

Product name : Initial toner in drum cartridge

 Issue Date : **2004.09.02**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : Initial toner in drum cartridge
 Used for : MFX-2830 Reorder No. : DK42830
 Company name : Murata Machinery, Ltd.
 Address : 136, Takeda-Mukaishiro-cho, Fushimi-ku, Kyoto, Japan 612-8686
 Contact point : Murata Machinery, Ltd. (Customer Satisfaction Center Communication Equipment Division)
 : Telephone +81-75-662-7735 / Facsimile +81-75-672-5046

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Nature : Preparation

Chemical Name	Ingredients(% by wt.)	CAS Registry No.	Note
Magnetite	60-70	1317-61-9	
Polyester resin	10-20	+++	
Polyester/grafted copolymer	10-20	+++	
Styrene/acrylate copolymer	1-5	+++	
Carbon black	1-5	1333-86-4	ACGIH-TLV(USA) : 3.5 mg/m ³ IARC Monographs : Group 2B

+++ : Supplier's confidential information

3. HAZARDS IDENTIFICATION

Physical and Chemical Hazards : There are no significant hazards associated with this product.
 Adverse Human Health Effects : There are no significant hazards associated with this product.
 Specific Hazards : Dust explosion (like most finely divided organic powders)

4. FIRST-AID MEASURES

Inhalation : Remove from exposure and provide fresh air. Rinse mouth with water.
 Skin contact : Wash with soap and water.
 Eye contact : Flush with a large amount of water for at least 15 minutes. Seek medical advice.
 Ingestion : Rinse mouth with water. Give several glasses of water to drink. Seek medical advice.

5. FIRE-FIGHTING MEASURES

Special Firefighting Procedures : Use extinguishing media.
 When in a machine, treat as an electrical fire.
 Extinguishing media : Water spray, Foam, Dry chemical, CO₂

Product name : Toner in toner bottle

 Issue Date : **2004.09.02**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : Toner in toner bottle
 Used for : MFX-2830 Reorder No. : TS42830
 Company name : Murata Machinery, Ltd.
 Address : 136, Takeda-Mukaishiro-cho, Fushimi-ku, Kyoto, Japan 612-8686
 Contact point : Murata Machinery, Ltd. (Customer Satisfaction Center Communication Equipment Division)
 : Telephone +81-75-662-7735 / Facsimile +81-75-672-5046

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Nature : Preparation

Chemical Name	Ingredients(% by wt.)	CAS Registry No.	Note
Polyester grafted copolymer	>80	+++	
Carbon black	5-10	1333-86-4	ACGIH-TLV(USA) : 3.5 mg/m ³ IARC Monographs : Group 2B
Polyolefin wax	1-5	+++	
Magnetite	1-5	1317-61-9	
Titanium compound	1-5	+++	

+++ : Supplier's confidential information

3. HAZARDS IDENTIFICATION

Physical and Chemical Hazards : There are no significant hazards associated with this product.
 Adverse Human Health Effects : There are no significant hazards associated with this product.
 Specific Hazards : Dust explosion (like most finely divided organic powders)

4. FIRST-AID MEASURES

Inhalation : Remove from exposure and provide fresh air. Rinse mouth with water.
 Skin contact : Wash with soap and water.
 Eye contact : Flush with a large amount of water for at least 15 minutes. Seek medical advice.
 Ingestion : Rinse mouth with water. Give several glasses of water to drink. Seek medical advice.

5. FIRE-FIGHTING MEASURES

Special Firefighting Procedures : Use extinguishing media.
 When in a machine, treat as an electrical fire.
 Extinguishing media : Water spray, Foam, Dry chemical, CO₂

Product name : Toner in toner bottle

Issue Date : **2004.09.02**

6. ACCIDENTIAL RELEASE MEASURES

Shut off ignition sources. For small spills, sweep up or soak up with damp cloth.

For large spills, wear proper protective equipment and collect waste material in closed container.

7. HANDLING AND STORAGE

Handling : Avoid exposure to high temperature. Do not disperse the particle.

Storage : Keep in cool, dry and well-ventilated area. Keep out of reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameter(total) : ACGIH(1999) : 10 mg/m³

Precautionary Measured : None required when used as intended use.

For use other than normal customer operating procedures, local exhaust ventilation may be required.

Personal Protective Equipment : None required when used as intended use.

For use other than normal customer operating procedures, protective gloves, goggles and respirators may be required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Black Powder Odor : Faint Odor

Boiling Point(°C) : Not applicable Vapor Pressure : Not applicable

Volatile(%) : Not applicable Softening Point(°C) : 110-125

Specific Gravity : 1.2¹⁾ Initial Boiling Point(°C) : Not applicable

Flash Point(°C) : Not applicable Auto-Ignition Temperature : Not applicable

Solubility in water : Negligible Other data : None

1) This information is based on data of similar materials.

10. STABILITY AND REACTIVITY

Explosion Limit : Not applicable

Flammability : Not flammable under conditions of use

Spontaneous Combustibility / Reactivity with water : None

Self-reactivity / Explosive : None

Dust Explosive : Like most organic materials in powder form, it may cause dust explosion when dispersed in air.

Stability and Reactivity : Stable

Other data : None

Product name : Toner in toner bottle

Issue Date : **2004.09.02**

11. TOXICOLOGICAL INFORMATION

Irritation	Skin (rabbit)	: Not an irritant	Eye(rabbit)	: Slightly irritant
Sensitization	Skin(guinea-pig)	: Not a sensitizer ¹⁾		
Acute Toxicity	Ingestion LD50(rat)	: >2.0 g/kg	(practically non-toxic)	
	Skin LD50(rabbit)	: Not available		
	Inhalation LC50(rat)	: >1.93 mg/L/4hr	(the highest attainable concentration)	
Chronic Toxicity	: In 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(16 mg/m ³) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle(4 mg/m ³) exposure group. But no pulmonary change was reported in the lowest(1 mg/m ³) exposure group, the most relevant level to potential human exposures. ¹⁾			
Carcinogenicity	: Carbon Black is classified as "Group 2B(possibly carcinogenic to humans)" by IARC. But a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development. ¹⁾ All other ingredients are not classified as "Carcinogens" ^{ref.1}			
Mutagenicity	Ames Test	: Negative		

1) This information is based on data of similar materials.

12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATION

Dispose of in accordance with federal, state and local regulations.

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

14. TRANSPORT INFORMATION

Transport in accordance with federal, state and local regulations.

UN Hazard Class : None UN Number : None

15. REGULATORY INFORMATION

Ensure this product in compliance with federal requirements and ensure conformity to local regulations.

16. OTHER INFORMATION

The above mentioned data correspond to our present state of knowledge and experience, but no warranty is made. Users should consider these data only as a supplement to other information and must make independent determination of the suitability and completeness of information from all sources to ensure proper use and disposal of the materials and safety and health of employees and customers.

Reference

- 1:IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans(International Agency for Research on Cancer)
National Toxicology Program(NTP) Report on Carcinogens
Journal of Occupational Health(Japan Society for Occupational Health)
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Product name : Photoconductor used in drum unit

 Issue Date : **2004.09.02**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : Photoconductor used in drum unit
 Used for : MFX-2830 Reorder No. : DK42830
 Company name : Murata Machinery, Ltd.
 Address : 136, Takeda-Mukaishiro-cho, Fushimi-ku, Kyoto, Japan 612-8686
 Contact point : Murata Machinery, Ltd. (Customer Satisfaction Center Communication Equipment Division)
 : Telephone +81-75-662-7735 / Facsimile +81-75-672-5046

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Nature : This product is classified as an "Article"

Chemical Name	Ingredients(% by wt.)	CAS Registry No.
Organic materials	+++	+++

+++ : Supplier's confidential information

3. HAZARDS IDENTIFICATION

Physical and Chemical Hazard : There are no significant hazards associated with this product.
 Adverse Humen Health Effect : There are no significant hazards associated with this product.
 Specific Hazard : There are no significant hazards associated with this product.

4. FIRST-AID MEASURES

Inhalation : Not applicable
 Skin contact : Wash with soap and water.
 Eye contact : Not applicable
 Ingestion : Not applicable

5. FIRE-FIGHTNG MEASURES

Specal Firefighting Procedures : Use extinguishing media.
 When in a machine, treat as an electrical fire.
 Extinguishing media : Water spray, Foam, Dry chemical, CO₂

Product name : Photoconductor used in drum unit

Issue Date : **2004.09.02**

6. ACCIDENTIAL RELEASE MEASURES

None required when used as intended use.

7. HANDLING AND STORAGE

Handling : Avoid exposure to high temperature. Do not disassemble a unit.

Storage : Keep in cool, dry and well-ventilated area. Keep out of reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameter : Not applicable

Precautionary Measured : None required when used as intended use.

Personal Protective Equipment : None required when used as intended use.

For use other than normal customer operating procedures, protective gloves may be required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Green solid	Odor	: Odorless
Boiling Point(°C)	: Not applicable	Vapor Pressure	: Not applicable
Volatile(%)	: Not applicable	Softening Point(°C)	: Not available
Specific Gravity	: Not available	Initial Boiling Point	: Not applicable
Flash Point(°C)	: Not applicable	Auto-Ignition Temperature	: Not applicable
Solubility in water	: Insoluble	Other data	: None

10. STABILITY AND REACTIVITY

Explosion Limit : Not applicable

Flammability : Not flammable under conditions of use.

Spontaneous Combustibility / Reactivity with water : None

Self-reactivity / Explosive : None

Dust Explosive : Not applicable

Stability and Reactivity : Stable

Other data : None

Product name : Photoconductor used in drum unit

Issue Date : 2004.09.02

11. TOXICOLOGICAL INFORMATION

Irritation	Skin (rabbit)	:	Not an irritant ¹⁾	Eye(rabbit)	:	Mild irritant ¹⁾
Sensitization	Skin(guinea-pig)	:	Not available			
Acute Toxicity	Ingestion LD50(rat)	:	>2.0 g/kg ¹⁾			(practically non-toxic)
	Skin LD50(rabbit)	:	Not available			
	Inhalation LC50(rat)	:	Not available			
Chronic Toxicity		:	Not known			
Carcinogenicity		:	All ingredients are not classified as "Carcinogens" ^{ref.1}			
Mutagenicity	Ames Test	:	Negative			

1) This information is based on data of similar materials.

12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATION

Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Transport in accordance with federal, state and local regulations.

UN Hazard Class	:	None	UN Number	:	None
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15. REGULATORY INFORMATION

Ensure this product in compliance with federal requirements and ensure deformity to local regulations.

16. OTHER INFORMATION

The above mentioned data correspond to our present state of knowledge and experience, but no warranty is made. Users should consider these data only as a supplement to other information and must make independent determination of the suitability and completeness of information from all sources to ensure proper use and disposal of the materials and safety and health of employees and customers.

Reference

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- National Toxicology Program(NTP) Report on Carcinogens
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6. ACCIDENTIAL RELEASE MEASURES

Shut off ignition sources. For small spills, sweep up or soak up with damp cloth.

For large spills, wear proper protective equipment and collect waste material in closed container.

7. HANDLING AND STORAGE

Handling : Avoid exposure to high temperature. Do not disassemble a cartridge.

Storage : Keep in cool, dry and well-ventilated area. Keep out of reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameter(total) : ACGIH(1999) : 10 mg/m³

Precautionary Measured : None required when used as intended use.

For use other than normal customer operating procedures, local exhaust ventilation may be required.

Personal Protective Equipment : None required when used as intended use.

For use other than normal customer operating procedures, protective gloves, goggles and respirators may be required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Black Powder	Odor	: Faint Odor
Boiling Point(°C)	: Not applicable	Vapor Pressure	: Not applicable
Volatile(%)	: Not applicable	Softening Point(°C)	: 110-125 ¹⁾
Specific Gravity	: 1.3 (bulk)	Initial Boiling Point(°C)	: Not applicable
Flash Point(°C)	: Not applicable	Auto-Ignition Temperature	: Not applicable
Solubility in water	: Negligible	Other data	: None

1) This information is based on data of similar materials.

10. STABILITY AND REACTIVITY

Explosion Limit : Not applicable

Flammability : Not flammable under conditions of use

Spontaneous Combustibility / Reactivity with water : None

Self-reactivity / Explosive : None

Dust Explosive : Like most organic materials in powder form, it may cause dust explosion when dispersed in air.

Stability and Reactivity : Stable

Other data : None

Product name : Initial toner in drum cartridge

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11. TOXICOLOGICAL INFORMATION

- | | | | | |
|------------------|---|----------------------------------|-------------------------|-----------------------------------|
| Irritation | Skin (rabbit) | : Not an irritant ¹⁾ | Eye(rabbit) | : Slightly irritant ¹⁾ |
| Sensitization | Skin(guinea-pig) | : Not a sensitizer ¹⁾ | | |
| Acute Toxicity | Ingestion LD50(rat) | : >2.0 g/kg ¹⁾ | (practically non-toxic) | |
| | Skin LD50(rabbit) | : Not available | | |
| | Inhalation LC50(rat) | : Not available | | |
| Chronic Toxicity | : In 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(16 mg/m ³) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle(4 mg/m ³) exposure group. But no pulmonary change was reported in the lowest(1 mg/m ³) exposure group, the most relevant level to potential human exposures. ¹⁾ | | | |
| Carcinogenicity | : Carbon Black is classified as "Group 2B(possibly carcinogenic to humans)" by IARC. But a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development. All other ingredients are not classified as "Carcinogens" ^{ref.1} | | | |
| Mutagenicity | Ames Test | : Negative | | |

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