XEROX

Material Safety Data Sheet

MSDS No.: A-0065
Date: 12/2/87
Revision: 4/7/94

Manufacturer: Xerox Corporation
Rochester, N.Y. 14644

Health Emergency Tel. No. : (716) 422-2177
Transportation Emergency: (716) 422-1230
Safety Information Tel. No.: (800) 828-6571

Section I - Product Identification

Trade Names/Synonyms: 5100 Dry Ink

Chemical Name: None

Part No. : FX: 6R258, 6R262;
XCI: 6R556;
RX: 6R90159;
Included in kits:
USMG: 502S30917;
RX:502S30918;
FX: 502S30919;
XCI: 502S30920, 6R82269

Ingredients	CAS No.
Styrene/butadiene copolymer (60-65%)	9003-55-8
Acrylic resin (20-25%)	9017-48-5
Carbon black (5-15%)	1333-86-4
Polyolefin (1-6%)	9003-07-0
Quaternary ammonium salt (<1%)	3843-16-1

Section II - Emergency and First Aid

Eyes: Flush with water.
Skin: Wash with soap and water.
Inhalation: Remove from exposure.
Ingestion: Dilute stomach contents with several glasses of water.
Primary Route of Entry: Inhalation
Symptoms of Overexposure: Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust.
Medical Conditions Generally Aggravated by Exposure: None when used as described by product literature.
Additional Information: See Sections V and VII.

Section III - Toxicology and Health Information

This material has been evaluated by Xerox Corporation.

Oral LD_{50}: >10 g/kg (rats) practically non-toxic.
Dermal LD_{50}: >2 g/kg (rabbits) practically non-toxic.
Inhalation LC_{50}: >5 mg/l (rats, 4 hr exposure) practically non-toxic.[1]
>20 mg/l (rats,calculated 1 hr exposure) non-poisonous, DOT.[1]
Eye Irritation: Not an irritant.
Skin Sensitization: Not a sensitizer.
Skin Irritation: Not an irritant.
Human Patch: Non-irritating, non-sensitizing
Mutagenicity: No mutagenicity detected in Ames, Pol A^+/A^-, in vitro CHO, and CHO/HGPRT Assays.
Carcinogens: None present
Aquatic LC_{50}: >1,000 mg/l (fathead minnows) non-toxic.
Additional Information: Test results noted above are based on toxicity data for toner.

TLV: 10 mg/m^3 (total dust)
PEL: 15 mg/m^3 (total dust)
5 mg/m^3 (respirable dust)
STEL: None established
Ceiling: None established
XEL[2]: 2.5 mg/m^3 (total dust)
0.4 mg/m^3 (respirable dust)

In a Xerox sponsored chronic inhalation study in rats using a special test toner, there were no lung changes at all in the lowest exposure level (1 mg/m^3), the most relevant level to potential human exposures. A very slight degree of fibrosis was noted in 25 % of the animals at the middle exposure level (4 mg/m^3) while a slight degree of fibrosis was observed at the highest exposure level (16 mg/m^3) in all animals. These findings are attributed to "lung overloading," a generic response to excessive amounts of any dust retained in the lungs for a prolonged interval. The special test toner was ten times more respirable than commercially available Xerox toner to comply with EPA testing protocol and would not function properly in Xerox equipment.

[1]Based on testing similar xerographic toner materials. [2] XEL - Xerox Exposure Limit

Section IV - Physical Data

Appearance/Odor:	Black powder / faint odor	**Softening Range:**	85°C to 100°C
Boiling Point:	N.A.	**Melting Point:**	N.A.
Solubility in Water:	Negligible	**Specific Gravity ($H_2O=1$):**	~3
Evaporation Rate:	N.A.	**Vapor Pressure (mm Hg):**	N.A.
Vapor Density (Air=1):	N.A.	**pH=**	N.A.
Volatile	N.A.%(Wgt.) N.A.%(Vol.)		

Section V - Fire and Explosion Data

Flash Point (Method Used): N.A.

Flammable Limits LEL: N.A. UEL: N.A.

Extinguishing Media: Water, dry chemical, carbon dioxide or foam.

Special Fire Fighting Procedures: Avoid inhalation of smoke. Wear protective clothing and self-contained breathing apparatus.

Fire and Explosion Hazards: Toner is a combustible powder. Like most organic materials in powder form, when dispersed in air, it can form explosive mixtures.

Section VI - Reactivity Data

Stability:	**Unstable**		**Hazardous Polymerization:**	**May Occur**	
	Stable	X		**Will Not Occur**	X

Hazardous Decomposition Products: Products of combustion may be toxic. Avoid breathing smoke.

Incompatibility (Materials to Avoid): None known

Section VII - Special Protection Information

Respiratory Protection: None required when used as intended in Xerox equipment.
Eye Protection: None required when used as intended in Xerox equipment.
Protective Gloves: None required when used as intended in Xerox equipment.
Other: For use other than normal customer - operating procedures (such as in bulk toner processing facilities), goggles and respirators may be required. For more information, contact Xerox.

Section VIII - Special Precautions

Handling and Storage: None

Conditions to Avoid: Avoid prolonged inhalation of excessive dust.

Section IX - Spill, Leak, and Disposal Procedures

For Spills or Leakage: Sweep up or vacuum spilled toner and carefully transfer into a sealable waste container. Sweep slowly to minimize generation of dust during clean-up. If a vacuum is used, the motor must be rated as dust tight. A conductive hose bonded to the machine should be used to reduce static buildup (See Section V). Residue can be removed with soap and cold water. Garments may be washed or dry cleaned, after removal of loose toner.

Waste Disposal Method: When disposed, this material is not a hazardous waste according to Federal Regulation 40 CFR 261. However, State and Local requirements may be more restrictive. Therefore, consultation with the appropriate State and Local waste disposal authorities is advised. Incinerate only in a closed container.

Section X - Transportation Information

DOT Proper Shipping Name: Not Regulated
Hazard Classification: N. A. **ID Number:** N. A.

Section IV - Physical Data

Appearance/Odor:	Solid /odorless	Softening Range:	N.A.
Boiling Point:	N.A.	Melting Point:	N.A.
Solubility in Water:	Insoluble	Specific Gravity (H_2O = 1):	N.A.
Evaporation Rate:	N.A.	Vapor Pressure (mm Hg):	N.A.
Vapor Density (Air = 1):	N.A.	pH =	N.A.

Volatile N.A. %(Wgt.) N.A. %(Vol.)

Section V - Fire and Explosion Data

Flash Point (Method Used): N.A.

Flammable Limits LEL: N.A. UEL: N.A.

Extinguishing Media: Water, carbon dioxide, foam.

Special Fire Fighting Procedures: When in a machine, treat as an electrical fire.

Fire and Explosion Hazards: Exposure to high temperatures can result in melting and pyrolysis. Fumes may cause respiratory symptoms. Delayed effects may occur up to 72 hours.

Section VI - Reactivity Data

Stability:		Hazardous Polymerization:	
Unstable		May Occur	
Stable	X	Will Not Occur	X

Hazardous Decomposition Products: Oxides of selenium.

Incompatibility (Materials to Avoid): Strong acids

Section VII - Special Protection Information

Respiratory Protection: None required when used as intended in Xerox equipment.
Eye Protection: None required when used as intended in Xerox equipment.
Protective Gloves: None required when used as intended in Xerox equipment.
Other: None required when used as intended in Xerox equipment.

Section VIII - Special Precautions

Handling and Storage: Avoid exposure to high temperatures.

Conditions to Avoid: Flames, direct heat.

Section IX - Spill, Leak, and Disposal Procedures

For Spills or Leakage: Particles detached through physical damage may be disposed of as indicated below.

Waste Disposal Method: Casual disposal leading to incineration or regular landfill according to local, state, and federal ordinances. Customers are encouraged to participate in environmental conservation by returning the spent unit to Xerox Corporation for recycling using the Cartridge Return Kit. Kits, for some of the part numbers on this data sheet, may be obtained by calling 1-800-822-2200.

Section X - Transportation Information

DOT Proper Shipping Name: Not Regulated
Hazard Classification: N. A. ID Number: N. A.

XEROX

Material Safety Data Sheet

MSDS No.: C-0309
Date: 1/25/85
Revision: 9/8/94

Manufacturer: Xerox Corporation
Rochester, N.Y. 14644

Health Emergency Tel. No. : (716) 422-2177
Transportation Emergency : (716) 422-1230
Safety Information Tel. No. : (800) 828-6571

Section I - Product Identification

Trade Names/Synonyms: 1065/1075/1090/4090/4050/ 4135/4235/ 4650/ 5016/ 5018/5021/5026/5028/5034/ 5046/5047/5065/ 5090/5090-S/5100/5126/ 5321/5328/5334/5335/5365/5380/5385/ 5388/ 5390/5775/DocuTech 90/ DocuTech135 Photoreceptor

Part No. : 1R300, 1R301, 1R302, 1R85, 1R88, 1R91, 1R104, 1R122, 1R425, 1R427 13R412, 1R119, 13R67, 13R7, 1R98, 13R9, 13R74, 1R115, 13R37, 13R13, 13R18 ; RX: 1R107, 13R68, 13R34; XLA: 13R69, 13R35; XCl: 13R520, 13R511, 13R505; FX: 13R31

Chemical Name: None

Ingredients	CAS No.
Polyester film (65-70%)	25038-59-9
Polycarbonate (20-25%)	25037-45-0
Tertiary diamine (10-15%)	65181-78-4
Polyvinyl carbazole (<5%)	25067-59-8
Selenium (<1%)	7782-49-2

Section II - Emergency and First Aid

Eyes:	Not applicable
Skin:	Wash with soap and water.
Inhalation:	Not applicable
Ingestion:	Not applicable
Primary Route of Entry:	Skin
Symptoms of Overexposure:	None
Medical Conditions Generally Aggravated by Exposure:	None when used as described by product literature.
Additional Information:	See Sections V and IX.

Section III - Toxicology and Health Information

This material has been evaluated by Xerox Corporation.

Oral LD_{50}:	>5 g/kg (rats) practically non-toxic.
Dermal LD_{50}:	N.A.
Inhalation LC_{50}:	N.A.
Eye Irritation:	Not an irritant.
Skin Sensitization:	Not a sensitizer.
Skin Irritation:	Not an irritant.
Human Patch:	Non-irritating, non-sensitizing
Mutagenicity:	No mutagenicity detected in Ames, Pol A+/A-, and WP_2 Assays.
Carcinogens:	None present
Aquatic LC_{50}:	>500 mg/l (fathead minnows) non-toxic.
Additional Information:	Biodegradation/non-biodegradable; Leaching Test/negative.

TLV:	0.2 mg/m³ (selenium)
PEL:	0.2 mg/m³ (selenium)
STEL:	None established
Ceiling:	None established
XEL[1]:	0.05mg/m³ (selenium)

[1]XEL - Xerox Exposure Limit