

**MURATEC MODEL MFX-2000 PHOTOCONDUCTOR (D/C)**

**Material Safety Data Sheet**

May be used to comply with  
OSHA's Hazard Communication Standard  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements

**U.S. Department of Labor**

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

IDENTITY (As Used on Label and List)  
PHOTOCONDUCTOR (D/C)  
used for: SP-B151

Note: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

**Section I**

Manufacturer's Name

**MINOLTA CO. LTD**

Emergency Telephone Number

Address (Number, Street, City, State, and ZIP Code)

3-13, 2-Chome, Azuchi-Machi, Chuo-Ku,

Telephone Number for Information +81-6-271-2251

Date Prepared 1 July 1996

Signature of Preparer (optional)

**Section II - Hazardous Ingredients/Identity Information**

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other limits Recommended % (optional)
---	----------	-----------	---------------------------------------

**Hazardous Ingredients: None present**

Major Ingredients: Generic Name	CAS No.	WT%
---------------------------------	---------	-----

Substrate >99%

Aluminum Drum +++

Coating layer <1%

Binder resin +++

Photosensitive Material +++

Pigment +++

+++ - Supplier's confidential information

**Hazards Identification:**

For Human Health: No symptoms expected with intended use

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

For others: None

Specific Hazards: None

\* = Based on data for other Minolta products with similar ingredients  
(Reproduce locally)

**MURATEC MODEL MFX-2000 PHOTOCONDUCTOR (D/C)****Material Safety Data Sheet**

May be used to comply with  
 OSHA's Hazard Communication Standard  
 29 CFR 1910.1200. Standard must be  
 consulted for specific requirements

**U.S. Department of Labor**

Occupational Safety and Health Administration  
 (Non-Mandatory Form)  
 Form Approved  
 OMB No. 1218-0072

**Section III - Physical/Chemical Characteristics**

Boiling Point	Not app.	Softening Point	No data available
Vapor Pressure (mm Hg)	Not applicable	Melting Point	No data available
Vapor Density (AIR - 1) g/cm3	2.7	Flash point	Not applicable
Solubility in water	Insoluble	Oxidizing properties	No data available
pH	Not applicable	Explosion Properties	Not applicable
Ignition Temperature	No data available	Flammability	Not applicable

Partition Coefficient, n-octagonal/Water: Not applicable

Appearance and Odor    Physical State: Solid    Form: Cylinder    Color: Green    Odor: Odorless

**Section IV - Fire and Explosion Hazard Data**

Flash Point (Method Used)	N/A	Flammable Limits	N/A	LEL	UEL
Extinguishing Media	CO2; WATER; FOAM; DRY CHEMICAL				
Special Fire Fighting Procedures	NONE				
Protection of Firefighters	No special equipment is required				
Unusual Fire and Explosion Hazards	This material has no unusual fire or explosive hazards				

**Section V - Reactivity Data**

Stability	Unstable		Conditions to Avoid
	Stable	XXX	NONE

Incompatibility (Materials to Avoid)    None

Hazardous Reactions:    None

Hazardous Decomposition or Byproducts    CO, CO2

Conditions to Avoid    None

**Section VI - Health Hazard Data**

Health effects from exposure: No symptoms expected with intended use.

Toxicological Data:    <<Result of the coated compounds on the aluminum substrate.>>

Acute Toxicity:

Inhalation?    LD50(g/m<sup>3</sup>/4h: Not applicable

Dermal    LD50 (g/kg): Not applicable

\* = Based on data for other Minolta products with similar ingredients  
 (Reproduce locally)

# MURATEC MODEL MFX-2000 PHOTOCONDUCTOR (D/C)

## Material Safety Data Sheet

May be used to comply with  
OSHA's Hazard Communication Standard  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements

## U.S. Department of Labor

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

---

Ingestion (oral)? LD50 (g/kg): >3.57 (Rats)\*  
Eye irritation: Mild eye irritation (Rabbits)\*  
Skin irritation: Not an irritant (Rabbits)\*  
Skin sensitizer: No data available  
Mutagenicity: Negative (AMES test)

---

Local effects: No data available  
Chronic Toxicity or Long Term Toxicity: None

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

---

### ECOLOGICAL INFORMATION:

#### Ecotoxicity

Behavior in Sewage Works: No data are available on the adverse effects of this material on the environment.  
Aquatic Toxicity: No data are available on the adverse effects of this material on the environment.

#### Ecological Data (EC)

Csb Value (EC): No data are available on the adverse effects of this material on the environment  
AOX-Remark (EC): No data are available on the adverse effects of this material on the environment  
BsB5 Value (EC): No data are available on the adverse effects of this material on the environment  
Significant Components (EC): Not Applicable

Mobility: No data are available on the adverse effects of this material on the environment  
Persistence/Degradability: 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

---

#### Accidental Release Measures:

Personal Precautions: Not applicable with intended use  
Environmental Precautions: Not applicable with intended use  
Methods of Cleanup: Not applicable with intended use  
Further Information: None

---

#### Emergency and First Aid Procedures

Symptoms of Overexposure: No symptoms expected with intended use  
Routes of entry: None  
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  
Further information: None

---

## Section VII - Precautions for Safe Handling and Use

#### Handling:

Technical Measures None  
Precautions : This product will be scorched in case of fire  
Safe handling advice: None

#### Storage:

Technical Measures None  
Storage Conditions Keep container closed and store in a cool, dry place

---

\* = Based on data for other Minolta products with similar ingredients  
(Reproduce locally)

# MURATEC MODEL MFX-2000 PHOTOCONDUCTOR (D/C)

## Material Safety Data Sheet

May be used to comply with  
OSHA's Hazard Communication Standard  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements

## U.S. Department of Labor

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

Incompatible Products	None
Packing Materials	Bottles or Cartridge designated by Minolta
Further Information	None

---

### Transport Information

Special Precautions: None

Information on Code and Classifications According to International Regulations

UN Classification: None

Land

RID (EC): None

ADR (EC): None

DOT (USA) None

Inland Waterways

ADNR (Rhine R.):None

Sea

IMDG: None

Air

ICAO-TI: None

IATA-DGR: None

---

### Disposal Consideration

Appropriate Methods of Disposal

Preparation (community provisions)

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

Contaminated Packaging

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

---

## Section VIII - Control Measures

Respiratory Protection (Specify Type)

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:

Respirator protection: None required when used as intended in Minolta equipment.

Hand protection: None required when used as intended in Minolta equipment

Eye protection: None required when used as intended in Minolta equipment

Skin protection: None required when used as intended in Minolta equipment

Other: None

Work/Hygienic Practices

Wash hands after handling

Further Information:

None

---

## Section IX - 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.

SARA (Superfund Amendments and Reauthorization Act) Title III

302 Extreme Hazardous Substance: None

311/312 Hazard Categories: None

# MURATEC MODEL MFX-2000 PHOTOCONDUCTOR (D/C)

## Material Safety Data Sheet

May be used to comply with  
OSHA's Hazard Communication Standard  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements

## U.S. Department of Labor

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

---

313 Reportable Ingredients: None

---

California Proposition 65

This product contains no chemical substances subject to California Proposition 65

---

EU Information Information on the label (88/379/EEC and 67/548/EEC):

Symbol & Indication: Not required

R-Phrase: Not required

S-Phrase: Not required

---

## Section IX - OTHER INFORMATION

---

NFPA Hazard Rating: The 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

Recommended Uses: Toner for Printer SP-B151

Restrictions: Information on this data sheet represents our current data and the best opinion as to the proper use in handling of this product under normal conditions specified in our User's Manual. However, neither Minolta Co., Ltd, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we do not guarantee that these are the only hazards which exist.

Literature References: ANSI Z400.1-1993

TRGS 220: Sicherheitsdatenblatt für gefährliche Stoffe und Zubereitungen

ISO11014-1

Commission Directive 91/155/EEC

The Material Safety Data Sheet: A Practical Guide to First Aid: Canadian Center for Occupational Health and Safety's publication

HMIS IMPLEMENTATION MANUAL: National Paint & Coatings Association

---

# MURATEC MODEL MFX-2000 TONER CARTRIDGE

## Material Safety Data Sheet

May be used to comply with  
OSHA's Hazard Communication Standard  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements

## U.S. Department of Labor

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

IDENTITY (As Used on Label and List)  
TONER CARTRIDGE

Note: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

### Section I

Manufacturer's Name <b>MINOLTA CO. LTD</b>	Emergency Telephone Number
Address (Number, Street, City, State, and ZIP Code) 3-13, 2-Chome, Azuchi-Machi, Chuo-Ku,	Telephone Number for Information +81-6-271-2251
	Date Prepared 28 May 1996
	Signature of Preparer (optional)

### Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other limits Recommended % (optional)
<b>Hazardous Ingredients:</b> CARBON BLACK	WT% 1-5%	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    Symbol(EC): Not Listed    R-Phrases (EC): Not Listed    DFG-MAK(EC); Not Listed			
Worksafe-TWA(Austl): 3mg/m3			
<b>Major Ingredients:</b> Generic Name	CAS No.	WT%	
Polyester Resin	+++	>85%	
Carbon Black	1333-86-4	1-5%	
Polyolefin was	+++	1-5%	
Organic pigment	+++	1-5%	
Quaternary ammonium salt	+++	<1%	
+++ - Supplier's confidential information			

#### Hazards Identification:

For Human Health: This toner is not classified as a human carcinogen. No symptoms expected under intended use

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

For others: None

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

\* = Based on data for other Minolta products with similar ingredients  
(Reproduce locally)

**MURATEC MODEL MFX-2000 TONER CARTRIDGE**

**Material Safety Data Sheet**

May be used to comply with  
 OSHA's Hazard Communication Standard  
 29 CFR 1910.1200. Standard must be  
 consulted for specific requirements

**U.S. Department of Labor**

Occupational Safety and Health Administration  
 (Non-Mandatory Form)  
 Form Approved  
 OMB No. 1218-0072

+++ - Suppliers confidential information

**Section III - Physical/Chemical Characteristics**

Boiling Point	Not app.	Softening Point	120 - 130*
Vapor Pressure (mm Hg)	Not applicable	Melting Point	No data available
Vapor Density (AIR - 1) g/cm3	1.2	Flash point	Not applicable
Solubility in water	Negligible	Oxidizing properties	No data available
pH	Not applicable	Explosion Properties	No data available
Ignition Temperature	450*	Flammability	No data available

Partition Coefficient, n-octagonal/Water: Not applicable

Appearance and Odor    Physical State: Solid    Form: Powder    Color: Black    Odor: Faint odor

**Section IV - Fire and Explosion Hazard Data**

Flash Point (Method Used)	N/A	Flammable Limits	N/A	LEL	UEL
Extinguishing Media	CO2; WATER SPRAY; FOAM; DRY CHEMICAL		AVOID FULL WATER JET		
Special Fire Fighting Procedures	NONE				
Protection of Firefighters	Use self-contained breathing apparatus (SCBA)				
Unusual Fire and Explosion Hazards	IF DISPERSED IN AIR, LIKE MOST FINELY DIVIDED ORGANIC POWDERS, IT MAY FORM EXPLOSIVE MIXTURE				

**Section V - Reactivity Data**

Stability	Unstable		Conditions to Avoid
	Stable	XXX	NONE
Incompatibility (Materials to Avoid)	Oxidizing Materials		
Hazardous Reactions:	Dust explosion ( like most finely divided organic powders)		
Hazardous Decomposition or Byproducts	CO, CO2		
Conditions to Avoid	Electronic discharge; throwing into fire		

**Section VI - Health Hazard Data**

Routes of Entry: Inhalation?    LD50(g/m<sup>3</sup>/4h: >0.74 (Rats)\* (This was the highest attainable concentration)  
 Dermal    LD50 (g/kg): >2.0 (Rats)\*  
 Ingestion (oral)?    LD50 (g/kg): >2.0 (Rats)\*

\* = Based on data for other Minolta products with similar ingredients  
 (Reproduce locally)

# MURATEC MODEL MFX-2000 TONER CARTRIDGE

## Material Safety Data Sheet

May be used to comply with  
OSHA's Hazard Communication Standard  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements

## U.S. Department of Labor

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

---

Eye irritation:	Not an irritant (Rabbits)*
Skin irritation:	Not an irritant (Rabbits)*
Skin sensitizer:	No signs (Guinea-pig)*
Mutagenicity:	Negative (AMES test)

---

### Ecotoxicity

Behavior in Sewage Works:	No data are available on the adverse effects of this material on the environment.
Aquatic Toxicity:	No data are available on the adverse effects of this material on the environment.
Csb Value (EC):	No data are available on the adverse effects of this material on the environment
AOX-Remark (EC):	No data are available on the adverse effects of this material on the environment
BsB5 Value (EC):	No data are available on the adverse effects of this material on the environment
Significant Components (EC):	Not Applicable

---

### Ecological Information

Mobility:	No data are available on the adverse effects of this material on the environment
Persistence/Degradability:	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

---

Health Hazards (Acute and Chronic): No symptoms expected with intended use

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 of 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<sup>3</sup>) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4mg/m<sup>3</sup>) exposure group. But no pulmonary change was reported in the lowest (1mg/m<sup>3</sup>) exposure group, the most relevant level to potential human exposures.

---

### Accidental Release Measures:

Personal Precautions:	None
Environmental Precautions:	None
Methods of Cleanup:	Wipe off with paper or cloth. DO NOT use vacuum cleaner when a large amount is released. It, like most finely divided organic powders, may create a dust explosion.

---

### Carcinogenicity:

NTP? Not listed	IARC Monographs? Not listed	OSHA Regulated Not listed
-----------------	-----------------------------	---------------------------

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.

---

Signs and Symptoms of Exposure: No information

---

### Emergency and First Aid Procedures

Symptoms of Overexposure:	No symptoms expected with intended use
Routes of entry:	Eye contact, inhalation, ingestion
Inhalation:	If symptoms are experienced, remove source of contamination or move victim to fresh air and obtain medical advice
Skin contact:	Flush with gently flowing water (preferably lukewarm) and soap for 15 minutes or until particle is removed. If irritation does occur, obtain medical advice.
Eye contact:	Do not allow victim to rub eye(s). Flush with gently flowing water (preferably lukewarm) for 15 minutes or until particle is removed. If irritation does occur, obtain medical attention. Do Not

---

\* = Based on data for other Minolta products with similar ingredients  
(Reproduce locally)

# MURATEC MODEL MFX-2000 TONER CARTRIDGE

## Material Safety Data Sheet

May be used to comply with  
OSHA's Hazard Communication Standard  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements

## U.S. Department of Labor

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

---

Ingestion: attempt to manually remove anything stuck to the eye(s).  
If irritation or discomfort occurs, obtain medical attention immediately.

---

## Section VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled

Handling: Technical Measures - None

Precautions - None

Safe handling advice: Try not to disperse the particles

Storage:

Technical Measures - None

Storage Conditions - Keep container closed and store in a cool, dry place

Incompatible Products - None

Packing Materials - Bottles or Cartridge designated by Minolta

---

Waste Disposal Method

Preparation (community provisions): Waste may be disposed or incinerated under conditions which meet all federal, state, and local environmental regulations

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

---

Transport Information      Special Precautions: None

---

## Section VIII - Control Measures

Respiratory Protection (Specify Type)

Ventilation: None required with intended use.

Control Parameters (As total dust)

OSHA-PEL (USA): 15mg/m<sup>3</sup>

ACGIH-TLV (USA): 10mg/m<sup>3</sup>

DFG-MAK (EC): 6mg/m<sup>3</sup>

Worksafe-TWA (Austl): 10mg/m<sup>3</sup>

---

Personal Protective Equipment:

Respirator protection: None required when used as intended in Minolta equipment.

Hand protection: None required when used as intended in Minolta equipment

Eye protection: None required when used as intended in Minolta equipment

Skin protection: None required when used as intended in Minolta equipment

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

---

Protective Gloves      None required when used as intended in Minolta equipment.

---

Other Protective Clothing or Equipment      None required when used as intended in Minolta equipment

---

Work/Hygienic Practices      Wash hands after handling

---

## Section IX - REGULATORY INFORMATION

US Information: Information on the label: Not required

---

# MURATEC MODEL MFX-2000 TONER CARTRIDGE

## Material Safety Data Sheet

May be used to comply with  
OSHA's Hazard Communication Standard  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements

## U.S. Department of Labor

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

---

TSCA (Toxic Substances Control Act):

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

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 (88/379/EEC and 67/548/EEC):

Symbol & Indication: Not required

R-Phrase: Not required

S-Phrase: Not required

76/769/EEC:

All chemical substances in this product comply with all applicable rules or order under 76/769/EEC

---

## Section IX - OTHER INFORMATION

NFPA Hazard Rating: The 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

Recommended Uses: Toner for Printer SP-B151

Restrictions: Information on this data sheet represents our current data and the best opinion as to the proper use in handling of this product under normal conditions specified in our User's Manual. However, neither Minolta Co., Ltd, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we do not guarantee that these are the only hazards which exist.