



# MATERIAL SAFETY DATA SHEET

## Section 1 – Product and Company Identification

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

**For Emergency Source Information**  
**International Emergency Number:**  
**1-303-739-1111**  
**U.S.A. Emergency Number: 1-800-426-4333**

**Product Name:** IBM Infoprint 1334 Black Toner Cartridge  
**Product Trade Names and Synonyms:** none  
**IBM Part Numbers:** 75P5477, 75P5430  
**IBM Item ID Number:** 940142810  
**Product Use:** Printing toner

**MSDS Preparation Date:** April 14, 2004

**MSDS Revision Date:**

## Section 2 – Composition / Information on Ingredients

Component	Percentage	CAS No.	OSHA PEL	ACGIH TLV
Polyester Resin	No data	Trade Secret	None	None
Carbon Black	1-10%	1333-86-4	3.5 mg/m <sup>3</sup> TWA	3.5 mg/m <sup>3</sup> TWA
Amorphous Silica	No data	Trade Secret	None	None

## Section 3 – Hazards Identification

**NFPA Ratings (Scale 0-4):** Health = 1 Fire = 1 Reactivity = 0  
**HMIS Classification (Scale 0-4):** Health = 1 Fire = 1 Reactivity = 0

### **Emergency Overview:**

Black powder with a slight odor. Carbon black has been classified as an IARC 2B (possible human) 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: Low acute inhalation toxicity. Exposure is not probable with intended use.

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. Exposure is not probable with intended use.

Long Term Effects: Not an irritant. Low dermal toxicity. Not a dermal sensitizer. Exposure is not probable with intended use.



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### **Eye Contact:**

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

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

### **Ingestion:**

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

Long Term Effects: Exposure is not probable with intended use.

### **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 the source of contamination and move the individual to fresh air. If symptoms persist, seek medical attention.

**Skin Contact:** Wash with soap and water. If irritation occurs, seek medical attention.

**Eye Contact:** Do not rub eyes. Remove contact lenses. Immediately flush with water 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.

**Aggravated Conditions:** Exposure to high airborne dust concentrations, including toner, may aggravate existing respiratory conditions.

**Notes to Physician:** No specific antidote.

## Section 5 – Fire Fighting Measures

**Means of Extinction:** Carbon dioxide, Water spray or fog, dry chemical or foam.

**Flash Point (Method):** Solid. Not applicable

**Autoignition Temperature:** Not applicable.

**Lower Flammable (Explosive) Limit:** No data available

**Upper Flammable (Explosive) Limit:** No data available

**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 is involved.



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## Section 6 – Accidental Release Measures

**Personal Precautionary Measures:** None required for intended use in printer.

**Environmental Precautionary:** Disposal is subject to national, state, regional, or provincial regulations.

**Procedures for Cleaning / Absorption:** 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

**Precautions for Safe Handling:** To avoid damage to cartridge and accidental contact with toner, keep out of reach of children.

**Conditions for Safe Storage:** Store in a cool, dry place. Store away from oxidizers.

## 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 (Proposed addition 1995-1996)

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.



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### Section 9 – Physical and Chemical Properties

**Color and Physical State:** Black powder

**Odor:** Odorless

**pH:** Not applicable

**Boiling Point:** Not applicable

**Melting Point:** No data available

**Decomposition Temperature:** No data available

**Vapor Pressure:** No data available

**Vapor Density:** No data available

**Density:** 1.2 g/ml at 20°C

**Solubility in water:** Insoluble

**Octanol/Water Partition Coefficient:** No data available

### Section 10 – Stability and Reactivity

**Stability:** Stable.

**Hazardous reactions:** Stable.

**Conditions to avoid:** Ignition sources in dusty air.

**Materials to avoid:** Strong oxidizers.

**Hazardous decomposition products:** Carbon dioxide, carbon monoxide, and unidentified organics.

**Hazardous polymerization:** Will not occur.

### Section 11 – Toxicological Information

#### CARBON BLACK

**Toxicity Data:** >10 gm/kg oral-rat LD<sub>50</sub> (EM Science MSDS); 120 mg/kg intravenous-rat LD<sub>50</sub> (THIDD6).

#### **Carcinogenicity Status:**

In 1996 the International Agency for Research on Cancer (IARC) reevaluated carbon black as a Group 2B carcinogen (possible human 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) have listed carbon black as a carcinogen.



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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 animal data 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:** Slightly toxic by ingestion.

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

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

### **PRODUCT DATA (Toner)**

#### **Toxicity Data:**

LD50 (rat, oral): expected to be > 5000mg/kg

LD50 (rabbit, skin): not available

LD50 (rat, inhalation): not available

**Acute Toxicity Level:** not acutely toxic

**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.

**Carcinogenicity:** Toner is not listed by IARC, NTP, or OSHA.

**Teratogenicity:** No data available.

**Mutagenicity:** Negative.

**Reproductive toxicity:** No data available.

### **Section 12 – Ecological Information**

No information available.

### **Section 13 – Disposal Considerations**



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

## Section 14 – Transport Information

	Proper Shipping Name	Hazard Class	UN/ID Number	Packing Group	Special Provisions	Exceptions
<b>DOT (United States)</b>	Not classified as a hazardous material or substance.					

## Section 15 – Regulatory Information

### Australia

All ingredients are listed in the Australian **Inventory of Commercial Substances (AICS)**, have been registered, or are exempt.

### Canada

**WHMIS Classification:** This product is considered a manufacturing article and therefore is not WHMIS-controlled.

All ingredients are listed on the Canadian **Domestic Substances List (DSL)**, have been registered on the **Non-Domestic Substances List (NDSL)**, or are exempt.

### China

All ingredients are listed on the draft **Chinese Inventory of Chemical Substances**.

### Europe

All ingredients are listed on the **European Inventory of Existing Commercial Substances (EINECS)** or the **European List of Notified Chemical Substances (ELINCS)**.

### Japan

All ingredients are listed on the Japanese **Existing and New Chemical Substances (ENCS)**, have been registered, or are exempt.

### United States

**TSCA Regulations:** All ingredients are listed on the Toxic Substances Control Act inventory. No ingredient is subject to a regulatory action under TSCA restricting import or use. No ingredient requires export notification.

### South Korea

All ingredients are listed on the South Korea **Existing Chemicals List (ECL)**, have been registered, or are exempt.



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### Philippines

All ingredients are listed on the **Philippines Inventory of Chemicals and Chemical substances (PICCS)**, have been registered, or are exempt.

### Section 16 – Other Information

**MSDS Prepared By:** IBM Printing Systems Divisions, Boulder, CO, USA

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