

**MATERIAL SAFETY DATA SHEET**

MAY BE USED TO COMPLY WITH OSHA'S  
HAZARD COMMUNICATION STANDARD  
29CFR 1910.1200

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DATE PREPARED 3/13/02 SIGNATURE OF PREPARER ( OPTIONAL)

**SECTION 1 CHEMICAL PRODUCT / NAME**

**Product/Chemical Name:** Lexmark T 520 / 522 Toner  
**CAS Number:** Mixture  
**Other Designations:** N/A  
**General Use:** Laser Printer

**SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS**

Ingredient Name:	CAS NUMBER	%	OSHA PEL	ACGIH TLV	OTHER LIMITS
Toner is regulated under OSHA as particulate not otherwise regulated:					
Styrene-Acrylate Copolymer	29497-14-1	< 95			
Carbon Black	1333-86-4	< 10	3.5 mg/m <sup>3</sup>		
Polypropylene	9003-07-0	< 2			
Organic pigment	84179-66-8	< 1	0.5 mg/m <sup>3</sup>		
Amorphous Silica	68909-20-6	< 1	80 mg/m <sup>3</sup>		

N/A = NOT APPLICABLE

**SECTION 3 HAZARDOUS IDENTIFICATION**

<b>Primary Entry Routes:</b> Inhalation	HMIS
<b>Target Organs:</b> N/A	H 1
<b>Acute Effects:</b> N/A	F 1
<b>Inhalation:</b> Slight irritation of respiratory tract.	R 0
<b>Eye:</b> Dust may cause irritation by mechanical abrasion.	PPE
<b>Skin:</b> Slight irritation.	Sec.8
<b>Ingestion:</b> None known.	
<b>Carcinogenicity:</b> Carbon black is reclassified as a group 2B by IARC, but inhalation tests using a typical toner showed no association between toner and animal tumors.	
<b>Medical Conditions Aggravated By long-term Exposure:</b> Accumulation of dust in the respiratory system may cause congestion.	
<b>Chronic Effects:</b> If these materials are used in a manner that could generate airborne particles (dust), it is recommended that the dust be treated as a NUISANCE PARTICULATE according to the American Conference of Government Industrial Hygienists (ACGIH)(TLV=10mg/m <sup>3</sup> ).	

**SECTION 4 FIRST AID MEASURES**

**Inhalation:** Remove to fresh air. Treat any irritation symptomatically. Call a physician if condition persists.

**Eye Contact:** In case of contact immediately flush with plenty of low pressure water for at least 15 minutes. Remove any contact lenses to ensure thorough flushing.

**Skin Contact:** Wash well with soap and running water.

**Ingestion:** N/A

*After first aid, get appropriate in-plant paramedic or community medical support if serious sign and symptoms persist.*

**Note to Physicians:** N/A

**Special Precautions / procedures:** N/A

## Section 5 FIRE FIGHTING MEASURES

Flash Point:	N/A
Flash Point Method:	N/A
Burning Rate:	N/A
Auto Ignition Temperature:	Not Determined
LEL:	N/A
UEL:	N/A
Flammability Classification:	1 Slight ( HMIS, NFPA )
Extinguishing Media:	Water spray, dry chemical, foam, carbon dioxide, or halon type extinguishers.
Unusual Fire or explosion hazards:	May form flammable dust-air mixture.
Hazardous combustion products:	Carbon monoxide, carbon dioxide, nitrogen oxide and smoke. Under certain conditions some aliphatic aldehydes and carboxylic acids may form.
Fire- Fighting Instructions:	Do not release runoff from fire control methods to sewers or waterways.
Fire-Fighting Equipment:	Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus ( SCBA ) with full facepiece operated in pressure-demand or positive-pressure mode.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill / Leak Procedures:	N/A
Small Spills:	Scoop into container for disposal, suction up remaining material with high efficiency vacuum cleaner.
Large Spills:	Scoop into container for disposal, suction up remaining material with high efficiency vacuum cleaner.
Containment:	For large spills, avoid suspending particles, collect for later disposal. Do not release into sewers or waterways.
Cleanup:	No special requirements.
REGULATORY REQUIREMENT :	N/A

## SECTION 7 HANDLING AND STORAGE

Handling Precautions:	Keep containers closed at all times. Avoid creating dust. Keep away from ignition sources.
Storage Requirements	Store in a cool, dry location.
Regulatory Requirements:	N/A

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:	
Ventilation:	Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (sec.2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.
Administrative Controls:	
Respiratory Protection:	Seek professional advise prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operation ( cleaning spills, reactor vessels, or storage tanks), wear an SCBA. <i>Warning! Air-purified respirators do not protect workers in oxygen-deficient atmospheres.</i>
Protective Clothing/Equipment:	Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye-and face-protection regulations (29CFR 1910.133). Contact lenses are not eye protective devices. appropriate protection must be worn instead of, or in conjunction with contact lenses.
Safety Stations:	Make emergency eyewash stations and washing facilities available in work area.
Contaminated Equipment:	Separate contaminated work clothing from street clothes. Launder before re-use. Remove this material from your shoes and clean personal protective equipment.
Comments:	Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking using the toilet, or applying cosmetics

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Solid	<b>Water Solubility:</b>	Negligible
<b>Appearance and Odor:</b>	Black, free flowing powder.	<b>Other Solubilities:</b>	N/A
<b>Odor Threshold:</b>	N/A	<b>Boiling Point:</b>	N/A
<b>Vapor Pressure:</b>	N/A	<b>Freezing/Melting Point:</b>	N/A
<b>Vapor Density(Air=1):</b>	Heavier than air.	<b>Viscosity:</b>	N/A
<b>Formula Weight:</b>	N/A	<b>Refractive Index:</b>	N/A
<b>Density:</b>	N/A	<b>Surface Tension:</b>	N/A
<b>Specific Gravity:</b>	(H <sub>2</sub> O=1, at 4 <sup>0</sup> C): 1.1	<b>%Volatile:</b>	N/A
<b>pH:</b>	N/A	<b>Evaporation Rate:</b>	N/A

**SECTION 10 STABILITY AND REACTIVITY**

<b>STABILITY:</b>	N/A
<b>POLYMERIZATION:</b>	N/A
<b>CHEMICAL INCOMPATIBILITIES:</b>	N/A
<b>CONDITIONS TO AVOID:</b>	N/A
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	N/A

**SECTION 11 TOXICOLOGICAL INFORMATION****CARCINOGENICITY:**

In 1996, the IARC reevaluated carbon black as a GROUP 2B carcinogen (possible human carcinogen). This evaluation is given to carbon black for which there is inadequate human evidence, but sufficient animal evidence. The latter is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung. Studies performed in animal models other than rats have not demonstrated as 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 exposure and tumor developments and rats.

**MUTAGENICITY:**

AMES test is negative.

**CHRONIC EFFECTS:**

In a study in rats (H. Muhle) by chronic inhalation exposure to a typical toner, a mold to moderate degree of lung fibrosis was observed in 92% of the rats in the concentration (16 mg/m3) exposure group. And a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle ( 4mg/m3) exposure group. But no pulmonary changes in the lowest ( 1 mg/m3) exposure group, the most relevant level to potential human exposures.

**SECTION 12 ECOLOGICAL INFORMATION**

<b>Ecotoxicity:</b>	N/A
<b>Environmental Fate:</b>	N/A
<b>Environmental Degradation:</b>	N/A
<b>Soil Absorption / Mobility:</b>	N/A

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Disposal:** Follow all applicable federal, state, and local regulations.

<b>Disposal Regulatory Requirements:</b>	N/A
<b>Container Cleaning and Disposal:</b>	N/A

**SECTION 14 TRANSPORT INFORMATION**

**DOT Transportation Data ( 49 CFR 172.101 ):** Not specifically listed

<b>Shipping Name:</b>	N/A	<b>Packaging Authorizations</b>		<b>Quantity Limitations</b>	
<b>Shipping Symbol:</b>	N/A	a) Exceptions:	N/A	a) Passenger, Aircraft, or	
<b>Hazard Class:</b>	N/A	b)Non-bulk Packaging:	N/A	Railcar:	N/A
<b>ID No.:</b>	N/A	c) Bulk Packaging:	N/A		
<b>Packing Group:</b>	N/A	<b>Vessel Stowage Requirements</b>			
<b>Label:</b>	N/A	a) vessel stowage: N/A			
<b>Special Provisions</b>	N/A	b)Other: N/A			

## SECTION 15 REGULATORY INFORMATION

### EPA Regulations:

RCRA Hazardous Waste Number: Not listed ( 40 CFR 261.33 )

RCRA Hazardous Waste Classification: ( 40 CFR 261 ): Not classified

CERCLA Hazardous Substance (40 CFR 302.4) listed/unlisted specific per RCRA, sec. 3001;

CWA sec.311 (b)(4);

CWA, Sec. 307(a),CAA,Sec.112

CERCLA Reportable Quantity(RQ): Not listed

SARA 311/312 Codes: N/A

SARA Toxic Chemical ( 40 CFR 372.65 ): Not listed

SARA EHS (Extremely Hazardous Substance ) ( 40 CFR 355 ): Not listed, Threshold Planning Quantity (TPQ )

### OSHA Regulations:

Air Contaminant ( 29 CFR 1910.1000< Table Z-1-A ): Particulates not otherwise regulated.

**State Regulations:** Check your states regulations that may specifically list copy machine toner.

## SECTION 16 OTHER INFORMATION

Prepared By: N/A

Revision Notes: N/A

Additional Hazard Rating System: N/A

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