



## MATERIAL SAFETY DATA SHEET

### SECTION 1: CHEMICAL 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  
1-303-739-1111

In U.S.A. Call: 1-800-IBM-4333

In Canada Call: 1-800-IBM-4YOU

**Product Name:** Infoprint 1534 Black Toner Cartridge

**IBM Part Number:** 39V0302-4K; 39V0306-4K Use & Return; 39V0310-8K High Yield; 39V0314 - 8K High Yield Use & Return.

**IBM Material Reference Number:** 940227070

**Trade Names/Synonyms:**

**Product Use:** Black Toner Cartridges for Infoprint Color 1534 Laser Printer

**MSDS Creation Date:** 10/08/2005

**MSDS Revision Date:**

**MSDS Prepared By:** IBM Engineering

### SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Component	%	CAS Number	OSHA PELS	ACGIH TLV
Resin	80-90	292629-36-8	None	None
Wax	5 - 15	9002-88-4	None	None
Carbon Black	5 -10	1333-86-4	3.5 mg/m <sup>3</sup> TWA	3.5 mg/m <sup>3</sup> TWA

### SECTION 3 - HAZARDS IDENTIFICATION

#### **Emergency Overview:**

Black powder with a slight odor. Carbon black has been classified as an IARC 2B carcinogen. May cause respiratory tract or skin irritation. May form flammable or explosive dust-air mixtures. Avoid chronic pulmonary exposures to dust. Avoid exposure to eyes, skin or clothing (will stain). Keep container closed. Use with adequate ventilation.

#### **Routes of Entry and Potential Health Effects:**

##### **Inhalation:**

Short Term Effects: Respiratory tract irritation may occur with exposure to large amounts of dust.

Long Term Effects: Potential risk of irreversible pulmonary effects.\*

\*Chronic exposure is not expected when this product is used as intended.

##### **Skin Contact:**

Short Term Effects: Not an irritant. Low dermal toxicity. Not a dermal sensitizer.



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Long Term Effects:

**Eye Contact:**

Short Term Effects: Toner may act as a mechanical irritant.

Long Term Effects:

**Ingestion:**

Short Term Effects: Low acute oral toxicity. Exposure not probable with intended use.

Long Term Effects:

**Carcinogen Status:**

**IARC:** Y (Carbon Black)

**NTP:** N

**OSHA:** N

**ACGIH:** 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 individual to fresh air. If symptoms persist, seek medical attention.

**Skin Contact:** Wash 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. If irritation develops and persists, seek medical attention.

**Ingestion:** Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.



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## SECTION 5 - FIRE FIGHTING MEASURES

**Flash Point/Range (°C):** Solid, not applicable  
**Autoignition Temperature (°C):** Not applicable  
**Flammable Limits in Air UEL:** Not determined  
**Flammable Limits in Air LEL:** Not determined  
**Extinguishing Media:** Carbon dioxide, water spray or fog, dry chemical or foam  
**Hazardous Combustion Products:** Carbon monoxide, carbon dioxide, unidentified organics  
**Special Exposure Hazards:** 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.

**Special Protective Equipment:** Fire fighters should wear full protective clothing, including self-contained breathing apparatus, if a large number of cartridges are involved.

**NFPA Rating:** Health: 1 Flammability: 1 Reactivity: 0  
**HMIS Classification:** Health: 1 Flammability: 1 Reactivity: 0

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

<b>Personal Precautionary Measures:</b>	None required for intended use in printer.
<b>Environmental Precautionary:</b>	Disposal is subject to national, state, regional, or provincial regulations.
<b>Procedure for Cleaning/Absorption:</b>	If a dust cloud is possible due to a spill, 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 non-metallic broom and dustpan. Contain for disposal. Oil permeated sweeping compound may be useful in cleaning up spills.

## SECTION 7 - HANDLING AND STORAGE

<b>Handling:</b>	To avoid damage to cartridge and accidental contact with toner <b>KEEP OUT OF REACH OF CHILDREN.</b>
<b>Storage:</b>	Store in a cool, dry place. Store away from oxidizing material.



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### SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

#### Exposure Limits:

##### Carbon black:

3.5 mg/m <sup>3</sup>	OSHA TWA PEL
3.5 mg/m <sup>3</sup>	ACGIH TWA TLV - ACGIH A4 - Not classifiable as a human carcinogen
3.5 mg/m <sup>3</sup>	NIOSH recommended 10 hour TWA
0.1 mg/m <sup>3</sup>	NIOSH recommended 10 hour TWA (in the presence of polycyclic aromatic hydrocarbons)

##### Measurement

Method                      Particulate filter; gravimetric; (NIOSH III # 5000).

In Canada, consult local authorities for acceptable provincial values.

**Ventilation:** Provide adequate ventilation (ASHRAE 62).

**Respirator:** No respirator is required under normal conditions of use. Under conditions of frequent or heavy exposure, protection may be needed.

**Eye Protection:** If significant eye exposure is anticipated, the use of chemical splash goggles is recommended.

**Emergency Eye Wash:** Where there is a potential for eye exposure to this substance, an eye wash fountain should be provided within the immediate work area for emergency use.

**Clothing:** Protective clothing is not required under normal conditions.

**Protective Gloves:** If significant skin exposure is anticipated, appropriate gloves should be worn to prevent skin contact with this substance.

#### Other Protective Equipment:

### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Solid powder	<b>Freezing Point/Range (°C):</b>	Not applicable
<b>Color:</b>	Black	<b>Melting Point/Range:</b>	Not determined
<b>Odor:</b>	Faint plastic-like odor	<b>Vapor Density (Air=1):</b>	Not applicable
<b>Specific Gravity:</b>	Not determined	<b>% Volatiles:</b>	Not determined
<b>Solubility in Water:</b>	Insoluble	<b>Evaporation Rate:</b>	Not applicable

### SECTION 10 - STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable
<b>Hazardous Polymerization:</b>	Will not occur
<b>Conditions to Avoid:</b>	High temperatures and flame
<b>Materials to Avoid:</b>	Strong oxidizers



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### SECTION 11 - TOXICOLOGICAL INFORMATION

#### **IBM Toner:**

**Mutagenic Data:** Not available. Similar generic toner was nonmutagenic in a battery of *in vitro* short-term assays, including the Ames *Salmonella* test.

**Carcinogen Status:** Carbon black - IARC Group 2B.

**Acute Toxicity Level:** Low acute toxicity expected based on test results from similar generic toner.

**Target Effects:** No data available.

#### **CARBON BLACK**

**Toxicity Data:** Oral LD<sub>50</sub> (rat) > 15,400 mg/kg; Dermal LD<sub>50</sub> (rabbit) > 3,000 mg/kg (NIOSH RTECS #: FF5800000..

#### **Carcinogenicity Status:**

In 1996 the International Agency for Research on Cancer (IARC) reevaluated carbon black as a Group 2B carcinogen based upon the development of lung tumors in rats receiving chronic inhalation exposures of free carbon black. The effects were observed only in rats exposed to high concentrations of carbon black at levels that induce particle overload of the lung. Studies performed in animal models other than rats (i.e., mice, hamsters) 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.

In contrast to the IARC assessment, neither the Occupational Safety and Health Administration (OSHA) nor the American Conference of Governmental Industrial Hygienists (ACGIH) has listed carbon black as a carcinogen.

Epidemiology studies of workers in the carbon black producing industries of North America and Western Europe do not demonstrate an association between carbon black and cancer, even in high exposure occupational settings. In addition, in its reevaluation of carbon black, IARC concluded that "there is *inadequate evidence* in humans for the carcinogenicity of carbon black". Chronic overexposure to many dusts, including carbon black dust, may result in respiratory tract irritation and slight changes in pulmonary function.

Collectively, the available data from animal and human epidemiology studies suggest that carbon black, as contained in this product, does not present a cancer risk to the end user if the handling and personal protective measures contained within this MSDS are understood and followed.

**Local Effects:** Irritant - inhalation, skin.

**Acute Toxicity Level:** Low acute toxicity expected based on test results of similar generic toner.

**Target Effects:** Toxic overexposure may affect the respiratory system, skin and mucous membranes.

**At Increased Risk From Exposure:** Persons with certain pre-existing upper respiratory disorders, such as bronchitis or asthma.



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### PRODUCT DATA (Toner)

#### **Toxicity Data:**

LD<sub>50</sub> (rat, oral): Not available; expected to be > 10 g/kg based on test results of similar generic toner.

LD<sub>50</sub> (rabbit, skin): Not available; expected to be > 2 g/kg based on test results of similar generic toner.

LD<sub>50</sub> (rat, inhalation): Not available; expected to be > 4.9 g/m<sup>3</sup> based on test results of similar generic toner.

**Acute Toxicity Level:** Low acute toxicity expected based on test results of similar generic toner.

**Chronic Toxicity:** Contents of cartridge are not expected to be 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 lower toner exposure levels, which are the most relevant to potential human exposures. See information in Section 3 and earlier in this section for carbon black carcinogenicity status.

**Sensitization to Product:** N/A

**Irritancy of Product:** N/A

**Reproductive Toxicity:** N/A

**Teratogenicity:** N/A

**Mutagenicity:** N/A

**Toxicologically Synergistic Products:** N/A

### SECTION 12 - ECOLOGICAL INFORMATION

**Mobility:** Not determined

**Bioaccumulative:** Not determined

**Persistence:** Not determined

**Other Information:** None

### SECTION 13 - DISPOSAL CONSIDERATIONS

#### **Waste Disposal:**

This product is not a listed hazardous waste in accordance with Federal Regulation 40 CFR Part 261. If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, 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. Disposal is subject to local, state and federal regulations.



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### SECTION 14 - TRANSPORT INFORMATION

**DOT Status:** Not classified as a hazardous material or substance under US DOT.

**DOT Shipping Name:** Not applicable      **DOT Reportable Quantity:** Not applicable

**Hazard Class:** Not applicable      **DOT Packing Group:** Not applicable



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### SECTION 15 - REGULATORY INFORMATION

<b>TSCA (USA):</b>	All ingredients are listed on the Toxic Substances Control Act (TSCA) inventory, have been registered, or are exempt.
<b>SARA / EPCRA (USA):</b>	None of the ingredients in this product has a final reportable quantity (RQ) under Emergency Planning and Community Right-to-Know Act (EPCRA)- Section 302: Extremely Hazardous Substances (EHS) or notification requirements for EHS under Section 304.
<b>California Proposition 65:</b>	The Proposition 65 listing of carbon black as a chemical known to the State of California to cause cancer only pertains to “airborne, unbound carbon black particles of respirable size”. According to the Office of Environmental Health Hazard Assessment (OEHHA) of the California Environmental Protection Agency, “Exposure to carbon black, per se, does not occur when it is bound within a product matrix, such as rubber, ink or paint.” Carbon black has been shown by materials analyses to be bound in the polymer matrix of toners
<b>DSL (Canada):</b>	All ingredients are listed on the Canadian Domestic Substances List (DSL), have been registered on the Non-Domestic Substances List (NDSL), or are exempt.
<b>EINECS (Europe):</b>	All ingredients are listed on the European Inventory of Existing Commercial Substances (EINECS) list, have been registered on the European List of New Chemical Substances (ELINCS), or are exempt.
<b>AICS (Australia)</b>	All ingredients are listed on the Australian Inventory of Chemical Substances (AICS) list, or are exempt.
<b>ENCS (Japan)</b>	All ingredients are listed on the Existing and New Chemical Substances Inventory, have been registered, or are exempt.
<b>IECSC (China)</b>	All ingredients are listed on the Inventory of Existing Chemical Substances, have been registered, or are exempt.
<b>PICCS (Philippines)</b>	All ingredients are listed on the Philippine Inventory of Chemical and Chemical Substances, have been registered, or are exempt.
<b>ECL (Korea):</b>	All ingredients are listed on the Korean Existing Chemicals List (ECL), have been registered, or are exempt.
<b>WHMIS Hazard Class (Canada):</b>	Not a WHMIS controlled product.





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### SECTION 16 - OTHER INFORMATION

**Reason for revision**

New

**Additional advice**

No information available

**Prepared By**

IBM Printing Systems Division

**Preparer's Address**

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