Black Toner Cartridge **PN: 1402833. 10R4420**

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL PRODUCT NAME: InfoPrint 4000 Enhanced Printing Toner
IBM Field Use Number:
IBM Material Reference Number: 940010130

TRADE NAMES/SYNOMYMS: Toner K3.5

CHEMICAL FAMILY: Black Toner

PRODUCT USE: Black Toner Cartridge for Infoprint 4000 Laser Printer

IBM Corporation
New Orchard Road
Armonk, New York 10504
U.S.A.
INTERNATIONAL EMERGENCY NUMBER **1-303-739-1111**
24-Hour Emergency Source Information: 1-800-426-4333

In U.S.A. Call: 1-800-IBM-4333 **In Canada Call:** 1-800-IBM-4YOU.

DISTRIBUTED BY: Supplies Distributors SA
Rue Louis Bleriot 5
B-4460 Grace-Hollogne
Belgium
TELEPHONE NUMBER +32 4364 4111

E-mail ADDRESS OF COMPENTENT PERSON: sludwig@us.ibm.com

CHEMICAL MANUFACTURER:

IBM Part Number:

Description	**Part Number**
Black Toner Cartridge for enhanced printing	1402833
Black Toner Cartridge for enhanced printing	10R4420

Creation Date: 2004-Jul-08
Revision Date: 2007-Jun-18

Section 2 - Hazards Identification

The following information is based on testing of the product as a whole and/or characteristics of components.

Emergency Overview: Black powder with a mild 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 Classification: None

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: Not know as a dermal irritant or a dermal sensitizer.

Eye Contact: Dust or powder may irritate eye tissue

Ingestion: Low toxicity.

Carcinogen Status:
IARC: Y (Carbon Black)
NTP: N
OSHA: N
ACGIH: N

Section 3 – Composition, Information on Ingredients

Component	Percent (wt.) Classification	CAS Number Symbol Letters	EINECS/ELINCS Number Risk Phrases
Carbon Black	5-8 None	1333-86-4 None	None
Amorphous Silca	<0.5 None	7631-86-9 None	None

Section 4 - First Aid Measures

Inhalation: If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen.

Skin Contact: For skin contact, wash immediately with soap and water. If necessary, seek medical attention.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. If necessary, seek medical attention.

Ingestion: If the material is swallowed, get immediate medical attention or advice.

Notes to Physician: Provide general supportive measures and treat symptomatically.

Section 5 – Fire Fighting Measures

Flash Point/Range (^{o}C):	Not Applicable
Autoignition Temperature (^{o}C):	
Flammable Limits in Air UEL:	Not Applicable
Flamable Limits in Air LEL:	Not Applicable
Suitable Extinguishing Media:	Foam (preferred), dry chemical, water.
NOT Suitable Extinguishing Media:	No known hazards.
Hazardous Combustion Products:	Carbon Monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Special Exposure Hazards:	
Special Protective Equipment:	Firefighters should wear full protective clothing including self contained breathing apparatus.

Section 6 - Accidental Release Measures

TRANSPORTAION ACCIDENTS: Call Chemtrec at 800-424-9300 or 703-527-3887 for international collect calls.

Personal Precautions:	
Environmental Precautions:	
Small Spill and Leak	Contain by any means necessary. Sweep up the spilled material. Scoop dry solids into a DRY metal container, properly label, and cover. Take immediately to a waste handling area.
Large Spill and Leak	Contain by any means necessary. Sweep up the spilled material. Scoop dry solids into a DRY metal container, properly label, and cover. Take immediately to a waste handling area.
Evacuation Procedure:	Isolate area. Keep unnecessary personnel away.

Section 7 - Handling and Storage

Safe Handling:	Do not breathe fumes or dust from this material.
Safe Storage:	Store at ambient temperature and atmospheric pressure.

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).

Exposure Limits Amorphous Silica

6.0 mg/m3	NIOSH recommended 10 hour TWA

The following components are listed on the Canadian Ingredient Disclosure List (IDL)

Exposure Limits Carbon Black

1%	English Item 309, French Item 1271

Exposure Limits Amorphous Silica

1%	English Item 1403, French Item 1488

Biological Limit Values:	None
Recommended Monitoring Procedures:	None

Occupational Exposure Controls

Engineering Controls:	Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
Ventilation:	Provide adequate ventilation.
Respiratory Protection:	A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever there may be potential for airborne exposure.
Eye Protection:	Wear chemical goggles or a full face shield.
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.
Protective Clothing:	Normal work clothing (long sleeved shirts and long pants) is recommended.
Protective Gloves:	Use impervious gloves.
Other Protective Equipment:	Use good industrial hygiene practices in handling this material.

Section 9 - Physical and Chemical Properties

Physical State:	Fine powder	**Melting Point/Range (°C):**	Not tested
Colour:	Black	**Boiling Point/Range (°C):**	Not applicable
Odour:	Faint plastic-like odor	**Freezing Point/Range (°C):**	Not applicable
Pressurized (Yes/No):	No	**Evaporation Rate:**	Not determined
Specific Gravity:	1.16 (H_2O=1)	**pH:**	Not relevant
Solubility in Water:	No Data (Negligible)	**% Volatiles (by weight):**	Not determined
Solubility in Other:	No Data	**Vapour Density (Air=1):**	Not applicable
Explosive Properties:	Not determined	**Vapour Pressure:**	Not applicable
Oxidizing Properties	Not determined	**Relative Density:**	Not determined
Viscosity:	Not applicable	**Flammability (solid,gas)**	Not determined
Partition Coefficient (n-octanol/water):	Not applicable	**Flash Point (°C) (Closed Cup or Open Cup):**	Not determined

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal conditions
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Keep away from heat, sparks, or open flame.
Incompatibilities with Other Materials:	None known.
Hazardous Decomposition Byproducts:	None known.

Section 11 - Toxicological Information

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: Not known as a dermal irritant or dermal sensitizer

Eye Contact: Dust or powder may irritate eye tissue.

Ingestion: Low toxicity..

PRODUCT DATA (Toner Composition including Carbon Black)

Chronic Toxicity: Industry tests on similar toner formulations showed no signs of overt toxicity. Microscopic examination of the lungs of rats exposed to high levels of toner showed a chronic inflammatory response and a mild to moderate degree of lung fibrosis. At airborne concentrations more relevant to potential human exposure, no evidence of toxicity to the respiratory tract was found.

Acute Toxicity: Low acute inhalation toxicity. As with exposure to high concentrations of any dust, 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.

Repeated Dose Toxicity: No data available.

Reproductive Toxicity: No data available.

Sensitization to Product: No data available.

Irritancy of Product: Predicted to be mildly irritating to upper respiratory tract.

Carcinogenicity:

Mutagenicity: Similar toner formulations were not mutagenic in a battery of *in vitro* genotoxicity assays including the Ames Salmonella/mammalian microsome mutation assay.

Teratogenicity: No data available.

Toxicologically Synergistic Products: No data available.

Toxicokinetics, Metabolism, and Distribution: No data available.

Toxicity Data:

LD_{50} (rat, oral): Not available; Predicted to be > 10 g/kg based on test results of similar toner formulations

LD_{50} (rabbit, skin): Not available; Predicted to be > 2 g/kg based on test results of similar toner formulations.

LC_{50} (rat, inhalation): Not available; Predicted to be > 4.9 g/m^3 based on test results of similar toner formulations.

CARBON BLACK (Alone)

Chronic Toxicity:	Industry tests on similar toner formulations showed no signs of overt toxicity. Microscopic examination of the lungs of rats exposed to high levels of toner showed a chronic inflammatory response and a mild to moderate degree of lung fibrosis. At airborne concentrations more relevant to potential human exposure, no evidence of toxicity to the respiratory tract were found.
Acute Toxicity:	Low acute inhalation toxicity. As with exposure to high concentrations of any dust, 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.
Repeated Dose Toxicity:	Toxic overexposure may affect the respiratory system, skin, and mucous membranes.
Reproductive Toxicity:	No data available.
Sensitization to Product:	No data available.
Irritancy of Product:	Predicted to be mildly irritating to upper respiratory tract.
Carcinogenicity:	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) nor the National Toxicology Program (NTP) 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.
Mutagenicity:	Similar toner formulations were not mutagenic in a battery of *in vitro* genotoxicity assays including the Ames Salmonella/mammalian microsome mutation assay.
Teratogenicity:	No data available.
Toxicologically Synergistic Products:	No data available.
Toxicokinetics, Metabolism, and Distribution:	No data available.
At Increased Risk From Exposure:	Persons with certain pre-existing upper respiratory disorders, such as bronchitis or asthma.

Toxicity Data:

LD_{50} (rat, oral): 15,400 mg/kg
LD_{50} (rabbit, skin): 3,000 mg/kg (NIOSH RTECS #: FF5800000)
LC_{50} (rat, inhalation): Not available; Predicted to be > 4.9 g/m^3 based on test results of similar toner formulations.

Section 12 - Ecological Information

Ecotoxicity: No data available
Aquatic toxicity: No data available
Mobility: No data available
Persistence and Degradability: No data available
Bioaccumulative Potential: No data available
Persistence, Bioaccumulative, and Toxicity Assessment Results: No data available

Other Adverse Effects

Ozone Depletion Potential:
Photochemical Ozone Creative Potential:
Endocrine Disruption Potential:
Global Warming Potential:

Section 13 - Disposal Considerations

Waste Disposal: Dispose of product in compliance with European Union directives, national laws, and local laws and regulations.

Appropriate Disposal Method: Take immediately to a waste handling area.
Waste Management Measures:

Section 14 - Transport Information

Special Precautions:

UN Number:
ICAO Number:
ICAO/IATA Classification: Non-Hazardous material
ICAO Subrisks:
ICAO Packaging Group:
ICAO Labels:
Proper Shipping Name: Non-Hazardous material

ADR/RID Class:
ADR/RID Item:
ADR/RID Labels:
Hazard Code:
IMO Class: Non-Hazardous material
IMDG Page:
IMO Subrisks:
IMO Packaging Group:

Section 15 - Regulatory Information

NFPA Rating: Health: 1 Flammability: 0 Reactivity: 0
HMIS Classification: Health: 1 Flammability: 0 Reactivity: 0
TOXIC SUBSTANCES CONTROL ACT: This product is listed on the U.S. EPA TSCA Inventory.
TSCA Exporting Requirements: No limits established for this product.

INTERNATIONAL CHEMICAL INVENTORIES:
All of the components of this product are listed on the following chemical inventories:

DSL (Canada)	Yes
NDSL (Canada)	Not applicable
ENCS (Japan)	Yes
EINECS (Europe)	No
ELINCS (Europe)	Yes
IECSC (China)	Yes
PICCS (Philippines)	Yes
ECL (Korea)	Yes
AICS (Australia)	Yes

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT TITLE III;

EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW, PER 40 CFR 355, APP. A:

EHS Components	CAS Number	Percent	TPQ lbs and RQ
No limits established for this product.			

313 Components	CAS Number	Percent	Reporting Limit
No limits established for this product.			

SECTION 311/312 CLASSIFICATION:

Acute:	Yes
Chronic:	No
Fire:	No
Pressure:	No
Reactive:	No

OTHER FEDERAL REGULATIONS

The following chemical components are identified under the Clean Air Act HON-Rule for SOCMI Chemicals:

Chemical Name	CAS Number
No regulated components	

The following chemical components are identified under the Clean Air Act (VOC's in SOCMI)

Chemical Name	CAS Number
No regulated components	

The following chemical components are identified under the Clean Air Act as Hazardous Air Pollutants (HAP's):

Chemical Name	CAS Number
No regulated components	

The following chemical components are identified under the Clean Air Act as HON-Rule Hazardous Air Pollutants (HAP's):

Chemical Name	CAS Number
No regulated components	

STATE RIGHT TO KNOW INFORMATION:
The components of this product are listed on the following State Right to Know Lists:

COMPONENT NAME	CAS #	STATE LIST
Carbon black	1333-86-4	California
Carbon black	1333-86-4	Massachusetts-RTK List
Amorphous silica	7631-86-9	Massachusetts-RTK List
Carbon black	1333-86-4	New Jersey-RTK List
Silica, amorphous	7631-86-9	New Jersey-RTK List
Carbon black	1333-86-4	Pennsylvania-RTK List
Silica, amorphous	7631-86-9	Pennsylvania-RTK List

Section 16 - Other Information

Reason for revision: MSDS updated with latest information

Additional advice: None

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