LEXMARK™

MATERIAL SAFETY DATA SHEET
OPTRA LASER PRINTER CARTRIDGE
P/N 1382100

REVISED DATE: 4/28/00

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: Optra Laser Print Cartridge
P/N: 1382100
Additional P/N: 1382099, 1382101, 1382120, 1382138, 1382144, 1382149, 1382150, 1382151, 1382428, 1382438, 1382495, 1382505, 1382508, 1382509, 1382525, 1382530, 12A0140, 1382152, 1382181, 1382600, 1382601, 1382688, 1382700
Chemical Family: Cartridge contains toner
Product Use: Optra Laser Printers

SECTION 2 - GENERAL COMPOSITION OF TONER CONTAINED IN CARTRIDGE

COMPONENT	PERCENT (wt.)	CAS#	OSHA PEL	ACGIH TLV
Styrene Acrylic Copolymer	80-95	25987-66-0	(1)	(1)
Carbon Black	3-8	1333-86-4	3.5 mg/m^3	3.5 mg/m^3
Particle Control Agent	1-4	(2)	15 mg/m^3 5 mg/m^3 (3)	10 mg/m^3
Trade Secret Ingredient	1-4	(4)	(1)	(1)
Trade Secret Ingredient	1-4	(5)	(1)	(1)

Notes:
(1) Specific work place exposure limits have not been established.
(2) New Jersey Trade Secret Registration Number (NJTSRN) 80100451-5000.
(3) Measured as respirable dust.
(4) New Jersey Trade Secret Registration Number (NJTSRN) 80100451-5002.
(5) New Jersey Trade Secret Registration Number (NJTSRN) 80100451-5003.

SECTION 3 - HAZARDS IDENTIFICATION

Primary Routes of Entry: Inhalation of dust, skin contact.
Signs and Symptoms of Exposure: Toner on skin or mucus membranes (mouth, 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, 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.
Long Term Exposure - No adverse chronic effects known at intended 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.
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 a mechanical irritant.
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.
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. If symptoms persist, seek medical attention.
Skin Contact: Wash affected area 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. Seek medical attention if irritation develops and persists.
Ingestion: If conscious, immediately wash mouth out with plenty of water. Seek medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point: Not applicable **Autoignition:** Not available
Extinguishing Media: CO_2, water spray or fog, dry chemical, or foam

Firefighting: NIOSH approved self contained breathing apparatus may be required if large number of cartridges is involved.

Fire and Explosion Hazard: Like many finely divided materials, toner dust, in high concentrations can form an explosive mixture in air which, if ignited, could result in dust explosion.
Hazardous Combustion Products: Carbon dioxide, carbon monoxide, and low molecular weight organics.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Occupational Spill: 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 dust pan. To avoid possible dust explosion, do not use vacuum cleaners to cleanup large spills. Contain for disposal. Oil permeated sweeping compound may assist in the cleanup of toner spilled on nonporous surfaces.

SECTION 7 - HANDLING AND STORAGE

Store in a cool dry place. Store away from oxidizing materials.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Mechanical room ventilation
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.
Respirator: None required for intended use in printer.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Description: Black powdery material with plastic-like odor

Pressurized: No
Vapor Pressure: Not available
Vapor Density (Air = 1): Not applicable
Melting Point: Not available
Boiling Point: Not applicable
pH: Not applicable
Specific Gravity ($H_{20 = 1}$):
Evaporation Rate: Not applicable
Water Solubility: Negligible
% Volatility: Not applicable

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable
Conditions to Avoid: Combustible atmospheres of toner dust. Ignition sources, excessive heat,sparks and open flame.

Incompatibilities: Strong oxidizers
Hazardous Decomposition: Carbon dioxide, carbon monoxide, and unidentified organics.
Hazardous Polymerization: This product will not polymerize.

SECTION 11 - TOXICOLOGY INFORMATION

Acute Toxicity: Not acutely toxic: LD_{50} expected to be > 5000 mg/kg, based on data from similar toners.
Chronic Toxicity: 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 the lower toner exposure level, which is most relevant in regard to potential human exposures. Pure carbon black, a minor component of this toner, has been listed by **IARC** as a group 2B (possible carcinogen) based on rat "lung particulate overload" studies. Toner is not listed by **IARC, NTP**, or **OSHA**.

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 - WASTE DISPOSAL INFORMATION

This product is not a listed or hazardous waste in accordance with Federal Regulation 40 CFR Part 261 or the Code of California Regulations Title 22. 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 - 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 registered or consider registered (polymers) under **Canada Domestic Substances List (DSL).**

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

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

None of the product ingredients has a final Reportable Quantity (RQ) under **EPCRA Title III - CERCLA Section 302**.

This material contains no ingredients which, if spilled or released in quantities equal to or greater than the Reportable Quantity (RQ), are subject to the reporting requirements of **CERCLA and/or EPCRA (40 CFR parts 302 and 355)**.

This product contains less than 5% of a zinc compound. Zinc compounds are subject to the reporting requirement of **Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372**.

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**.

This product contains a component (carbon black CAS# 1333-86-4) at a concentration above the MSL de minimus concentration - **Massachusetts Right to Know**.

This product contains a component (carbon black CAS# 1333-86-4) at a concentration above the de minimus concentration - **New Jersey Right to Know.**

This product contains a component (carbon black CAS# 1333-86-4) at a concentration above the de minimus concentration - **Pennsylvania Right to Know**.

SECTION 16 - OTHER

Disclaimer: 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.