Ricoh Corporation MATERIAL SAFETY DATA SHEET

Section I. General Information

MSDS Identifier Code

Supplier ID: Ricoh Product Code: 887523

Identity: Ricoh FT Toner Type 410 - Black

Manufacturer's Name and Address:

Ricoh Corporation 5 Dedrick Place

West Caldwell, NJ 07006

Emergency Telephone Number: (800) 336-6737

Telephone Number for Information: (201) 882-2000, (800) 336-6737

Synonyms & Common Names: Ricoh FT Toner Type 410 - Black

Uses: FT4418, FT4480, FT4421, FT4415, FT4220, FT4222, FT4215

Chemical Formula: Mixture

Registry numbers

CAS Number: 0-00-0 RTECS Number: N/App

Date Prepared: 03/25/91 Filed/Prepared By: Ricoh CQA/EA Division

Section II. Hazardous Ingredients/Identity Information

Composition

Component	%	CAS #	OSHA Pel	ACG IH
Polyester Resin (CAS# Confidential) Styrene Acrylic Polymer Polyolefine Carbon Black	57.00 04.00	0-00-0 25036-19-5 9003-07-0 1333-86-4	N/App	
Polyolefine is listed on the IARC Monograph. Carbon Black is listed on the IARC Monograph and the Massachusetts Substance List. The IARC has evaluated the evidence for the carcinogenicity of Carbon Black and Polyolefine as inadequate to determine a carcinogenic risk for humans.				
All components of this mixture comply with the United States TSCA.				
THIS PRODUCT IS NON-HAZARDOUS				

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Exposure Limits (TLV/PEL)

OSHA: See data above NIOSH: Not applicable ACGIH: See data above State: Not applicable

Other: None

Section III. Physical/Chemical Characteristics

Boiling Point: Not applicable Specific Gravity: 1.2g/cm3
Vapor Pressure: Not applicable % Volatile by Volume: Not applicable Melting Point: 80C or higher Vapor Density (Air=1): Not applicable

Evaporation Rate (n-BuAc=1): Not applicable

Solubility in Water: Less than 0.1%

Appearance and Odor: Black powder with slight plastic odor

Section IV. Fire and Explosion Hazard Data

Flash Point and Method: Not applicable

Explosive Limits: LEL N/App UEL N/App

Comments: Not applicable

Extinguishing Media: CO2, dry chemicals, foam or water

Special Fire-Fighting Procedures: No special fire-fighting procedure is necessary.

Unusual Fire and Explosion Hazards: Airborne dispersal of most finely divided organic powders such as toner may form an explosive mixture. Do not incinerate loose or spilled toner.

Section V. Reactivity Data

Stability: Stable

Conditions to Avoid: Not applicable

Incompatibility (Materials to Avoid): Not applicable

Hazardous Decomposition or Byproducts: Carbon monoxide and other decomposition products in the case of incomplete combustion.

Hazardous Polymerization: Will not Occur Conditions to Avoid: Not applicable

Section VI. Health and Hazard Data

Routes of Entry: Eyes, inhalation, ingestion

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Health Hazards of Short-Term exposure (Acute)

Eyes: May cause temporary eye discomfort.

Skin: No skin irritation

Inhalation: Gasping

Ingestion: Greater than 5g/kg bodyweight

Health Hazards of Long-Term exposure (Chronic): A Xerox sponsored chronic inhalation study in rats using a special test toner revealed there were no lung changes at all in the lowest exposure level (lmg/m3), 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 (4mg/m3) while a slight degree of fibrosis was observed at the highest exposure level (16mg/m3) 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 toner to comply with EPA testing protocol and would not function properly in Xerographic equipment.

Carcinogenicity: See Section II

NTP? No IARC Monographs? Yes OSHA Regulated? No

Signs and Symptoms of Exposure: Not applicable

Medical Conditions Generally Aggravated by Exposure: Not applicable

Emergency and First Aid Procedures

First Aid

Eyes: Try to remove with eye drops or flush with water. If unsucessful, get medical attention.

Skin: Wash thoroughly with soap and water.

Inhalation: Remove from exposure.

Ingestion: Dilute stomach contents with several glasses of water.

Additional Information: Ames test result: Negative

Section VII. Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled: If spilled, sweep up using an approved toner vacuum cleaner with a .5 micron filter or smaller such as the Atrix AAA Toner Vacuum (Ricoh EDP Code 342MIV). Use of a vacuum cleaner not rated for toner particulate could be a potential fire hazard and/or result in personal injury.

Remove residue with soap and water.

Waste Disposal Method: Used toner should be disposed of in an environmentally

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safe manner and in accordance with governmental regulations. Do not incinerate loose or spilled toner. (See section IV). Disposal regulations vary from locality to locality, therefore, consult your local office of the EPA to determine proper method of disposal.

Precautions to Be Taken in Handling and Storing: Cleanse skin thoroughly after contact, before breaks and meals, and at the end of work periods. Keep out of reach of children.

Other Precautions: Not applicable

Section VIII. Control Measures

Respiratory Protection: None required under normal conditions of use.

Ventilation

Local Exhaust: None required under normal conditions of use.

Special: None

Mechanical (general): None required under normal conditions of use.

Other: None

Protective Gloves: None required under normal conditions of use.

Eye Protection: None required under normal conditions of use.

Other Protective Clothing or Equipment: None

Work and Hygenic Practices: Cleanse skin thoroughly after contact, before breaks and meals, and at the end of work periods.