

**MURATEC MODEL F-80, F-90 TONER CARTRIDGE (Page 1 of 2)**

**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.
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Section I

Manufacturer's Name <b>HITACHI METALS, LTD</b>	Emergency Telephone Number 0485-31-1316 (JAPAN)
Address (Number, Street, City, State, and ZIP Code) 5200 Mikajiri, Kumagaya City, Saitama Pre. Japan	Telephone Number for Information 0485-31-1316 (JAPAN)
	Date Prepared 14 JULY 1993
	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: THIS TONER DOES NOT CONTAIN HAZARDOUS COMPONENTS			

Component	CAS No	FINES No	% (Optional)
Magnetite	1317-61-9	2152775	60 wt% less
Styrene acrylate copolymer	25153-46-2	2028515 / 2030807	60 wt% less
Polypyrrolene	9003-07-0	2040621	60 wt% less
Metal complex	72869-85-3	279554	10 wt% less

Section III - Physical/Chemical Characteristics

Boiling Point	NONE	Specific Gravity (H <sub>2</sub> O= 1)	1.0~1.9
Vapor Pressure (mm Hg)	NONE	Melting Point	Over 140°
Vapor Density (AIR - 1)	NONE	Evaporation Rate (Butyl Acetate =1)	None
Solubility in Water: Insoluble			
Appearance and Odor	Physical State: Solid Form: Fine Powder	Color: Black	

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)	Not applicable	Flammable Limits	Over 400°F	LEL	UEL
Extinguishing Media	CO <sub>2</sub> ; WATER; FOAM; DRY CHEMICAL		AVOID FULL WATER JET		
Special Fire Fighting Procedures	A fire may produce hazardous decomposition products such as carbon dioxide, carbon monoxide				
For protection of firefighters, use self-contained breathing apparatus (SCBA)					
Unusual Fire and Explosion Hazards	Like many finely divided materials, toner dust in high concentrations can form explosive mixtures in air. If ignited, could result in dust explosions				

**MURATEC MODEL F-80 / F-90 TONER CARTRIDGE (Page 2 of 2)**

Section V - Reactivity Data			
Stability	Unstable		Conditions to Avoid NONE
	Stable	X	
Incompatibility (Materials to Avoid) Oxidizing materials			
Hazardous Decomposition or Byproducts CO, CO2, Unidentified organics			
Hazardous Polymerization	May Occur		Conditions to Avoid NONE
	Will Not Occur	X	
Section VI - Health Hazard Data			
Routes of Entry: Inhalation? POSSIBLE SKIN? NONE Ingestion? POSSIBLE			
Health Hazards (Acute and Chronic)			
Acute: Inhalation Nontoxic Skin: Not an irritant or a sensitizer Ingestion: Nontoxic			
Chronic: None known			
Carcinogenicity: NTP? Not listed IARC Monographs? Not listed OSHA Regulated Not listed			
Signs and Symptoms of Exposure: None			
Medical Conditions			
Generally Aggravated by Exposure Unknown			
Emergency and First Aid Procedures			
Inhalation: Remove from exposure Eyes: Flush copiously with water for 15 minutes			
Skin: Wash affected area with soap and water Ingestion: No treatment indicated			
Section VII - Precautions for Safe Handling and Use			
Steps to be Taken in Case Material is Released or Spilled CAUTION: Minimize generation of dust during cleanup			
Use of a vacuum cleaner is preferable to a broom: Collect the toner and place in a closed container for proper disposal.			
Waste Disposal Method Small quantities should be disposed of in accordance with applicable Federal, State and Local regulations.			
Precautions to be Taken in Handling and Storing Keep out of reach of children.			
Other Precautions			
Section VIII - Control Measures			
Respiratory Protection (Specify Type) None required when used as intended			
Ventilation	Local Exhaust	None	Special None
	Mechanical (General)	None	Other None
Protective Gloves	None	Eye Protection	None
Other Protective Clothing or Equipment Normally not required			
Work/Hygenic Practices Normally gloves & dust filter respirator are not required but recommended when handling bulk amounts			

**MURATEC MODEL F-80/F-90 DRUM CARTRIDGE (Page 1 of 2)**

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IDENTITY (As Used on Label and List) PHOTOSENSITIVE DRUM	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.
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Section I

Manufacturer's Name <b>CANON, INC.</b>	Emergency Telephone Number
Address (Number, Street, City, State, and ZIP Code)	Telephone Number for Information 03-3758-2111
30-2 Shimomaruko 3-Chomc, Ohta-Ku, Tokyo Japan	Date Prepared 21 September 1993
	Signature of Preparer (optional)

Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	* OSHA PEL ACGIH TLV	** DFG***	% (optional)
<u>Hazardous Ingredients:</u>			
<u>Coating Layer</u>			
Aluminum alloy			95.0-98.0
Binder resin			0.5-2.0
Titanium Dioxide			0.5-2.0
Organic Semiconductor			0.3-0.8

\*The column OSHA reveals PEL (Permissible Exposure List) under Occupational Safety & Health Administration

\*\*The column ACGIH reveals TLV (Threshold Limit Value) under American Conf. of Govt. Industrial Hygienists

\*\*\*The column DFG reveals MAK (Maximale Arbeitsplatzkonzentrationen) under Deutsche Forschungsgemeinschaft

Section III - Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H <sub>2</sub> O - 1) No data available
Vapor Pressure (mm Hg)	Negligible	Melting Point 100° C or higher
Vapor Density (AIR - 1)	N/A	Evaporation Rate Not Applicable

Solubility in Water: NEGLIGIBLE Solubility in Org. Solvents: Partially soluble in ketones, esters and aromatic solvents

Appearance and Odor Aluminum cylinder with a bright Turquoise colored surface; no odor

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) N/A	Flammable Limits N/A	LEL	UEL
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Extinguishing Media CO<sub>2</sub>; WATER; FOAM; DRY CHEMICAL

Special Fire Fighting Procedures None

Ignition Temperature: No data available Flammability: No data available

Unusual Fire and Explosion Hazards None

**MURATEC MODEL F-80 / F-90 DRUM CARTRIDGE (Page 2 of 2)**

Section V - Reactivity Data			
Stability	Unstable		Conditions to Avoid
	Stable	X	NONE
Incompatibility (Materials to Avoid) NONE			
Hazardous Decomposition or Byproducts: None			
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	
Section VI - Health Hazard Data			
Routes of Entry:	Eye?	Inhalation?	Skin? Ingestion?
	<b>NONE</b>	No corroding or irritating effect is expected in usual use as a photosensitive drum	
Health Hazards (Acute and Chronic)			
Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated N/A
No carcinogen or potential carcinogen, according to IARC Monographs, NTP, OSHA regulation and EC directive			
Signs and Symptoms of Exposure:			
<b>NO SYMPTOMS EXPECTED WITH INTENDED USE</b>			
Medical Conditions			
Generally Aggravated by Exposure		Mutagenicity: Negative (Test strains: S. typhimurium)	
Emergency and First Aid Procedures Not applicable			
Section VII - Precautions for Safe Handling and Use			
Steps to be Taken in Case Material is Released or Spilled: Not Applicable			
Waste Disposal Method Waste may be disposed or incinerated under conditions which meet all federal, state, and local environmental control regulations			
Precautions to be Taken in Handling and Storing NONE			
Other Precautions			
Section VIII - Control Measures			
Respiratory Protection (Specify Type) None required			
Ventilation	Local Exhaust	None required	Special None required
	Mechanical (General)	None req.	Other None required
Protective Gloves	None required	Eye Protection	None required
Other Protective Clothing or Equipment None required			
Work/Hygenic Practices Wash hands after handling			