RICOH MATERIAL SAFETY DATA SHEET

Ricoh Fax Toner Cassette Type 1160 Black

Date Prepared : 2002/02/19
MSDS Number : 430347
Product Number: 430347

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identification

Product Name : Ricoh Fax Toner Cassette Type 1160 Black
Product Number : 430347
Chemical Name : Mixture
CAS Number : 0-00-0

Company Identification

Company Name : Ricoh Corporation
Address : 5 Dedrick Place
West Caldwell, NJ USA
Emergency telephone Number : (800)336-MSDS (6737)
Telephone Number for Information : (973)882-5218

Model use: 3310L

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients	CAS #	Contents %	ACGIH (TLV)			OSHA (PEL)	
			TWA	STEL	C	TWA	C
Polyester Resin	Confidential	50-80	8mg/m3	10mg/m3	N/A	N/A	N/A
Styrene Acrylic Polymer	25767-47-9	10-40	N/a	N/A	N/A	N/a	N/A
Carbon Black	1333-86-4	<15	3.5mg/m3	N/A	N/A	3.5mg/m3	N/A
Wax	8015-86-9	<5	N/a	N/A	N/A	N/a	N/A
Dye	31714-55-3	<5	N/a	N/A	N/A	N/a	N/A

SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview

HMIS Health = 1 Flammability = 1 Reactivity = 0 PPE : See Section 8

Potential Health Effects

Primary Entry Routes
Inhalation : Yes
Skin : No
Ingestion : Yes

Carcinogenicity :

Carbon Black was reclassified as a Group 2B by IARC in 1996 based on the result of only the inhalation study in rats. However there was not observed the incidence of tumors on the test results on dermal or oral studies. Also 2-years inhalation study using a typical toner containing carbon black showed no association between toner exposure and animal tumors.

Medical Conditions Aggravated by Exposure :

Chronic Effects :

Prolonged inhalation of excessive dust may cause lung damage. It is attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lung for a prolonged interval. Use of this product, as intended, does not result in inhalation of excessive dust.

SECTION 4 FIRST AID MEASURES

Inhalation : Gargle with water, move to place in fresh air. If unsuccessful, get medical attention.
Skin contact : Wash thoroughly with soap and water.
Eye Contact : Try to remove with eye drops or flush with water. If unsuccessful, get medical attention.
Ingestion : Dilute stomach contents with several glasses of water. If unsuccessful, get medical attention.

SECTION 5 FIRE-FIGHTING MEASURES

Flash Point Not applicable
Burning Rate (mm/sec) Not available
Autoignition Temperature (C) Not available
Flammable Limits (%) **LEL** Not available
UEL Not available

Extinguishing Media : Carbon dioxide, dry chemicals, foam or water
Fire-Fighting Instructions : Generally by sprinkling or extinguisher.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions : Minimize inhalation of dust.
Environment Precautions : Keep product out of sewers and watercourses.

Method for Cleaning up : If spilled, sweep up or pick up by vacuum cleaner (rated for toner extraction).

SECTION 7 HANDLING AND STORAGE

Handling (technical measures, precautions, safe handling material)
Do not handle in areas where wind blows.
Flying powder may enter eyes.
Minimize breathing dust.

Storage (technical measures, storage condition, packaging material)
Avoid direct sunlight.
Do not keep this over 35C.
Keep out of reach children.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation	None needed under normal use condition.
Respiratory Protections (Specify type)	None required under normal conditions of use.
Eye Protection :	None required under normal conditions of use.
Protective Gloves	None required under normal conditions of use.
Protective Clothing or Equipment	None required under normal conditions of use.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Form	Powder
Color	Black
Odor	Slightly plastic odor
pH	Not applicable
Boiling Point (C)	Not applicable
Vapor Pressure(Pa)	Not applicable
Vapor density(Air=1)	Not applicable
Density (g/cm3)	approx. 1.2
Formula Weight	Not applicable
Melting Point (C)	Not available
Viscosity (Pa)	Not applicable
Volatile (%)	-
Evaporation Rate(n-BuAc=1)	Not applicable

Water Solubility (g/L)	Insoluble
Other Solvent name	-
Other Solvent Solubility(g/L)	-

SECTION 10 STABILITY AND REACTIVITY

Stability

Condition to Avoid	Not applicable in normal use.
Material to Avoid	Not applicable in normal use.
Hazardous Polymerization	None
Hazardous Decomposition or Byproducts	Styrene

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity

Acute Oral Toxicity :	Rat: 5000mg/kg
Acute Dermal Toxicity :	Not available
Acute Inhalation Toxicity :	Not available

Sensitization

Acute Skin Irritation :	Non-irritant
Acute Eye Irritation :	Not applied
Acute Allergenic Effects :	non-skin sensitive

Special Effects

Carcinogenicity

In 1996 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 an association between carbon black and lung tumors. Moreover, 2-years cancer bioassay using a typical toner preparation containing carbon black did not demonstrate an association between toner exposure and tumor development in rats.

Mutagenicity	Negative (Ames test)
Effects on the reproductive system	No data is available on this product.

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Teratogenic Not available

SECTION 12 ECOLOGICAL INFORMATION

Persistence/Degradability Not known
Bioaccumulation Not known in bioaccumulation.
Ecotoxicity
Acute toxicity for Fish >500 (mg/kg/96hr)
Acute toxicity for daphnia Not available
Algae inhibition test Not available

SECTION 13 DISPOSAL CONSIDERATION

Recommended Methods for safe Environmentally Preferred Disposal

Used toner should be disposed of in an environmentally appropriate manner and in accordance with governmental regulations. Do not incinerate.

SECTION 14 TRANSPORT INFORMATION

International regulations

RID/ADR Not applicable
DOT 49 CFR Not applicable
ADNR Not applicable
IMDG Code Not applicable
ICAO-TI/ATA-DGR Not applicable
The UN Classification Number Not applicable

Specific Precautionary Transport Measures Avoid direct sunlight. Do not keep this over 35C.
Specific Materials to Avoid None in normal use.

SECTION 15 REGULATION INFORMATION

Regulation : Not known

SECTION 16 OTHER INFORMATION

Explanation of Hazardous Materials Identification System (HMIS) & National Fire Protection Association (NFPA) hazard rating systems :

Both the HMIS and NFPA systems use number from "0" to "4" to show the degree of hazard in an uncontrolled situation:
0=Minimum hazard 1=Slight hazard 2=Moderate hazard 3=Serious hazard 4=Severe hazard.
Colors may also be used in both systems :
Blue= Health hazard Red= Fire hazard Yellow= Reactivity hazard White= Indicate a special hazard.
HMIS will specify any Personal Protective Equipment required (PPE).
NFPA will specify OX(oxidizer), Acid(acid), ALK(alkali), COR(corrosive), W(use no water), xx(radioactive).

References:

1) IARC(1996) "IARC Monograph on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol.65, Printing Process and Printing Inks, Carbon Black and some Nitro Compounds", Lyon, pp149-261
2) H.Muhle, B.Bellman, O.Creutzenberg, C.Dasenbrock, H.Emst, R.Kilpper, J.C.MacKenzie, P.Morrow, U.Mohr, S.Takenaka and R.Mermelstein(1991) "Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats" Fundamental and Applied Toxicology 17, pp280-299