MATERIAL SAFETY DATA SHEET

Section 1 – Product and Company Identification

IBM Corporation
New Orchard Road
Armonk, New York 10504
U.S.A.

24 Hour Emergency Source Information:
1-800-426-4333
International Emergency Number:
1-303-739-11113

Product Name: Infoprint 1226 Toner Cartridge
Product Trade Names and Synonyms: None
Chemical Family: Contains toner
IBM Part Number: 53P7581, 53P7582
IBM Material Reference Number: 940115830

MSDS Preparation Date: August 26, 2002 **MSDS Revision Date:**

MSDS Prepared By: IBM Printing Systems Division, Boulder, Colorado

Section 2 – Composition / Information on Ingredients

				NFPA Ratings			
Component	**Percentage**	**CAS #**	**UN #**	**H**	**F**	**R**	**S**
Toner	100	Mixture	N/App	1	1	0	--
Styrene acrylate copolymer	55-60	(1)	--	--	--	--	--
Iron oxide	35-40	(1)	--	--	--	--	--
Ethylene propylene copolymer	<3	(1)	--	--	--	--	--
Amorphous silica	<1	7631-86-9	--	--	--	--	--
Chromium azo dye complex	<1	84179-66-8 109125-51-1 109125-50-0	--	--	--	--	--

Note: (1) Manufacturer's trade secret or patented molecule.

See Section 8 for Exposure Guidelines.

Section 3 – Hazards Identification

The following information is based on data obtained from testing of the product or similar products and on the characteristics of component chemicals.

Primary Routes of Entry: Toner is contained in a cartridge. Exposure potential includes incidental inhalation of toner dust and possible minimal skin contact during cartridge change. There is no evidence that toner is absorbed through the skin.

Potential Health Effects:

Inhalation:

Short Term Exposure: Testing and/or information on this or similar toners, or on the constituents of this toner indicate low inhalation toxicity. As with exposure to high concentrations of any dust, minimal respiratory tract irritation may occur if excessive amounts of toner dust are inhaled. Exposure not probable with intended use.

Long Term Exposure: No adverse chronic effects known at expected level of use. Exposure not probable with intended use.

Skin Contact:

Short Term Exposure: Testing and/or information on this or similar toners, or on the constituents of this toner indicate this toner is not a skin irritant and is of low dermal toxicity. Toner is not a dermal sensitizer. Exposure not probable with intended use.

Long Term Exposure: No adverse chronic effects known at expected level of use. Exposure not probable with intended use.

Eye Contact:

Short Term Exposure: Toner may act as a mechanical irritant. Exposure not probable with intended use.

Long Term Exposure: No adverse chronic effects known. Exposure not probable with intended use.

Ingestion:

Short Term Exposure: Testing and/or information on this or similar toners, or on the constituents of this toner indicate low oral toxicity. Exposure not probable with intended use.

Long Term Exposure: No adverse chronic effects known. Exposure not probable with intended use.

Medical Conditions Aggravated by Exposure: None known at intended levels of use. Exposure to high airborne dust concentrations, including toner, may aggravate existing respiratory conditions.

Signs and Symptoms of Exposure: Toner on skin or mucus membranes (mouth, eyes & nose).

Physical Hazards: As with most finely divided dusts, explosion is possible when extremely high concentrations of dust and an ignition source are present. Not a hazard under normal conditions of use.

Carcinogen Status:

OSHA: N
IARC: N
NTP: N

Section 4 – First Aid Measures

Inhalation: If symptoms, such as shortness of breath or persistent coughing are experienced, remove source of contamination and move the individual to fresh air. If symptoms persist, seek medical attention.

Skin Contact: Wash affected area with soap and water. Should irritation occur, seek medical attention.
Eye Contact: Do not rub eyes. Flush immediately with plenty of water. Remove contact lenses and continue flushing for at least 15 minutes. Seek medical attention if irritation develops and persists.
Ingestion: If conscious, immediately wash mouth out with plenty of water. Seek medical attention.
Antidotes/Note to Physician: There are no specific antidotes. Milk or water may be given to dilute the product.

Section 5 – Fire Fighting Measures

Means of Extinction: CO_2, water spray or fog, dry chemical, or foam.
Protective Equipment for Fire-Fighting: NIOSH approved self-contained breathing apparatus may be required if a large number of cartridges are involved.
Fire and Explosion Hazard: Like many finely divided materials, toner dust, in high concentrations can form an explosive mixture in air which, if ignited, could result in a dust explosion.
Flash Point (Method): Not applicable.
Upper and Lower Flammable (Explosive) Limits: Not applicable.
Autoignition Temperature: Not available.
Hazardous Combustion Products: Carbon dioxide, carbon monoxide, and low molecular weight organics.

Section 6 – Accidental Release Measures

Procedures to be Followed in Case of Leak or Spill: If a dust cloud is possible due to spills involving a large number of cartridges, remove all sources of ignition such as open sparks, flames or static discharge to prevent the ignition of the dust. Minimize dust generation during clean up. Sweep up spill with a non-metallic broom and non-metallic dustpan. To avoid possible dust explosion, do not use vacuum cleaners to clean up large spills. Contain for disposal. Oil permeated sweeping compound may assist in the clean up of large amounts of toner spilled on nonporous surfaces.

Section 7 – Handling and Storage

Precautions for Safe Handling: When handling, minimize generation of dust. Supply adequate ventilation.

Conditions for Safe Storage: Store away from oxidizing materials. Store in a cool, dry place.

Section 8 – Exposure Controls/Personal Protection

Exposure Limits/Guidelines:

Component	OSHA PEL	ACGIH TLV	ACGIH STEL	IDLH
Styrene acrylate copolymer	(1)	(1)	N/Av	N/Av
Iron oxide	(1)	5 mg/m^3	N/Av	N/Av
Ethylene propylene copolymer	(1)	(1)	N/Av	N/Av
Amorphous silica	(1)	(1)	N/Av	N/Av
Chromium azo dye complex	(1)	(1)	N/Av	N/Av

Note: (1) Specific workplace limits have not been established.

In Canada, consult local authorities for acceptable provincial values.

Personal Protective Equipment:

Gloves: None required for intended use in printer.
Eye Protection: None required for intended use in printer.
Protective Clothing: None required for intended use in printer.

Ventilation: Mechanical room ventilation is recommended.

Section 9 – Physical and Chemical Properties

Color: Black
Physical State: Solid (powder)
Odor: Plastic-like odor
pH: Not applicable
Vapor Pressure: Not available
Boiling Point/Boiling Range: Not applicable
Softening Point/Softening Range: Not available
Evaporation Rate: Not applicable, solid
Solubility in Water: Insoluble
Density: Not available
Percent Volatile: Not applicable, solid
Molecular Weight: Not available
Pressurized (Y/N): N

Section 10 – Stability and Reactivity

Stability: Stable.
Conditions to Avoid: Combustible atmospheres of toner dust. Ignition sources, excessive heat, sparks and open flame.
Materials to Avoid/Incompatibility: Strong oxidizers.
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide, and unidentified organics.
Hazardous Polymerization: This product will not polymerize.

Section 11 – Toxicological Information

Toxicity Data:

Acute Toxicity: Not expected to be acutely toxic. LD_{50} (oral, rat), LD_{50} (dermal, rabbit), and LC_{50} (inhalation, rat) expected to be >5000 mg/kg, based on data from similar toner.

Chronic Toxicity: Not expected to be chronically toxic. Industry tests on similar generic toner showed no signs of overt toxicity. Rats exposed to high levels of toner showed a chronic inflammatory response and a mild to moderate degree of lung fibrosis. There were no pulmonary changes of any type at the lower toner exposure level, which is most relevant in regard to potential human exposures.

Carcinogenicity: Toner is not listed by IARC, NTP, or OSHA.
Teratogenicity: Not available.
Mutagenicity: Not available.

Section 12 – Ecological Information

Environmental Information: Not available.

Section 13 – Disposal Considerations

Disposal Methods/Waste Disposal: If discarded, this product is not a hazardous waste either by listing or by characteristic. However, it is the responsibility of the product user to determine at the time of disposal whether a material has been contaminated and should be classified as a hazardous waste.

Observe all federal, regional, and local regulations when disposing of this substance. Contact local waste vendors for proper disposal.

Section 14 – Transport Information

Mexico/Latin America

Regulations for Land Transportation of Hazardous Materials and Wastes: Not available.
NOM-004-SCT2-1994: Not available.
United Nations Recommendations on the Transport of Dangerous Goods: Not applicable.
North American Emergency Response Guide: Not available.

United States

Department of Transportation (DOT) Subchapter 49CFR: Not regulated.

Section 15 – Regulatory Information

Europe

All ingredients are listed on EINECS, ELINCS, or are exempt.

Canada

WHMIS Classification: None – Manufactured article.

United States

TSCA Inventory Status: Y

California Proposition 65: This product contains no known materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

Section 16 – Other Information