California Proposition 65 is bound in polymer-matrices so that warnings are not required.

EU Information

Information on the label (1999/45/EC and 67/548/EEC): Not required

Article14 (2.1) of Directive 1999/45/EC is not applicable to this product.

16. OTHER INFORMATION

HMIS Rating: The National Paint and Coating Association(USA):
Health: 1 Flammability: 1 Reactivity: 0

Recommended Uses: Toner for Electrophotographic Equipment

Explanation of term: IARC 2B means "possible human carcinogen".

Revision Information: Regular revision on revised date.

Literature References:

ANSI Z400.1-1993
ISO 11014-1
Commission Directive 91/155/EEC
IARC(1996): IARC monographs 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, pp.149-261

H.Muhle, B.Bellmann, O.Creutzenberg, C.Dasenbrock, H.Ernst, 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.

Restrictions:

The above information is believed to be accurate and represents the best information currently available to Our Corporation. However, Our Corporation makes no warranty with respect to such information, and Our Corporation assumes no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purposes.

Product Name: TONER (YELLOW)

Prepared date:20-Jan-2006
Revised Date: 10-Aug-2006

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: TONER (YELLOW)
used for: magicolor5570series/5550series

Supplier Identification:

Konica Minolta Business Technologies, INC.
Marunouchi Center Building 1-6-1, Marunouchi, Chiyoda-Ku, Tokyo 100-0005 JAPAN
Telephone: +81-3-6250-2250 Facsimile: +81-3-3218-1379

Contact Point:

Chemical Products Development Center
Chemical Products Business Headquaters
No.2970 ishikawa-machi, hachioji-shi Tokyo 192-8505, Japan
Tel: +81-42-660-9093 Fax: +81-42-660-9094

2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance [ ] Preparation [X]

Major Ingredients:

[Generic Name]	[CAS No.]	[%]
Styrene acrylic resin	+++	75-85
Wax	+++	10-20
Organic pigment	+++	1-10
Amorphous silica	7631-86-9	1-10
Titanium oxide	13463-67-7	<1

+++: Supplier’s confidential information

Hazardous Ingredients:
None present

3. HAZARDS IDENTIFICATION

Emergency Overview: Yellow powder (mean dia. is 5-10um by volume). Almost odorless

Classification: Not classified as dangerous. (1999/45/EC)

Most Important Hazards and Effects of the Products

Ingestion Effect: None currently known.

Inhalation Effect: None currently known. Minimal respiratory tract irritation may occur as with exposure to large amount of any non-toxic dust.

Eye Effect: None currently known.

Skin Effect: None currently known.

Chronic Effects: Prolonged inhalation of excessive dusts may cause lung damage. Use of this product, as intended, does not result in inhalation of excessive dust.

Environment Hazards: No data are available on the adverse effects of this product on the environment.

Specific Hazards: Dust explosion(like most finely divided organic powders)

4. FIRST-AID MEASURES

Ingestion: Wash out mouth with water. Drink one or two glasses of water. If symptoms occur, get medical attention.

Inhalation: Move victim to fresh air immediately. If symptoms occur, get medical attention.

Eye Contact: Immediately flush eyes with plenty of water for 15 minutes. If symptoms occur, get medical attention.

Skin Contact: Wash with water and mild soap.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: CO2, water spray, foam and dry chemical

Extinguishing Media to Avoid: Full water jet

Fire and Explosion Hazards: If dispersed in air, like most finely divided organic powders, may form an explosive mixture.

Protection of Firefighters: Use self-contained breathing apparatus(SCBA).

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: None

Environmental Precautions: None

Methods for Cleaning Up: Wear personal protective equipment (See Section 8). Vacuum or sweep material and place in a bag and hold for waste disposal. Use vacuum equipped with High Efficiency Particulate Air(HEPA) filter. Vacuum should be electrically bonded and grounded to dispel static electricity. To avoid dust generation, do not sweep dry.

7. HANDLING AND STORAGE

Handling

Technical Measures: None

Precautions: Do not breathe dust. Avoid contact with eyes.

Safe Handling Advice: Try not to disperse the particulates.

Storage

Technical Measures: None

Storage Conditions: Keep container closed. Store in a cool and dry place. Keep out of reach of children.

Incompatible Products: None

Packaging Materials: Bottles or Cartridge designated by Konica Minolta.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures

Ventilation: None required with intended use.

Control Parameters(As total dust)

OSHA-PEL(USA): 15mg/m3 ACGIH-TLV(USA): 10mg/m3

DFG-MAK(GER): 4mg/m3 Worksafe-TWA(Austl.): 10mg/m3

Personal Protective Equipment

Not required under normal conditions. For use other than in normal operating procedures (such as in the event of large spill), goggles and respirators may be required.

Hygiene Measures: Wash hands after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State: Solid Color: Yellow

Form: Powder (mean dia. is 5-10um by volume)

Odor:	Almost odorless
PH	Not applicable
Boiling Point(°C):	Not applicable
Melting Point(°C):	Around 125C(275F) (Softening Point)
Flash Point(°C):	Not applicable
Ignition Temperature(°C):	No data available
Explosion Properties:	No data available
Vapor Pressure:	Not applicable
Specific Gravity:	1.2
Solubility:	Insoluble in water.

Partition Coefficient, n-Octanol/Water: Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable except above 200C(392F).
Hazardous Reactions: Dust explosion, like most finely divided organic powders.
Conditions to avoid: Electric discharge, throwing into fire.
Materials to Avoid: Oxidizing materials.
Hazardous Decomposition Products: CO, CO2, NOx and smoke.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:
Ingestion(oral), LD50(mg/kg): >2500 (Rat)
Dermal, LD50(mg/kg): No data available
Inhalation, LC50(mg/l): >5.57 (Rat)(This was the highest attainable concentration.)
Eye irritation: Minimal irritant (Rabbit)
Skin irritation: Non irritant (Rabbit)
Skin sensitizer: Non sensitizer (Guinea pig)
(*= Based on data for other Konica Minolta Products with similar ingredients)
Local Effects: see Chronic Toxicity or Long term Toxicity
Chronic Toxicity or Long Term Toxicity:
Prolonged inhalation of excessive dust may cause lung damage. It is attributed to “lung overloading”, a generic response to excessive amounts of any dust retained in the lungs for a prolonged interval. Use of this product, as intended, does not result in inhalation of excessive dust.
In a study in rats by chronic inhalation exposure to a typical toner, a mild to moderate degree of lung fibrosis was observed in 92% of rats in the high concentration(16mg/m^3) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle(4mg/m^3) exposure group. But no pulmonary change was reported in the lowest(1mg/m^3) exposure group, the most relevant level to potential human exposures.
Carcinogenicity
IARC Monographs: Not listed
NTP(USA): Not listed
OSHA Regulated(USA): Not listed
Mutagenicity: Negative (AMES test)

12. ECOLOGICAL INFORMATION

No data are available on the adverse effects of this material on the environment.

Ecotoxicity: No data available
Mobility: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available

13. DISPOSAL CONSIDERATION

When disposing of the waste or recovered material, consult federal, state and/or local regulations for the proper disposal method.

14. TRANSPORT INFORMATION

Information on Code and Classifications According to International Regulations

UN Classification: None

15. REGULATORY INFORMATION

US Information

Information on the label: Not required

TSCA(Toxic Substances Control Act):

All chemical substances in this product comply with all applicable rules or order under TSCA.

California Proposition 65:

This product contains no chemical substances subject to California Proposition 65.

EU Information

Information on the label (1999/45/EC and 67/548/EEC): Not required

Article14 (2.1) of Directive 1999/45/EC is not applicable to this product.

16. OTHER INFORMATION

HMIS Rating: The National Paint and Coating Association(USA):

Health: 1 Flammability: 1 Reactivity: 0

Recommended Uses: Toner for Electrophotographic Equipment

Revision Information: Regular revision on revised date.

Literature References:

ANSI Z400.1-1993
ISO 11014-1
Commission Directive 91/155/EEC

H.Muhle, B.Bellmann, O.Creutzenberg, C.Dasenbrock, H.Ernst, 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.

Restrictions:

The above information is believed to be accurate and represents the best information currently available to Our Corporation. However, Our Corporation makes no warranty with respect to such information, and Our Corporation assumes no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purposes.

Product Name: TONER (MAGENTA)

Prepared date:20-Jan-2006
Revised Date: 10-Aug-2006

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: TONER (MAGENTA)
used for: magicolor5570series/5550series

Supplier Identification:

Konica Minolta Business Technologies, INC.
Marunouchi Center Building 1-6-1, Marunouchi, Chiyoda-Ku, Tokyo 100-0005 JAPAN
Telephone: +81-3-6250-2250 Facsimile: +81-3-3218-1379

Contact Point:

Chemical Products Development Center
Chemical Products Business Headquaters
No.2970 ishikawa-machi, hachioji-shi Tokyo 192-8505, Japan
Tel: +81-42-660-9093 Fax: +81-42-660-9094

2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance [ ] Preparation [X]

Major Ingredients:

[Generic Name]	[CAS No.]	[%]
Styrene acrylic resin	+++	70-80
Wax	+++	10-20
Organic pigment 1	+++	1-10
Organic pigment 2	+++	1-10
Amorphous silica	7631-86-9	1-10
Titanium oxide	13463-67-7	<1

+++: Supplier’s confidential information

Hazardous Ingredients:
None present

3. HAZARDS IDENTIFICATION

Emergency Overview: Red powder (mean dia. is 5-10um by volume). Almost odorless

Classification: Not classified as dangerous. (1999/45/EC)

Most Important Hazards and Effects of the Products

Ingestion Effect: None currently known.

Inhalation Effect: None currently known. Minimal respiratory tract irritation may occur as with exposure to large amount of any non-toxic dust.

Eye Effect: None currently known.

Skin Effect: None currently known.

Chronic Effects: Prolonged inhalation of excessive dusts may cause lung damage. Use of this product, as intended, does not result in inhalation of excessive dust.

Environment Hazards: No data are available on the adverse effects of this product on the environment.

Specific Hazards: Dust explosion(like most finely divided organic powders)

4. FIRST-AID MEASURES

Ingestion: Wash out mouth with water. Drink one or two glasses of water. If symptoms occur, get medical attention.

Inhalation: Move victim to fresh air immediately. If symptoms occur, get medical attention.

Eye Contact: Immediately flush eyes with plenty of water for 15 minutes. If symptoms occur, get medical attention.

Skin Contact: Wash with water and mild soap.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: CO2, water spray, foam and dry chemical

Extinguishing Media to Avoid: Full water jet

Fire and Explosion Hazards: If dispersed in air, like most finely divided organic powders, may form an explosive mixture.

Protection of Firefighters: Use self-contained breathing apparatus(SCBA).

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: None

Environmental Precautions: None

Methods for Cleaning Up: Wear personal protective equipment (See Section 8). Vacuum or sweep material and place in a bag and hold for waste disposal. Use vacuum equipped with High Efficiency Particulate Air(HEPA) filter. Vacuum should be electrically bonded and grounded to dispel static electricity. To avoid dust generation, do not sweep dry.

7. HANDLING AND STORAGE

Handling

Technical Measures: None

Precautions: Do not breathe dust. Avoid contact with eyes.

Safe Handling Advice: Try not to disperse the particulates.

Storage

Technical Measures: None

Storage Conditions: Keep container closed. Store in a cool and dry place. Keep out of reach of children.

Incompatible Products: None

Packaging Materials: Bottles or Cartridge designated by Konica Minolta.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures

Ventilation: None required with intended use.

Control Parameters(As total dust)

OSHA-PEL(USA): 15mg/m3 ACGIH-TLV(USA): 10mg/m3

DFG-MAK(GER): 4mg/m3 Worksafe-TWA(Austl.): 10mg/m3

Personal Protective Equipment

Not required under normal conditions. For use other than in normal operating procedures (such as in the event of large spill), goggles and respirators may be required.

Hygiene Measures: Wash hands after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State: Solid Color: Red

Form: Powder (mean dia. is 5-10um by volume)

Odor:	Almost odorless
PH	Not applicable
Boiling Point(°C):	Not applicable
Melting Point(°C):	Around 125C(275F) (Softening Point)
Flash Point(°C):	Not applicable
Ignition Temperature(°C):	No data available
Explosion Properties:	No data available
Vapor Pressure:	Not applicable
Specific Gravity:	1.2
Solubility:	Insoluble in water.

Partition Coefficient, n-Octanol/Water: Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable except above 200C(392F).
Hazardous Reactions: Dust explosion, like most finely divided organic powders.
Conditions to avoid: Electric discharge, throwing into fire.
Materials to Avoid: Oxidizing materials.
Hazardous Decomposition Products: CO, CO2, NOx and smoke.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:
Ingestion(oral), LD50(mg/kg): >2500 (Rat)
Dermal, LD50(mg/kg): No data available
Inhalation, LC50(mg/l): >4.77 (Rat)(This was the highest attainable concentration.)
Eye irritation: Minimal irritant (Rabbit)
Skin irritation: Non irritant (Rabbit)
Skin sensitizer: Non sensitizer (Guinea pig)
(*= Based on data for other Konica Minolta Products with similar ingredients)
Local Effects: see Chronic Toxicity or Long term Toxicity
Chronic Toxicity or Long Term Toxicity:
Prolonged inhalation of excessive dust may cause lung damage. It is attributed to “lung overloading”, a generic response to excessive amounts of any dust retained in the lungs for a prolonged interval. Use of this product, as intended, does not result in inhalation of excessive dust.
In a study in rats by chronic inhalation exposure to a typical toner, a mild to moderate degree of lung fibrosis was observed in 92% of rats in the high concentration(16mg/m^3) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle(4mg/m^3) exposure group. But no pulmonary change was reported in the lowest(1mg/m^3) exposure group, the most relevant level to potential human exposures.
Carcinogenicity
IARC Monographs: Not listed
NTP(USA): Not listed
OSHA Regulated(USA): Not listed
Mutagenicity: Negative (AMES test)

12. ECOLOGICAL INFORMATION

No data are available on the adverse effects of this material on the environment.

Ecotoxicity: No data available
Mobility: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available

13. DISPOSAL CONSIDERATION

When disposing of the waste or recovered material, consult federal, state and/or local regulations for the proper disposal method.

14. TRANSPORT INFORMATION

Information on Code and Classifications According to International Regulations

UN Classification: None

15. REGULATORY INFORMATION

US Information

Information on the label: Not required

TSCA(Toxic Substances Control Act):

All chemical substances in this product comply with all applicable rules or order under TSCA.

California Proposition 65:

This product contains no chemical substances subject to California Proposition 65.

EU Information

Information on the label (1999/45/EC and 67/548/EEC): Not required

Article14 (2.1) of Directive 1999/45/EC is not applicable to this product.

16. OTHER INFORMATION

HMIS Rating: The National Paint and Coating Association(USA):
Health: 1 Flammability: 1 Reactivity: 0

Recommended Uses: Toner for Electrophotographic Equipment

Revision Information: Regular revision on revised date.

Literature References:

ANSI Z400.1-1993
ISO 11014-1
Commission Directive 91/155/EEC

H.Muhle, B.Bellmann, O.Creutzenberg, C.Dasenbrock, H.Ernst, 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.

Restrictions:

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Product Name: TONER (CYAN)

Prepared date:20-Jan-2006
Revised Date: 10-Aug-2006

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: TONER (CYAN)
used for: magicolor5570series/5550series

Supplier Identification:

Konica Minolta Business Technologies, INC.
Marunouchi Center Building 1-6-1, Marunouchi, Chiyoda-Ku, Tokyo 100-0005 JAPAN
Telephone: +81-3-6250-2250 Facsimile: +81-3-3218-1379

Contact Point:

Chemical Products Development Center
Chemical Products Business Headquaters
No.2970 ishikawa-machi, hachioji-shi Tokyo 192-8505, Japan
Tel: +81-42-660-9093 Fax: +81-42-660-9094

2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance [ ] Preparation [X]

Major Ingredients:

[Generic Name]	[CAS No.]	[%]
Styrene acrylic resin	+++	75-85
Wax	+++	10-20
Organic pigment	147-14-8	1-10
Amorphous silica	7631-86-9	1-10
Titanium oxide	13463-67-7	<1

+++: Supplier’s confidential information

Hazardous Ingredients:
None present

3. HAZARDS IDENTIFICATION

Emergency Overview: Cyan powder (mean dia. is 5-10um by volume). Almost odorless

Classification: Not classified as dangerous. (1999/45/EC)

Most Important Hazards and Effects of the Products

Ingestion Effect: None currently known.

Inhalation Effect: None currently known. Minimal respiratory tract irritation may occur as with exposure to large amount of any non-toxic dust.

Eye Effect: None currently known.

Skin Effect: None currently known.

Chronic Effects: Prolonged inhalation of excessive dusts may cause lung damage. Use of this product, as intended, does not result in inhalation of excessive dust.

Environment Hazards: No data are available on the adverse effects of this product on the environment.

Specific Hazards: Dust explosion(like most finely divided organic powders)

4. FIRST-AID MEASURES

Ingestion: Wash out mouth with water. Drink one or two glasses of water. If symptoms occur, get medical attention.

Inhalation: Move victim to fresh air immediately. If symptoms occur, get medical attention.

Eye Contact: Immediately flush eyes with plenty of water for 15 minutes. If symptoms occur, get medical attention.

Skin Contact: Wash with water and mild soap.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: CO_2, water spray, foam and dry chemical

Extinguishing Media to Avoid: Full water jet

Fire and Explosion Hazards: If dispersed in air, like most finely divided organic powders, may form an explosive mixture.

Protection of Firefighters: Use self-contained breathing apparatus(SCBA).

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: None

Environmental Precautions: None

Methods for Cleaning Up: Wear personal protective equipment (See Section 8). Vacuum or sweep material and place in a bag and hold for waste disposal. Use vacuum equipped with High Efficiency Particulate Air(HEPA) filter. Vacuum should be electrically bonded and grounded to dispel static electricity. To avoid dust generation, do not sweep dry.

7. HANDLING AND STORAGE

Handling

Technical Measures: None

Precautions: Do not breathe dust. Avoid contact with eyes.

Safe Handling Advice: Try not to disperse the particulates.

Storage

Technical Measures: None

Storage Conditions: Keep container closed. Store in a cool and dry place. Keep out of reach of children.

Incompatible Products: None

Packaging Materials: Bottles or Cartridge designated by Konica Minolta.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures

Ventilation: None required with intended use.

Control Parameters(As total dust)

OSHA-PEL(USA): 15mg/m3 ACGIH-TLV(USA): 10mg/m3

DFG-MAK(GER): 4mg/m3 Worksafe-TWA(Austl.): 10mg/m3

Personal Protective Equipment

Not required under normal conditions. For use other than in normal operating procedures (such as in the event of large spill), goggles and respirators may be required.

Hygiene Measures: Wash hands after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State: Solid Color: Cyan

Form: Powder (mean dia. is 5-10um by volume)

Odor:	Almost odorless
PH	Not applicable
Boiling Point(°C):	Not applicable
Melting Point(°C):	Around 125C(275F) (Softening Point)
Flash Point(°C):	Not applicable
Ignition Temperature(°C):	No data available
Explosion Properties:	No data available
Vapor Pressure:	Not applicable
Specific Gravity:	1.2
Solubility:	Insoluble in water.

Partition Coefficient, n-Octanol/Water: Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable except above 200C(392F).
Hazardous Reactions: Dust explosion, like most finely divided organic powders.
Conditions to avoid: Electric discharge, throwing into fire.
Materials to Avoid: Oxidizing materials.
Hazardous Decomposition Products: CO, CO2, NOx and smoke.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:
Ingestion(oral), LD50(mg/kg): >2500 (Rat)
Dermal, LD50(mg/kg): No data available
Inhalation, LC50(mg/l): >5.08 (Rat)(This was the highest attainable concentration.)
Eye irritation: Minimal irritant (Rabbit)
Skin irritation: Non irritant (Rabbit)
Skin sensitizer: Non sensitizer (Guinea pig)
(*= Based on data for other Konica Minolta Products with similar ingredients)
Local Effects: see Chronic Toxicity or Long term Toxicity
Chronic Toxicity or Long Term Toxicity:
Prolonged inhalation of excessive dust may cause lung damage. It is attributed to “lung overloading”, a generic response to excessive amounts of any dust retained in the lungs for a prolonged interval. Use of this product, as intended, does not result in inhalation of excessive dust.
In a study in rats by chronic inhalation exposure to a typical toner, a mild to moderate degree of lung fibrosis was observed in 92% of rats in the high concentration(16mg/m^3) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle(4mg/m^3) exposure group. But no pulmonary change was reported in the lowest(1mg/m^3) exposure group, the most relevant level to potential human exposures.
Carcinogenicity
IARC Monographs: Not listed
NTP(USA): Not listed
OSHA Regulated(USA): Not listed
Mutagenicity: Negative (AMES test)

12. ECOLOGICAL INFORMATION

No data are available on the adverse effects of this material on the environment.

Ecotoxicity: No data available
Mobility: No data available
Persistence and degradability: No data available
Bioaccumulative potential: No data available

13. DISPOSAL CONSIDERATION

When disposing of the waste or recovered material, consult federal, state and/or local regulations for the proper disposal method.

14. TRANSPORT INFORMATION

Information on Code and Classifications According to International Regulations

UN Classification: None

15. REGULATORY INFORMATION

US Information

Information on the label: Not required

TSCA(Toxic Substances Control Act):

All chemical substances in this product comply with all applicable rules or order under TSCA.

California Proposition 65:

This product contains no chemical substances subject to California Proposition 65.

EU Information

Information on the label (1999/45/EC and 67/548/EEC): Not required

Article14 (2.1) of Directive 1999/45/EC is not applicable to this product.

16. OTHER INFORMATION

HMIS Rating: The National Paint and Coating Association(USA):

Health: 1 Flammability: 1 Reactivity: 0

Recommended Uses: Toner for Electrophotographic Equipment

Revision Information: Regular revision on revised date.

Literature References:

ANSI Z400.1-1993
ISO 11014-1
Commission Directive 91/155/EEC

H.Muhle, B.Bellmann, O.Creutzenberg, C.Dasenbrock, H.Ernst, 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.

Restrictions:

The above information is believed to be accurate and represents the best information currently available to Our Corporation. However, Our Corporation makes no warranty with respect to such information, and Our Corporation assumes no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purposes.

Products Name: DRUM (PHOTOCONDUCTOR)

Prepared Date:13-Mar-2006
Revised Date: 10-Aug-2006

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: DRUM (PHOTOCONDUCTOR)
used for: magicolor5570series/5550series

Supplier Identification:
Konica Minolta Business Technologies, INC.
Marunouchi Center Building 1-6-1, Marunouchi, Chiyoda-Ku, Tokyo 100-0005 JAPAN
Telephone: +81-3-6250-2250 Facsimile: +81-3-3218-1379

Contact Point:
Chemical Products Development Center
Chemical Products Business Headquaters
No.2970 ishikawa-machi, hachioji-shi Tokyo 192-8505, Japan
Tel: +81-42-660-9093 Fax: +81-42-660-9094

2. COMPOSITION / INFORMATION ON INGREDIENTS

Major Ingredients:

[Generic Name]	[CAS No.]	[%]
Substrate		>95
Aluminium drum	7429-90-5	
Coating layer		<5
Polycarbonate	+++	
OPC compound	+++	
Organic pigment	+++	

+++: Supplier’s confidential information

Hazardous Ingredients:
None present

Products Name: DRUM (PHOTOCONDUCTOR)

Prepared Date:13-Mar-2006
Revised Date: 10-Aug-2006

3. HAZARDS IDENTIFICATION

Emergency Overview: Dark green Cylinder
Almost odorless

Classification: Not classified as dangerous. (1999/45/EC)

Most Important Hazards and Effects of the Products

For Human Health: No symptoms expected with intended use.

For the Environment: No data are available on the adverse effects of this product on the environment.

For Others: None

Specific Hazards: None

4. FIRST-AID MEASURES

Symptoms of Overexposure: No symptoms expected with intended use.

Routes of Entry: None

Information

Inhalation: No treatment is required.

Skin Contact: No treatment is required.

Eye Contact: No treatment is required.

Ingestion: No treatment is required.

Note to Physician: None

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: CO2, water, foam and dry chemical

Extinguishing Media to Avoid: None

Special Firefighting Procedures: None

Fire and Explosion Hazards: This material has no unusual fire or explosive hazards.

Protection of Firefighters: No special equipment is required.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Not applicable with intended use.

Environmental Precautions: Not applicable with intended use.

Methods for Cleaning Up: Not applicable with intended use.

7. HANDLING AND STORAGE

Handling

Technical Measures: None

Precautions: This product will be scorched in the case of fire.

Safe Handling Advice: None.

Storage

Technical Measures: None

Storage Conditions: Keep and Store in a cool and dry place.

Incompatible Products: None

Packing Materials: None

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures

Ventilation: None required with intended use.

Control Parameters

OSHA-PEL(USA): Not Applicable ACGIH-TLV(USA): Not Applicable
DFG-MAK(EC): Not Applicable Worksafe-TWA(Austl): Not Applicable

Personal Protective Equipment

None required when used as intended in Konica Minolta equipment.

Hygiene Measures: Wash hands after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State: Solid Form: Cylinder Color: Dark green
Odor: Almost odorless

<<Results of the coated compounds on the aluminum substrate.>>

Boiling Point:	Not applicable
Melting/Softening Point:	No data available
Flash Point:	Not applicable
pH:	Not applicable
Explosion Properties:	Not applicable
Density(g/cm^3):	1.2
Solubility in water:	insoluble
Flammability:	Not applicable
Oxidizing Properties:	No data available
Ignition Temperature(°C):	No data available
Vapor Pressure:	Not applicable

Partition Coefficient, n-Octanol/Water: Not applicable

(*= Based on data for other Konica Minolta Products with similar ingredients)

10. STABILITY AND REACTIVITY

Stability: Stable [X] Unstable [ ]
Hazardous Reactions: None
Conditions to avoid: None
Materials to Avoid: None
Hazardous Decomposition Products: CO, CO2

11. TOXICOLOGICAL INFORMATION

Health Effects from Exposure: No symptoms expected with intended use.

Toxicological Data

<<Result of the coated compounds on the aluminum substrate.>>

Acute Toxicity:

Inhalation, LC50(mg/l):	Not applicable
Ingestion(oral), LD50(mg/kg):	No data available
Dermal, LD50(mg/kg):	Not applicable
Eye irritation:	No data available
Skin irritation:	No data available
Skin sensitizer:	No data available
Mutagenicity:	Negative (AMES test)

Local Effects: No data available

Chronic Toxicity or Long Term Toxicity: None

Carcinogenicity

IARC Monographs:	Not listed
NTP(USA):	Not listed
OSHA Regulated(USA):	Not listed

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATION

Appropriate Methods of Disposal

Waste may be disposed or incinerated under conditions which meet all federal, state and local environmental regulations.

14. TRANSPORT INFORMATION

Special Precautions: None

Information on Code and Classifications According to International Regulations

UN Classification: None

15. REGULATORY INFORMATION

US Information

Information on the label: Not required

SARA(Superfund Amendments and Reauthorization Act) Title III

302 Extreme Hazardous Substance: None

311/312 Hazard Categories: None

313 Reportable Ingredients: None

California Proposition 65:

This product contains no chemical substances subject to California Proposition 65.

EU Information

Information on the label(1999/45/EC and 67/548/EEC):

Symbol & Indication: Not required

R-Phrase: Not required

S-Phrase: Not required

Article14(2.1) of Directive 1999/45/EC is not applicable to this product.

16. OTHER INFORMATION

NFPA Hazard Rating: The National Fire Protection Agency(USA):
Health: 0 Flammability: 1 Reactivity: 0

HMIS RATING: The National Paint and Coating Association(USA):
Health: 0 Flammability: 1 Reactivity: 0

Recommended Uses:

Photoconductor for Electrophotographic Equipment

Restrictions:

The above information is believed to be accurate and represents the best information currently available to Our Corporation. However, Our Corporation makes no warranty with respect to such information, and Our Corporation assumes no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purposes.

Literature References:

ANSI Z400.1-1993

ISO 11014-1

Commission Directive 91/155/EEC