
MATERIAL SAFETY DATA SHEET (1/4)

PRODUCT NAME: BLACK TONER

MSDS No.: MSDS-I-101

PART No.: PJIAB0002XA

DATE REVISED: September 30,2002

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL IDENTIFICATION: BLACK TONER

USED FOR: Color Laser Printer / KX-CL500, KX-CL510
Black Toner Cartridge / KX-CLTK1
Black Print Cartridge / KX-CLPK1

PART No.: PJIAB0002XA

DISTRIBUTOR'S NAME:

DISTRIBUTOR'S ADDRESS:

TELEPHONE NUMBER:

MANUFACTURER'S NAME: Kyushu Matsushita Electric Co., Ltd.

MANUFACTURER'S ADDRESS: 1471 Murata-Machi, Tosu, Saga, Japan

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL PRODUCT: Preparation

<u>Ingredients</u>	<u>CAS No.</u>	<u>Proportion</u> <u>(% by wt.)</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Polyester resin	+++	80-90%	Not listed	Not listed
Wax	+++	4-8%	Not listed	Not listed
Carbon black	1333-86-4	1.5-5%	3.5mg/m ³	3.5mg/m ³
Charge control agent(++)	31714-55-3	0.5-3%	0.5mg/m ³	0.5mg/m ³
Organic pigment	+++	3-8%	Not listed	Not listed
Silica	68909-20-6	1-4%	15mg/m ³	10mg/m ³

(++) :NON-SENSITIVE-MATERIAL

+++ :Supplier's confidential information

3. HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYES: Solid or dusts may cause irritation or corneal injury due to mechanical action.
SKIN CONTACT: Essentially nonirritating to skin.
SKIN ABSORPTION: Skin absorption is unlikely due to physical properties.
INGESTION: Oral toxicity is believed to be low. Considered to be physiologically inert.
INHALATION: Minimal irritation to respiratory track may occur.

4. FIRST AID MEASURES

EYES: Flush eyes immediately with plenty of water for at least 15 minutes.
SKIN: Flush with plenty of water. Use soap.
INGESTION: If irritation or discomfort occurs, consult medical personnel.
INHALATION: Remove to fresh air. If effects occur, consult medical personnel.

MATERIAL SAFETY DATA SHEET (2/4)

PRODUCT NAME: BLACK TONER
PART No.: PJIAB0002XA

MSDS No.: MSDS-I-101
DATE REVISED: September 30,2002

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: No data available

EXTINGUISHING MEDIA: Water fog, foam, CO₂, dry chemical.

FIRE-FIGHTING EQUIPMENT: Wear full bunker gear including a positive pressure self-contained breathing apparatus in case of burning in large quantities.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: None

ENVIRONMENTAL PRECAUTIONS: None

METHODS FOR CLEANING UP: Wipe off with paper or cloth.

7. HANDLING AND STORAGE

HANDLING

TECHNICAL MEASURES: None

PRECAUTIONS: None

SAFE HANDLING ADVICE: Try not to disperse the particles.

STORAGE

TECHNICAL MEASURES: None

STORAGE CONDITIONS: Keep container closed. Store in a cool and dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES

VENTILATION: None required with intended use

CONTROL PARAMETERS(As total dust)

ACGIH-TLV(USA): 10mg/m³

(ACGIH:American Conference of Government Industrial Hygienists)

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: No precautions should be needed under normal use.

HAND PROTECTION: No precautions should be needed under normal use.

EYE PROTECTION: No precautions should be needed under normal use.

SKIN PROTECTION: No precautions should be needed under normal use.

OTHER: For use other than normal customer-operating procedures(such as in bulk toner processing facilities),goggles and respirators may be required.

HYGIENE MEASURES: Wash hands after handling.

MATERIAL SAFETY DATA SHEET (3/4)

PRODUCT NAME: BLACK TONER

MSDS No.: MSDS-I-101

PART No.: PJIAB0002XA

DATE REVISED: September 30,2002

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Black fine powder	ODOR:	None
PARTICLE SIZE(μ m):	5-15	VAP PRESS:	N.A.
MELTING POINT()::	No data available	VAP DENSITY:	N.A.
SOFTENING POINT()::	100-150	SOL IN WATER:	Negligible
BOILING POINT()::	N.A.(not applicable)	pH:	N.A.
FREEZING POINT()::	N.A.	EXPLOSION PROPERTIES:	No data available
SP. GRAVITY(g/cm^3):	1.2	FLAMMABILITY:	No data available
BULK DENSITY(g/cm^3):	0.4		

10. STABILITY AND REACTIVITY

STABILITY: This is a stable product.

INCOMPATIBILITY: (SPECIAL MATERIALS TO AVOID) None

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂ or NO_x (by high heat and fire)

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

HEALTH EFFECTS FROM EXPOSURE: No symptoms expected with intended use.

TOXICOLOGICAL DATA

ACUTE TOXICITY

ORAL TOXICITY:	LD ₅₀ > 2000mg/kg(Rat) (+++)
EYE IRRITATION:	No Data
SKIN IRRITATION:	NON-IRRITANT(Rabbit) (+++)
SKIN SENSITISATION:	NON-SENSITIVE(Guinea Pig) (+++)
INHALATION TOXICITY:	No Data (+++):Data of similar material with same ingredients

MUTAGENICITY: NON-MUTAGENIC(Ames Test)

OTHER INFORMATION

CHRONIC TOXICITY

In a study in rats by chronic inhalation to typical toner, mild to moderate degree of lung fibrosis was observed in 92% of rats in high concentration(16 mg/m³) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle(4mg/m³) exposure group. But no pulmonary change was reported in the lowest(1mg/m³) exposure group, which the most relevant level to potential human exposures.

MATERIAL SAFETY DATA SHEET (4/4)

PRODUCT NAME: BLACK TONER

MSDS No.: MSDS-I-101

PART No.: PJIAB0002XA

DATE REVISED: September 30,2002

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 rat receiving chronic inhalation exposures to free carbon black at level 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.

12. ECOLOGICAL INFORMATION

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

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

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

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Waste must be disposed of in accordance with country and local environmental control regulations. Incineration is preferred method.

14. TRANSPORT INFORMATION

TRANSPORT INFORMATION: This is not a hazardous product.

UN No.: None allocated.

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION

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

USER'S RESPONSIBILITY

This bulletin cannot cover all possible situations which the user may experience during processing. Each aspect of your operation must be examine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin must be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.

MATERIAL SAFETY DATA SHEET (1/4)

PRODUCT NAME: CYAN TONER

MSDS No.: MSDS-I-104

PART No.: PJIAB0003YA

DATE REVISED: September 30,2002

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL IDENTIFICATION: CYAN TONER

USED FOR: Color Laser Printer / KX-CL500, KX-CL510
Cyan Toner Cartridge / KX-CLTC1
Color Print Cartridge / KX-CLPC1

PART No.: PJIAB0003YA

DISTRIBUTOR'S NAME:

DISTRIBUTOR'S ADDRESS:

TELEPHONE NUMBER:

MANUFACTURER'S NAME: Kyushu Matsushita Electric Co., Ltd.

MANUFACTURER'S ADDRESS: 1471 Murata-Machi, Tosu, Saga, Japan

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL PRODUCT: Preparation

<u>Ingredients</u>	<u>CAS No.</u>	<u>Proportion</u> (% by wt.)	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Polyester resin	+++	80-90%	Not listed	Not listed
Wax	+++	4-8%	Not listed	Not listed
Charge control agent	72869-85-3	0.5-3%	0.5mg/m ³	0.5mg/m ³
Organic pigment	+++	3-8%	Not listed	Not listed
Silica	68909-20-6	1-4%	15mg/m ³	10mg/m ³

+++ : Supplier's confidential information

3. HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYES: Solid or dusts may cause irritation or corneal injury due to mechanical action.
SKIN CONTACT: Essentially nonirritating to skin.
SKIN ABSORPTION: Skin absorption is unlikely due to physical properties.
INGESTION: Oral toxicity is believed to be low. Considered to be physiologically inert.
INHALATION: Minimal irritation to respiratory track may occur.

4. FIRST AID MEASURES

EYES: Flush eyes immediately with plenty of water for at least 15 minutes.
SKIN: Flush with plenty of water. Use soap.
INGESTION: If irritation or discomfort occurs, consult medical personnel.
INHALATION: Remove to fresh air. If effects occur, consult medical personnel.

MATERIAL SAFETY DATA SHEET (2/4)

PRODUCT NAME: CYAN TONER
PART No.: PJIAB0003YA

MSDS No.: MSDS-I-104
DATE REVISED: September 30,2002

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: No data available

EXTINGUISHING MEDIA: Water fog, foam, CO₂, dry chemical.

FIRE-FIGHTING EQUIPMENT: Wear full bunker gear including a positive pressure self-contained breathing apparatus in case of burning in large quantities.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: None

ENVIRONMENTAL PRECAUTIONS: None

METHODS FOR CLEANING UP: Wipe off with paper or cloth.

7. HANDLING AND STORAGE

HANDLING

TECHNICAL MEASURES: None

PRECAUTIONS: None

SAFE HANDLING ADVICE: Try not to disperse the particles.

STORAGE

TECHNICAL MEASURES: None

STORAGE CONDITIONS: Keep container closed. Store in a cool and dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES

VENTILATION: None required with intended use

CONTROL PARAMETERS(As total dust)

ACGIH-TLV(USA): 10mg/m³

(ACGIH:American Conference of Government Industrial Hygienists)

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: No precautions should be needed under normal use.

HAND PROTECTION: No precautions should be needed under normal use.

EYE PROTECTION: No precautions should be needed under normal use.

SKIN PROTECTION: No precautions should be needed under normal use.

OTHER: For use other than normal customer-operating procedures(such as in bulk toner processing facilities),goggles and respirators may be required.

HYGIENE MEASURES: Wash hands after handling.

MATERIAL SAFETY DATA SHEET (3/4)

PRODUCT NAME: CYAN TONER

MSDS No.: MSDS-I-104

PART No.: PJAB0003YA

DATE REVISED: September 30,2002

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Cyan fine powder	ODOR:	None
PARTICLE SIZE(μ m):	5-15	VAP PRESS:	N.A.
MELTING POINT()::	No data available	VAP DENSITY:	N.A.
SOFTENING POINT()::	100-150	SOL IN WATER:	Negligible
BOILING POINT()::	N.A.(not applicable)	pH:	N.A.
FREEZING POINT()::	N.A.	EXPLOSION PROPERTIES:	No data available
SP. GRAVITY(g/cm ³):	1.2	FLAMMABILITY:	No data available
BULK DENSITY(g/cm ³):	0.4		

10. STABILITY AND REACTIVITY

STABILITY: This is a stable product.

INCOMPATIBILITY: (SPECIAL MATERIALS TO AVOID) None

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂ or NO_x (by high heat and fire)

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

HEALTH EFFECTS FROM EXPOSURE: No symptoms expected with intended use.

TOXICOLOGICAL DATA

ACUTE TOXICITY

ORAL TOXICITY:	LD ₅₀ > 2000mg/kg(Rat) (+++)
EYE IRRITATION:	No Data
SKIN IRRITATION:	NON-IRRITANT(Rabbit) (+++)
SKIN SENSITISATION:	NON-SENSITIVE(Guinea Pig) (+++)
INHALATION TOXICITY:	No Data (+++):Data of similar material with same ingredients

MUTAGENICITY: NON-MUTAGENIC(Ames Test)

OTHER INFORMATION

CHRONIC TOXICITY

In a study in rats by chronic inhalation to typical toner, mild to moderate degree of lung fibrosis was observed in 92% of rats in high concentration(16 mg/m³) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle(4mg/m³) exposure group. But no pulmonary change was reported in the lowest(1mg/m³) exposure group, which the most relevant level to potential human exposures.

MATERIAL SAFETY DATA SHEET (4/4)

PRODUCT NAME: CYAN TONER

MSDS No.: MSDS-I-104

PART No.: PJAB0003YA

DATE REVISED: September 30,2002

12. ECOLOGICAL INFORMATION

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

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

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

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Waste must be disposed of in accordance with country and local environmental control regulations. Incineration is preferred method.

14. TRANSPORT INFORMATION

TRANSPORT INFORMATION: This is not a hazardous product.

UN No.: None allocated.

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION

NFPA Rating: Health = 1 Flammability = 1 Reactivity = 0

(NFPA: The National Fire Protection Agency (USA))

USER'S RESPONSIBILITY

This bulletin cannot cover all possible situations which the user may experience during processing. Each aspect of your operation must be examine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin must be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.

MATERIAL SAFETY DATA SHEET (1/4)

PRODUCT NAME: MAGENTA TONER

MSDS No.: MSDS-I-103

PART No.: PJIAB0004YA

DATE REVISED: September 30,2002

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL IDENTIFICATION: MAGENTA TONER

USED FOR: Color Laser Printer / KX-CL500, KX-CL510

Magenta Toner Cartridge / KX-CLTM1

Color Print Cartridge / KX-CLPC1

PART No.: PJIAB0004YA

DISTRIBUTOR'S NAME:

DISTRIBUTOR'S ADDRESS:

TELEPHONE NUMBER:

MANUFACTURER'S NAME: Kyushu Matsushita Electric Co., Ltd.

MANUFACTURER'S ADDRESS: 1471 Murata-Machi, Tosu, Saga, Japan

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL PRODUCT: Preparation

<u>Ingredients</u>	<u>CAS No.</u>	<u>Proportion</u> <u>(% by wt.)</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Polyester resin	+++	80-90%	Not listed	Not listed
Wax	+++	4-8%	Not listed	Not listed
Charge control agent	72869-85-3	0.5-3%	0.5mg/m ³	0.5mg/m ³
Organic pigment	+++	3-8%	Not listed	Not listed
Silica	68909-20-6	1-4%	15mg/m ³	10mg/m ³

+++ : Supplier's confidential information

3. HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYES: Solid or dusts may cause irritation or corneal injury due to mechanical action.

SKIN CONTACT: Essentially nonirritating to skin.

SKIN ABSORPTION: Skin absorption is unlikely due to physical properties.

INGESTION: Oral toxicity is believed to be low. Considered to be physiologically inert.

INHALATION: Minimal irritation to respiratory track may occur.

4. FIRST AID MEASURES

EYES: Flush eyes immediately with plenty of water for at least 15 minutes.

SKIN: Flush with plenty of water. Use soap.

INGESTION: If irritation or discomfort occurs, consult medical personnel.

INHALATION: Remove to fresh air. If effects occur, consult medical personnel.

MATERIAL SAFETY DATA SHEET (2/4)

PRODUCT NAME: MAGENTA TONER
PART No.: PJIAB0004YA

MSDS No.: MSDS-I-103
DATE REVISED: September 30,2002

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: No data available

EXTINGUISHING MEDIA: Water fog, foam, CO₂, dry chemical.

FIRE-FIGHTING EQUIPMENT: Wear full bunker gear including a positive pressure self-contained breathing apparatus in case of burning in large quantities.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: None

ENVIRONMENTAL PRECAUTIONS: None

METHODS FOR CLEANING UP: Wipe off with paper or cloth.

7. HANDLING AND STORAGE

HANDLING

TECHNICAL MEASURES: None

PRECAUTIONS: None

SAFE HANDLING ADVICE: Try not to disperse the particles.

STORAGE

TECHNICAL MEASURES: None

STORAGE CONDITIONS: Keep container closed. Store in a cool and dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES

VENTILATION: None required with intended use

CONTROL PARAMETERS(As total dust)

ACGIH-TLV(USA): 10mg/m³

(ACGIH:American Conference of Government Industrial Hygienists)

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: No precautions should be needed under normal use.

HAND PROTECTION: No precautions should be needed under normal use.

EYE PROTECTION: No precautions should be needed under normal use.

SKIN PROTECTION: No precautions should be needed under normal use.

OTHER: For use other than normal customer-operating procedures(such as in bulk toner processing facilities),goggles and respirators may be required.

HYGIENE MEASURES: Wash hands after handling.

MATERIAL SAFETY DATA SHEET (3/4)

PRODUCT NAME: MAGENTA TONER

MSDS No.: MSDS-I-103

PART No.: PJAB0004YA

DATE REVISED: September 30,2002

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Magenta fine powder	ODOR:	None
PARTICLE SIZE(μ m):	5-15	VAP PRESS:	N.A.
MELTING POINT()::	No data available	VAP DENSITY:	N.A.
SOFTENING POINT()::	100-150	SOL IN WATER:	Negligible
BOILING POINT()::	N.A.(not applicable)	pH:	N.A.
FREEZING POINT()::	N.A.	EXPLOSION PROPERTIES:	No data available
SP. GRAVITY(g/cm^3):	1.2	FLAMMABILITY:	No data available
BULK DENSITY(g/cm^3):	0.4		

10. STABILITY AND REACTIVITY

STABILITY: This is a stable product.

INCOMPATIBILITY: (SPECIAL MATERIALS TO AVOID) None

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂ or NO_x (by high heat and fire)

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

HEALTH EFFECTS FROM EXPOSURE: No symptoms expected with intended use.

TOXICOLOGICAL DATA

ACUTE TOXICITY

ORAL TOXICITY:	LD ₅₀ > 2000mg/kg(Rat) (+++)
EYE IRRITATION:	No Data
SKIN IRRITATION:	NON-IRRITANT(Rabbit) (+++)
SKIN SENSITISATION:	NON-SENSITIVE(Guinea Pig) (+++)
INHALATION TOXICITY:	No Data (+++):Data of similar material with same ingredients

MUTAGENICITY: NON-MUTAGENIC(Ames Test)

OTHER INFORMATION

CHRONIC TOXICITY

In a study in rats by chronic inhalation to typical toner, mild to moderate degree of lung fibrosis was observed in 92% of rats in high concentration(16 mg/m³) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle(4mg/m³) exposure group. But no pulmonary change was reported in the lowest(1mg/m³) exposure group, which the most relevant level to potential human exposures.

MATERIAL SAFETY DATA SHEET (4/4)

PRODUCT NAME: MAGENTA TONER

MSDS No.: MSDS-I-103

PART No.: PJIAB0004YA

DATE REVISED: September 30,2002

12. ECOLOGICAL INFORMATION

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

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

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

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Waste must be disposed of in accordance with country and local environmental control regulations. Incineration is preferred method.

14. TRANSPORT INFORMATION

TRANSPORT INFORMATION: This is not a hazardous product.

UN No.: None allocated.

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION

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

USER'S RESPONSIBILITY

This bulletin cannot cover all possible situations which the user may experience during processing. Each aspect of your operation must be examine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin must be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.

MATERIAL SAFETY DATA SHEET (1/4)

PRODUCT NAME: YELLOW TONER

MSDS No.: MSDS-I-102

PART No.: PJIAB0005YA

DATE REVISED: September 30,2002

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL IDENTIFICATION: YELLOW TONER

USED FOR: Color Laser Printer / KX-CL500, KX-CL510
Yellow Toner Cartridge / KX-CLTY1
Color Print Cartridge / KX-CLPC1

PART No.: PJIAB0005YA

DISTRIBUTOR'S NAME:

DISTRIBUTOR'S ADDRESS:

TELEPHONE NUMBER:

MANUFACTURER'S NAME: Kyushu Matsushita Electric Co., Ltd.

MANUFACTURER'S ADDRESS: 1471 Murata-Machi, Tosu, Saga, Japan

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL PRODUCT: Preparation

<u>Ingredients</u>	<u>CAS No.</u>	<u>Proportion</u> (% by wt.)	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Polyester resin	+++	80-90%	Not listed	Not listed
Wax	+++	4-8%	Not listed	Not listed
Charge control agent	72869-85-3	0.5-3%	0.5mg/m ³	0.5mg/m ³
Organic pigment	+++	3-8%	Not listed	Not listed
Silica	68909-20-6	1-4%	15mg/m ³	10mg/m ³

+++ : Supplier's confidential information

3. HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYES: Solid or dusts may cause irritation or corneal injury due to mechanical action.
SKIN CONTACT: Essentially nonirritating to skin.
SKIN ABSORPTION: Skin absorption is unlikely due to physical properties.
INGESTION: Oral toxicity is believed to be low. Considered to be physiologically inert.
INHALATION: Minimal irritation to respiratory track may occur.

4. FIRST AID MEASURES

EYES: Flush eyes immediately with plenty of water for at least 15 minutes.
SKIN: Flush with plenty of water. Use soap.
INGESTION: If irritation or discomfort occurs, consult medical personnel.
INHALATION: Remove to fresh air. If effects occur, consult medical personnel.

MATERIAL SAFETY DATA SHEET (2/4)

PRODUCT NAME: YELLOW TONER
PART No.: PJIAB0005YA

MSDS No.: MSDS-I-102
DATE REVISED: September 30,2002

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: No data available

EXTINGUISHING MEDIA: Water fog, foam, CO₂, dry chemical.

FIRE-FIGHTING EQUIPMENT: Wear full bunker gear including a positive pressure self-contained breathing apparatus in case of burning in large quantities.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: None

ENVIRONMENTAL PRECAUTIONS: None

METHODS FOR CLEANING UP: Wipe off with paper or cloth.

7. HANDLING AND STORAGE

HANDLING

TECHNICAL MEASURES: None

PRECAUTIONS: None

SAFE HANDLING ADVICE: Try not to disperse the particles.

STORAGE

TECHNICAL MEASURES: None

STORAGE CONDITIONS: Keep container closed. Store in a cool and dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES

VENTILATION: None required with intended use

CONTROL PARAMETERS(As total dust)

ACGIH-TLV(USA): 10mg/m³

(ACGIH:American Conference of Government Industrial Hygienists)

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: No precautions should be needed under normal use.

HAND PROTECTION: No precautions should be needed under normal use.

EYE PROTECTION: No precautions should be needed under normal use.

SKIN PROTECTION: No precautions should be needed under normal use.

OTHER: For use other than normal customer-operating procedures(such as in bulk toner processing facilities),goggles and respirators may be required.

HYGIENE MEASURES: Wash hands after handling.

MATERIAL SAFETY DATA SHEET (3/4)

PRODUCT NAME: YELLOW TONER

MSDS No.: MSDS-I-102

PART No.: PJAB0005YA

DATE REVISED: September 30,2002

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Yellow fine powder	ODOR:	None
PARTICLE SIZE(μ m):	5-15	VAP PRESS:	N.A.
MELTING POINT()::	No data available	VAP DENSITY:	N.A.
SOFTENING POINT()::	100-150	SOL IN WATER:	Negligible
BOILING POINT()::	N.A.(not applicable)	pH:	N.A.
FREEZING POINT()::	N.A.	EXPLOSION PROPERTIES:	No data available
SP. GRAVITY(g/cm^3):	1.2	FLAMMABILITY:	No data available
BULK DENSITY(g/cm^3):	0.4		

10. STABILITY AND REACTIVITY

STABILITY: This is a stable product.

INCOMPATIBILITY: (SPECIAL MATERIALS TO AVOID) None

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂ or NO_x (by high heat and fire)

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

HEALTH EFFECTS FROM EXPOSURE: No symptoms expected with intended use.

TOXICOLOGICAL DATA

ACUTE TOXICITY

ORAL TOXICITY:	LD ₅₀ > 2000mg/kg(Rat) (+++)
EYE IRRITATION:	No Data
SKIN IRRITATION:	NON-IRRITANT(Rabbit) (+++)
SKIN SENSITISATION:	NON-SENSITIVE(Guinea Pig) (+++)
INHALATION TOXICITY:	No Data (+++):Data of similar material with same ingredients

MUTAGENICITY: NON-MUTAGENIC(Ames Test)

OTHER INFORMATION

CHRONIC TOXICITY

In a study in rats by chronic inhalation to typical toner, mild to moderate degree of lung fibrosis was observed in 92% of rats in high concentration(16 mg/m³) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle(4mg/m³) exposure group.

But no pulmonary change was reported in the lowest(1mg/m³) exposure group, which the most relevant level to potential human exposures.

MATERIAL SAFETY DATA SHEET (4/4)

PRODUCT NAME: YELLOW TONER

MSDS No.: MSDS-I-102

PART No.: PJIAB0005YA

DATE REVISED: September 30,2002

12. ECOLOGICAL INFORMATION

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

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

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

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Waste must be disposed of in accordance with country and local environmental control regulations. Incineration is preferred method.

14. TRANSPORT INFORMATION

TRANSPORT INFORMATION: This is not a hazardous product.

UN No.: None allocated.

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION

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

USER'S RESPONSIBILITY

This bulletin cannot cover all possible situations which the user may experience during processing. Each aspect of your operation must be examine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin must be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.
