



**MATERIAL SAFETY DATA SHEET
LEXMARK BLACK HIGH RESOLUTION
PRINT CARTRIDGE: P/N 10N0016**

Revised Date: 07/24/02

Lexmark International, Inc.
740 West New Circle Rd.
Lexington, Kentucky 40550-1876 Information: 1-859-232-3000

Emergency: 1-859-232-3333

Lexmark has determined that Material Safety Data Sheets are not required for print cartridges. For customer convenience, Lexmark provides product information in this familiar format.

SECTION 1 - CHEMICAL PRODUCTS & COMPANY IDENTIFICATION

Name: Lexmark Black High Resolution Print Cartridge

P/N: 10N0016

Additional PN: 10N0217 (17)

Chemical Family: Ink

Product Use: Lexmark Color Jetprinter Z13, Z23, Z25, Z33, Z35, X74, X75,
Compaq JetPrinter IJ650

SECTION 2 - GENERAL COMPOSITION OF INK CONTAINED IN CARTRIDGE

COMPONENT	PERCENT (wt.)	CAS #	OSHA PEL	ACGIH TLV
Carbon Black	1-6	1333-86-4	3.5 mg/m ³ (1)	3.5 mg/m ³ (1)
Acrylic Terpolymer	0.1-2	(2)	(3)	(3)
Water Soluble Organic Solvents	10-20	(2)	(3)	(3)
Hydroxylated Alkane	1-10	(2)(4)	(3)	(3)
Acrylic Resin	0.1-5	(2)	(3)	(3)
Water	>55	7732-18-5	(3)	(3)

- Notes:**
- (1) Total dust (measured as carbon black).
 - (2) Trade secret of patented molecule.
 - (3) Specific workplace exposure limits have not been established.
 - (4) New Jersey Trade Secret Registration Number (NJTSRN) 80100451-5004.

SECTION 3 - HAZARDS IDENTIFICATION

The following information is based on testing of the ink and on the characteristics of component chemicals:

Primary Routes of Entry: Skin contact, ingestion of ink.

Signs and Symptoms of Exposure: Ink stains on skin or mucus membranes (mouth, eyes & nose) may cause discomfort.

Medical Conditions Aggravated by Exposure: None known at intended levels of use.



POTENTIAL HEALTH EFFECTS:

Inhalation:	<u>Short Term Exposure</u>	--	If ink mist is inhaled, respiratory tract irritation may occur.
	<u>Long Term Exposure</u>	--	No adverse chronic effects expected.
Skin Contact:	<u>Short Term Exposure</u>	--	Ink may be slightly irritating to the skin.
	<u>Long Term Exposure</u>	--	No adverse chronic effects expected. Not a dermal sensitizer.
Eye Contact:	<u>Short Term Exposure</u>	--	Not an eye irritant.
	<u>Long Term Exposure</u>	--	No adverse chronic effects expected.
Ingestion:	<u>Short Term Exposure</u>	--	Low oral toxicity.
	<u>Long Term Exposure</u>	--	No adverse chronic effects known or expected, but based on component characteristics, gastrointestinal effects, liver and kidney toxicity, and CNS effects are possible if large quantities of ink are repeatedly ingested.

SECTION 4 - FIRST AID MEASURES

Inhalation: Remove to fresh air. Seek medical attention if breathing becomes difficult.
Skin Contact: Remove contaminated clothing. Flush affected area with water. Seek medical attention if irritation develops and persists.
Eye Contact: 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: Immediately rinse mouth out with plenty of water. If within 30 minutes after ingestion, give victim a small glass of water or milk (NEVER give anything by mouth to an unconscious person). Contact physician or poison center. Do not induce vomiting unless instructed to do so by a physician or poison center.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point: Not applicable. **Autoignition:** Not applicable.
Flammability Limits (%): Not applicable.
Extinguishing Media: Water, foam, carbon dioxide or dry chemical.
Firefighting: Fire may produce small amounts of hazardous decomposition products such as carbon dioxide, carbon monoxide, and unidentified organics. NIOSH approved self-contained breathing apparatus may be required if a large volume of ink is involved.
Fire and Explosion Hazard: No unusual fire or explosion hazards are known for this product.
Hazardous Combustion Products: Oxides of carbon, organic acids, low molecular weight organics.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Occupational Spill: Absorb small ink spills with cloth or paper towels or other suitable material. Place in a container for disposal. For large spills, dike around spill with absorbent material. Transfer contaminated diking material to separate, suitable containers for recovery or disposal. Ventilate area and wash spill site after material pickup is complete. Unless specifically permitted, keep waste out of sewers, watershed and waterways.

SECTION 7 - HANDLING AND STORAGE

STORE IN COOL, DRY PLACE

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Mechanical room ventilation.
Eye Protection: None needed for intended use in printer.
Protective Clothing: None needed for intended use in printer.
Gloves: None needed for intended use in printer.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Description: Black liquid with faint odor.
Pressurized: No
Water Solubility: Fully Miscible
Evaporation Rate (Butylacetate=1): Approx. 3.5
Vapor Density (Air=1): Approx. 1.6
Freezing Point: Approx. -12 to -15⁰C
pH: 7.0-8.5
Percent Volatile : Approx. 18.7
Specific Gravity: Approx. 1.0 mg/l

SECTION 10 - STABILITY AND REACTIVITY

Conditions to Avoid: None known.
Incompatibilities: None known.
Hazardous Decomposition: Oxides of carbon, acid gases, low molecular weight organics.
Polymerization: This product will not polymerize.

SECTION 11 - TOXICOLOGY INFORMATION

Acute Toxicity: Not expected to be acutely toxic; LD₅₀ (oral, rat) expected to be >2000 mg/kg.
Chronic Toxicity: Not expected to be chronically toxic based on component information, volume, concentration, and intended use. Pure carbon black, a minor component of this ink, has been listed by IARC as group 2B (possible carcinogen). This classification is based on rat "lung particulate overload" studies performed with airborne particulate carbon black. Ink is not listed by IARC, NTP, or OSHA.

SECTION 12 - ECOLOGICAL INFORMATION

No data available.

SECTION 13 - DISPOSAL INFORMATION

This product is not a listed or hazardous waste in accordance with Federal Regulation 40 CFR Part 261. If discarded, this product would not be a hazardous waste either by listing or by characteristic. However, 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. In accordance with RCRA 40 CFR Sections 264.314 and 265.314, the placement of any liquid in landfills is prohibited. Disposal is subject to local, state and federal regulations.



SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not regulated as hazardous material.

SECTION 15 - REGULATORY INFORMATION

All ingredients are registered under the **Toxic Substances Control Act (TSCA)** or under polymer exemption.

All ingredients are exempt, registered or considered registered (polymers) under the **European Inventory of Existing Commercial Chemical Substances (EINECS/ELINCS)**.

Preparation not classified as dangerous (**EU Directives 67/548/EEC; 1999/45/EC**).

All ingredients are listed on or are considered polymers under the **Canadian Domestic Substances List (DSL) or Non Domestic Substances List (NDSL)**.

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 at levels which the State of California has found to cause cancer, birth defects or other reproductive harm - **California Proposition 65**.

SECTION 16 - OTHER

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



**MATERIAL SAFETY DATA SHEET
 COLOR HIGH RESOLUTION PRINT CARTRIDGE:
 P/N 10N0026**

Revised Date: 07/24/02

Lexmark International, Inc.
 740 West New Circle Rd.
 Lexington, Kentucky 40550-1876 Information: 1-859-232-3000

Emergency: 1-859-232-3333

Lexmark has determined that Material Safety Data Sheets are not required for print cartridges. For customer convenience, Lexmark provides product information in this familiar format.

SECTION 1 - PRODUCT IDENTIFICATION

Name: Color High Resolution Print Cartridge

P/N: 10N0026

Additional PN: 10N0227 (27)

Family: Contains water soluble inks

Product Use: Lexmark Color Jetprinter Z13, Z23, Z25, Z33, Z35, X74, X75,
 Compaq JetPrinter IJ650

SECTION 2 - GENERAL COMPOSITION OF INKS CONTAINED IN CARTRIDGE

COMPONENT	PERCENT (WT.) (1)	CAS#	OSHA PEL	ACGIH TLV
Water Soluble Dyes	2.0-3.5	(2)(3)	(4)	(4)
Water Soluble Organic Solvents	12-25	(2)	(4)	(4)
Water Soluble Organic Solvent	4-8	(2)(5)	(4)	(4)
Hydroxylated Alkane	3-7	(2)(6)	(4)	(4)
Nitrates	1-3	(2)	(4)	(4)
Water	>68	7732-18-5	(4)	(4)

Notes:

- (1) Based on total weight of ink in cartridge.
- (2) Trade secret or patented molecule.
- (3) NJTSRN 80100451-5005 (Magenta)
- (4) Specific workplace limits have not been established.
- (5) NJTSRN 80100451-5013
- (6) NJTSRN 80100451-5004
- NJTSRN 80100451-5007 (Cyan)
- NJTSRN 80100451-5012 (Yellow)

SECTION 3 - HAZARDS IDENTIFICATION

The following information is based on data obtained from testing the ink contained in the cartridge and on characteristics of ink component chemicals.

Primary Routes of Entry: Skin contact, ingestion of ink.

Signs and Symptoms of Exposure: Ink stains on skin or mucus membranes (mouth, eyes & nose) may cause discomfort.

Medical Conditions Aggravated by Exposure: None known at intended levels of use.



POTENTIAL HEALTH EFFECTS:

Inhalation:	<u>Short Term Exposure</u> -	If ink mist is inhaled, respiratory tract irritation may occur. Exposure not probable with intended use.
	<u>Long Term Exposure</u> -	No adverse chronic effects known. Exposure not probable with intended use.
Skin Contact:	<u>Short Term Exposure</u> -	Ink is not a skin irritant.
	<u>Long Term Exposure</u> -	No adverse chronic effects known. Ink is not a dermal sensitizer. Exposure not probable with intended use.
Eye Contact:	<u>Short Term Exposure</u> -	Ink may be slightly irritating to the eye.
	<u>Long Term Exposure</u> -	No adverse chronic effects known. Exposure is not probable with intended use.
Ingestion:	<u>Short Term Exposure</u> -	Oral toxicity is low. Exposure not probable with intended use.
	<u>Long Term Exposure</u> -	No adverse chronic effects expected, but based on component characteristics, liver, kidney, gastrointestinal, respiratory tract and CNS effects are possible if large quantities of ink are ingested. Exposure not probable with intended use.

SECTION 4 - FIRST AID MEASURES

Inhalation: Remove to fresh air. Seek medical attention if breathing becomes difficult.
Skin Contact: Remove contaminated clothing. Flush affected area with water. Seek medical attention if irritation develops and persists.
Eye Contact: 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: Immediately rinse mouth out with plenty of water. If within 30 minutes after ingestion, give victim a small glass of water or milk (NEVER give anything by mouth to an unconscious person). Contact physician or poison center. Do not induce vomiting unless instructed to do so by a physician or poison center.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point: Not applicable
Autoignition: Not applicable
Flammability Limits (%): Not applicable
Extinguishing Media: Water, foam, carbon dioxide or dry chemical
Firefighting: Fire may produce small amounts of hazardous decomposition products such as carbon dioxide, carbon monoxide, and unidentified organics. NIOSH approved self contained breathing apparatus may be required if a large number of cartridges is involved.
Fire and Explosion Hazard: No unusual fire or explosion hazards are known for this product.
Hazardous Combustion Products: Oxides of carbon, organic acids, low molecular weight organics.



SECTION 6 - ACCIDENTAL RELEASE MEASURES

The volume of liquid in a cartridge is minimal. Absorb small ink spills with cloth or paper towels or other suitable material. Place in a container for disposal. For large spills, involving a large number of cartridges, dike around spill with absorbent material. Transfer contaminated diking material to separate, suitable containers for recovery or disposal. Ventilate area and wash spill site after material pickup is complete. Unless specifically permitted, keep waste out of sewers, watershed and waterways. See section 13 for information on the disposal of recovered material.

SECTION 7 - HANDLING AND STORAGE

To avoid damage to cartridge and accidental contact with ink - KEEP OUT OF REACH OF SMALL CHILDREN.

STORE IN A COOL, DRY PLACE.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: None required for intended use. Mechanical room ventilation is recommended.
Eye Protection: None required for intended use in printer.
Protective Clothing: None required for intended use in printer.
Gloves: None required for intended use in printer.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Description: Printer cartridge with sealed ink reservoirs. Ink has faint odor.
Melting Point: Not applicable **Freezing Point:** Not applicable
Pressurized: No **Boiling Point:** Not applicable
pH: Not applicable (ink 7.0-8.5) **Specific Gravity (H₂O = 1):** Not applicable
Evaporation Rate: Not applicable **Water Solubility:** Ink is water soluble.
% Volatility: Not applicable

SECTION 10 - STABILITY AND REACTIVITY

Conditions to Avoid: None known **Incompatibilities:** None known
Hazardous Decomposition: Oxides of carbon, acid gases, low molecular weight organics
Polymerization: This product will not polymerize.

SECTION 11 - TOXICOLOGY INFORMATION

Acute Toxicity: Not expected to be acutely toxic. Based on testing of inks and similar ink formulations, LD₅₀ (oral, rat) expected to be >2500 mg/kg for inks.
Chronic Toxicity: Not expected to be chronically toxic based on component information, volume, concentration, and intended use.

SECTION 12 - ECOLOGICAL INFORMATION

No data available



SECTION 13 - DISPOSAL INFORMATION

This product is not a listed or 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, 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. In accordance with RCRA 40 CFR Sections 264.314 and 265.314, the placement of any liquid in landfills is prohibited. Disposal is subject to local, state and federal regulations.

SECTION 14 - TRANSPORTATION INFORMATION

This product is not regulated as a hazardous material by the **DOT**.

SECTION 15 - REGULATORY INFORMATION

All ingredients are registered under the **Toxic Substances Control Act (TSCA)** or under polymer exemption.

All ingredients are exempt, registered or considered registered (polymers) under **European Inventory of Existing Commercial Chemical Substances (EINECS/ELINCS)**.

Preparation not classified as dangerous (**EU Directives 67/548/EEC; 1999/45/EC**).

All ingredients are exempt, registered or considered registered (polymers) under the **Canadian Domestic Substances List (DSL)**.

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 at levels which the State of California has found to cause cancer, birth defects or other reproductive harm **California Proposition 65**.

SECTION 16 - OTHER

Disclaimer: Information is most current known to Lexmark at the time of preparation and is believed to be accurate. No warranty as to its accuracy or completeness is expressed or implied.