



MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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In CANADA, call: 1-800-IBM-4YOU

PRODUCT NAME:

IBM Infoprint Color 1220 Yellow Toner Cartridge
IBM Infoprint Color 1354 Toner Cartridge, Yellow
IBM Infoprint Color 1454 Yellow Toner Cartridge
IBM Infoprint Color 1464 Yellow Toner Cartridge

IBM Part Numbers:

53P9359, 53P9363, 53P9367, 53P9371
75P4046, 75P4050, 75P4054, 75P4058

IBM Material Reference Number: 940098830

TRADE NAMES/SYNONYMS: IBM 4920 Yellow Toner Cartridge, IBM 4921 Yellow Toner Cartridge, Toner, EP Cartridge, IBM 4924 Yellow Toner Cartridge

CHEMICAL FAMILY: Toner

PRODUCT USE: Replacement toner print cartridges for the IBM Infoprint Color 1220 and IBM Infoprint Color 1354 printers, IBM Infoprint Color 1454, IBM Infoprint Color 1464, 4920 and 4921 machine types.

CREATION DATE: 14 December 2001

REVISION DATE: 20 September 2004

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

TONER

COMPONENT: Polyester Resin

CAS NUMBER: (1)

PERCENTAGE: 78-84

COMPONENT: Copolyester Polymer 561

CAS NUMBER: (1)(2)

PERCENTAGE: 5-15

COMPONENT: Pigment Yellow 180

CAS NUMBER: 77804-81-0

PERCENTAGE: 1-6

COMPONENT: Polyethylene

CAS NUMBER: 9002-88-4

PERCENTAGE: 1-5

COMPONENT: Amorphous Silica (modified)

CAS NUMBER: (1)(3)



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PERCENTAGE: 2-7

COMPONENT: Charge Control Agents

CAS NUMBER: (1)(4)(5)

PERCENTAGE: <2.5

- (1) Trade Secret or Patented Molecule
- (2) New Jersey Trade Secret Registration Number 80100451-5019
- (3) New Jersey Trade Secret Registration Number 80100451-5015
- (4) New Jersey Trade Secret Registration Number 80100451-5017
- (5) New Jersey Trade Secret Registration Number 80100451-5018

SECTION 3 - HAZARDS IDENTIFICATION

EC CLASSIFICATION (CALCULATED): Not determined.

EMERGENCY OVERVIEW:

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.

SIGNS AND SYMPTOMS OF EXPOSURE: Toner on skin or mucous membranes (mouth, eyes, or nose).

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.

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

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. This toner is not expected to be a dermal sensitizer. Exposure not probable with intended use.

LONG TERM EXPOSURE: Rare individuals may note skin rash with repeated contact. Exposure not probable with intended use.

EYE CONTACT:

SHORT TERM EXPOSURE: Toner may act as 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.



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LONG TERM EXPOSURE: No adverse chronic effects known. Exposure not probable with intended use.

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. Seek medical advice if symptoms persist.

SKIN CONTACT: Wash affected area with soap and water. Should irritation occur, obtain 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.

ADVICE TO DOCTOR: There are no specific antidotes. Milk or water may be given to dilute the product.

SECTION 5 - FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY AND EXPLOSION: 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.

EXTINGUISHING MEDIA: CO₂, water spray or fog, dry chemical or foam.

FIRE FIGHTING: NIOSH approved self-contained breathing apparatus may be required if a large number of cartridges are involved.

FLASH POINT (METHOD): Not applicable

LOWER FLAMMABLE LIMIT: Not available

UPPER FLAMMABLE LIMIT: Not available

AUTOIGNITION TEMPERATURE: Not available

HAZARDOUS COMBUSTION PRODUCTS: CO, CO₂, and low molecular weight organics. Avoid breathing smoke.

EXPLOSION DATA: See Conditions of Flammability and Explosion

SENSITIVITY TO MECHANICAL IMPACT: Not available

SENSITIVITY TO STATIC DISCHARGE: See Conditions of Flammability and Explosion

SECTION 6 - ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL 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 nonmetallic broom and dustpan. Contain for disposal. To avoid possible dust explosion, do not use vacuum cleaners to clean up spills. Oil permeated sweeping compound may assist in the cleanup of toner spilled on nonporous surfaces.

SECTION 7 - HANDLING AND STORAGE

Store away from oxidizing materials. When handling, minimize generation of dust. Supply adequate ventilation. To avoid damage to cartridge and accidental contact with toner- keep out of reach of small children. Store in cool dry place.



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SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

Ingredients listed in Section 1: OSHA PEL and ACGIH TLV specific work place limits have not been established.

In Canada, consult local authorities for acceptable provincial values.

VENTILATION: Mechanical room ventilation is recommended.

RESPIRATOR: None required for intended use in printer.

EYE PROTECTION: None required for intended use in printer.

PROTECTIVE GLOVES: None required for intended use in printer.

OTHER PROTECTIVE EQUIPMENT: None required for intended use in printer.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Cartridge contains toner, finely divided yellow solid with plastic-like odor.

ODOR AND APPEARANCE: See above

BOILING POINT: Not applicable

FREEZING POINT: Not applicable

VAPOR PRESSURE: Not applicable

VAPOR DENSITY: Not applicable

SPECIFIC GRAVITY: Not applicable

WATER SOLUBILITY: Insoluble

VOLATILITY: Not applicable, solid

PH: Not applicable

ODOR THRESHOLD: Not available

EVAPORATION RATE: Not applicable

COEFFICIENT OF WATER/OIL DISTRIBUTION: 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.

INCOMPATIBLE MATERIALS: Strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂ and other unidentified organics.

POLYMERIZATION: This product will not polymerize.

SECTION 11 - TOXICOLOGICAL INFORMATION

PRODUCT DATA:

ACUTE TOXICITY LEVEL: Not acutely toxic: LD₅₀ (oral, rat) and LC₅₀ (inhalation, rat) expected to be >5000mg/kg, based on data from similar toners.

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. Toner is not listed by IARC, NTP, or OSHA.



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SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL IMPACT RATING (0-4): Not available

ACUTE AQUATIC TOXICITY: Not available

DEGRADABILITY: Not available

LOG BIOCONCENTRATION FACTOR (BCF): Not available

LOG OCTANOL/WATER PARTITION COEFFICIENT: Not available

SECTION 13 - DISPOSAL CONSIDERATIONS

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

This product is not regulated as a hazardous material under current U.S. DOT.

SECTION 15 - REGULATORY INFORMATION

All ingredients are registered under the Toxic Substances Control Act (TSCA) have been registered, or are exempt.

All ingredients are listed on the European Inventory of Existing Chemicals Substances (EINECS) list, have been registered on the European List of New Chemical Substances (ELINCS), or are exempt.

This product is a “manufactured article” and is exempt from the new substances provisions of the Canadian Environmental Protection Act. All ingredients are listed on the Canadian Domestic Substances List (DSL), have been registered on the Non- Domestic Substances list (NDSL) or are exempt. WHMIS Classification - “Manufactured article” therefore, product is exempt under WHMIS.

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

None of the product ingredients are listed as Emergency Planning and Community Right to Know Act (EPCRA)- Section 302: Extremely Hazardous Substances (EHS).

None of the product components are present above the minimum quantities of listed chemicals in EPCRA Section 313 Supplier Notification.

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

SECTION 16 - OTHER INFORMATION



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