Safety Data Sheet (ISO form)

Date prepared 02/03/2001

1.Product and Company Identification

Product Name INFOTEC TONER CASSETTE TYPE D-1 (I-3692)

Company Name: Ricoh Asia Industry (Shenzhen) Ltd.
Address: Color TV Industrial Zone, North Huanggang Road, Shenzhen, P.R.China
Tel. Number: +86-755-3223296
Emergency Tel.: +86-755-3223296

2.Composition/Information on Ingredients

Substance or Preparation
Preparation

Chemical Nature

Ingredients	CAS.No.	Contents(%)
Polyester resin	Confidential	58
Magnetite	1309-38-2	20
Styrene-Acrylic-Polymer	25036-19-5	15
Carbon Black	1333-86-4	3
Wax	8015-86-9	3
Silica	7631-86-9	1

Components Contributing to The Hazard
Applicable for it mentioned below

Their Chemical or Generic Name/Their Concentration or Concentration Range
Not relevant %

3.Hazards Identification (Most Important Hazard)

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

Potential Health Effects

Primary Entry Routes
Inhalation: No
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.

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.

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

CO_2,dry chemicals,foam or water

Fire-Fighting Instructions

No special fire protecting method is required.

6.Accidental Release Measures

Personal Precautions

Minimize inhalation of dust.

Environment Precautions

Keep product out of sewers and watercourses.

Methods for Cleaning Up

If spilled, sweep up or pick up by vacuum cleaner (rather for toner extraction). Remove residue with soap and water.

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 conditions,packaging material)
Avoid direct sunlight
Do not keep this over 35º
Keep out of reach of children

8.Exposure Controls/Personal Protection

Ventilation
Local exhaust equipment is needed.

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.

9.Physical and Chemical Properties

Physical State
Form :Powder
Color:Black
Odour:Slightly sour smell

Information

pH	:Not applicable
Boiling Point(ºC)	:Not applicable
Vapor Pressure(Pa)	:Not applicable
Vapor Density(AIR=1)	:Not applicable
Density (g/cm3)	:Approx.1.45
Formula Weight	:Not applicable
Melting Point (C)	:Not applicable
Viscosity (Pa)	:Not applicable
Volatile (%)	:-
Evaporation Rate (n-BuAc=1)	:Not applicable

Solubility

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

10.Stability and Reactivity

Stability
Stable

Conditions to Avoid
Not applicable in normal use.

Materials to Avoid
None under normal use condition

Hazardous Polymerization
None

Hazardous Decomposition or Byproducts
Carbon dioxide; Water

11.Toxicological Information

Acute Toxicity
Acute Oral Toxicity
Rat: >=5000mg/kg (The acute lethal oral does to rats of this toner was demonstrated to be greater than 5000mg/Kg bodyweight)
Acute Dermal Toxicity
:Not available
Acute Inhalation Toxicity
:Not available

Sensitization
Acute Skin Irritation :non-irritant (PII=0.0)
Acute Eye Irritation :not applied
Acute Allergenic Effects:Non-skinsensitive (Did not produce evidence of skin sensitization)

Specific Effects
Carcinogencity:
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(shows on evidence of mutagenic activity)
Effects on The Reproductive System:No data is available on this product.
Teratogenic :Not available

12.Ecological Information

Persistence/Degradability:not known

Bioaccumulation
Not available

Ecotoxicity
Acute Toxicity for Fish :Not available (mg/kg/96hr)
Acute Toxicity for Daphnia :Not available (mg/kg/48hr)
Algae Inhibition Test :Not available (mg/kg/72hr)

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.

14.Transport Information

International Regulations
RID/ADR:Not applicable

DOT 49 CFR:Not applicable

ADNR :Not applicable
IMDG Code :Not applicable
ICAO-TI/IATA-DGR :Not applicable
The UN Classification Number :Not applicable

Specific Precautionary Transport Measures
Avoid direct sunlight. Do not keep this over 35º

Specific Materials to Avoid
None in normal use.

15.Regulation Information

Regulations
Not known

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

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