



MATERIAL SAFETY DATA SHEET

Section 1 - Product and Company Identification

IBM CORPORATION
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U.S.A.

FOR EMERGENCY SOURCE INFORMATION
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INTERNATIONAL EMERGENCY NUMBER
1-303-739-1111

In U.S.A., call: 1-800-426-4333

In CANADA, call: 1-800-426-4968

PRODUCT NAME:

IBM Infoprint 1422 6k Toner Cartridge
IBM Infoprint 1422 6k Return Program Toner Cartridge
IBM Infoprint 1422 High Yield Toner Cartridge
IBM Infoprint 1422 Return Program High Yield Toner Cartridge
IBM Infoprint 1532, 1552, 1572 IBM Return Program Toner Cartridge
IBM Infoprint 1532, 1552, 1572 IBM Return High Yield Program Toner Cartridge
IBM Infoprint 1532, 1552, 1572 IBM Return Extra High Yield Program Toner Cartridge

IBM Part Numbers:

IBM Infoprint 1422: 75P6049, 75P6050, 75P6051; 75P6052
IBM Infoprint 1532, IBM Infoprint 1552, Infoprint 1572: 75P6958, 75P6959, 75P6960, 75P6961, 75P6962, 75P6963

IBM Material Reference Number: 940158360

TRADE NAMES/SYNONYMS: None

CHEMICAL FAMILY: Toner

PRODUCT USE: Replacement toner print cartridges for the IBM Infoprint 1422 printers.

CREATION DATE: 17 September 2004

REVISION DATE:

Ingredients	CAS No.	Percent (wt.)
Polyester Resin NJTSRN 80100286-6001P		65-85
Iron Oxide	1317-61-9	6-13
Carbon Black	1333-86-4	1-10
Polymer Wax NJTSRN 80100451-5016		1-5
Amorphous Silica (modified) NJTSRN 80100451-5015		1-3

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.

Hazard Information:

Primary Routes of Exposure: Dust inhalation, skin contact.

Inhalation: Low acute inhalation toxicity. As with exposure to high concentrations of any dust, minimal irritation of the respiratory tract may occur.
 Long Term Effects: Potential risk of irreversible pulmonary effects.*
 *Chronic exposure is not expected when this product is used as intended.

Skin Contact: Not an irritant. Low dermal toxicity. Not a dermal sensitizer.

Eye Contact: Toner may act as a mechanical irritant.

Ingestion: Low acute oral toxicity. Exposure 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 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.

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

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

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

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

Procedure 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

Handling: To avoid damage to cartridge and accidental contact with toner
KEEP OUT OF REACH OF CHILDREN.

Storage: Store in a cool, dry place. Store away from oxidizing material.

Section 8 - Exposure Controls / Personal Protection

Exposure Limits: Carbon black:
3.5 mg/m³ OSHA TWA PEL
3.5 mg/m³ ACGIH TWA TLV - ACGIH A4 - Not classifiable as a human carcinogen
3.5 mg/m³ NIOSH recommended 10 hour TWA
0.1 mg/m³ 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.

Engineering Controls: None required Use in a well ventilated area.

Ventilation: Provide adequate ventilation (ASHRAE 62).

Clothing: Protective clothing is not required under normal conditions.

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

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

Skin Protection: None required for intended use in printer.

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

Emergency Eyes 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.

Section 9 - Physical and Chemical Properties

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

Section 10 - Stability and Reactivity

Chemical Stability: Stable

Hazardous Polymerization:	Will not occur
Conditions to Avoid:	High temperatures and flame
Materials to Avoid:	Strong oxidizers
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide, unidentified organics
Additional Guidelines:	None

Section 11 - Toxicological Information

IBM 4523 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

Acute Toxicity Oral Rat LD50 (mg/kg):

15,400 mg/kg; Dermal LD₅₀ (rabbit) > 3,000 mg/kg (NIOSH RTECS #: FF5800000).

Inhalation:

Low acute inhalation toxicity. As with exposure to high concentrations of any dust, minimal irritation of the respiratory tract may occur. Pure carbon black, a minor component of this product, has been listed by IARC as a group 2B (possible carcinogen). This classification is based on rat "lung particulate overload" studies performed with airborne particulate carbon black. Toner is not listed by IARC, NTP, or OSHA.

Aggravated Conditions:

Exposure to high airborne dust concentrations, including toner, may aggravate existing respiratory conditions.

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

Product data (Toner)

LD₅₀ (rat, oral): Not available; expected to be > 10 g/kg based on test results of similar generic toner..
LD₅₀ (rabbit, skin): Not available; expected to be > 2 g/kg based on test results of similar generic toner..
LD₅₀ (rat, inhalation): Not available; expected to be > 4.9 g/m³ 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.

Section 12 - Ecological Information

Mobility: Not determined
Persistence: Not determined
Bioaccumulative: 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.

Section 14 - Transport Information

DOT Status: Not classified as a hazardous material or substance under US DOT.
DOT Shipping Name: Not applicable
Hazard Class: Not applicable
DOT Reportable Quantity: Not applicable
DOT Packing Group: Not applicable

Section 15 - Regulatory Information

TSCA (USA) All ingredients are listed on the Toxic Substances Control Act (TSCA) inventory, have been registered, or are exempt.

SARA / EPCRA (USA): 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.

- California Proposition 65:** This product contains no known materials at levels which the State of California has found to cause cancer, birth defects or other reproductive harm - California Proposition 65.
- DSL (Canada):** All ingredients are listed on the Canadian Domestic Substances List (DSL), have been registered on the Non-Domestic Substances List (NDSL), or are exempt.
- EINECS (Europe):** 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.
- ENCS (Japan):** All ingredients are listed on the Japanese Existing and New Chemical Substances (ENCS) list, have been registered, or are exempt.
- AICS (Australia):** All ingredients are listed in Australian Inventory of Commercial Substances (AICS), have been registered, or are exempt.
- ECL (Korea):** All ingredients are listed on the Korean Existing Chemicals List (ECL), have been registered, or are exempt.
- WHMIS Hazard Class (Canada):** Not a WHMIS controlled product.

Section 16 - Other Information

The following has been revised since the last issue of this MSDS: No significant revisions to health and safety information.

Additional Information: None

Data are most current known to Lexmark at the time of preparation and are believed to be accurate. No warranty as to their accuracy or completeness is expressed or implied.

*****END OF MSDS*****