

# Material Safety Data Sheet (ISO form)

Date Prepared 99/07/23

## 1. Product and Company Identification

Product Name RICOH TONER TYPE 2210D BLACK

Company Name : Ricoh Company,Ltd.

Address : 16-1 Honda-machi Numazu-shi Shizuoka-ken, 410-8505 Japan

Telephone Number : 0559-20-1000, Japan

Emergency Telephone Number : 0559-20-1000, Japan

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## 2. Composition/Information on Ingredients

Substance or Preparation  
Preparation

Chemical Nature

Ingredients	CAS.No.	Contents(%)
Polyester resin	Confidential	60 ~ 80
Styrene-Acrylic-Polymer	25767-47-9	10 ~ 30
Carbon Black	1333-86-4	7 ~ 15
Wax	8015-86-9	<5
Dye	31714-55-3	<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)

Adverse Human Health Effects  
Not applicable in normal use.

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.

Environmental Effects  
Not applicable in normal use.

Physical and Chemical Hazards  
Not applicable in normal use.

The Classification of The Chemical Product

Not applicable

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#### 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.

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#### 5. Fire-Fighting Measures

##### Extinguishing Media

CO<sub>2</sub>, dry chemicals, foam or water.

##### Specific Method

Generally by sprinkling or extinguisher.

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#### 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 (rated for Toner extraction).  
Remove residue with soap and water.

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#### 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 35°C.

Keep out of reach of children.

## 8.Exposure Controls/Personal Protection

### Respiratory Protections

None required under normal conditions of use.

### Hand Protection

None required under normal conditions of use.

### Eye Protection

None required under normal conditions of use.

### Skin and Body Protection

None required under normal conditions of use.

## 9.Physical and Chemical Properties

### Physical State

Form : Powder

Color : Black

Odour : Slightly plastic odor

### Information

pH : not applicable Measuring Temp.(°C) : -

Boiling Point(°C) : not applicable

Flash Point(°C) : not applicable

Explosion Properties(°C) : This product is considered a nonexplosive material under normal use condition.

Vapor Pressure(Pa) : not applicable Measuring Temp.(°C) : -

Vapor Density(AIR=1) : not applicable

Density (g/cm<sup>3</sup>) : approx.1.2 Measuring Temp.(°C) : 25

### Solubility

Water Solubility(g/L) : Insoluble

Water Solubility Measuring Temp.(°C) : -

Other Solvent name : -

Other Solvent Solubility(g/L) : -

Other Solvent Solubility Measuring Temp.(°C) : -

### Octanol/Water Partition Coefficient

non-biodegradable

## 10.Stability and Reactivity

### Conditions to Avoid

Not applicable in normal use.

### Materials to Avoid

Not applicable in normal use.

### Hazardous Decomposition Products

carbon monoxide and other decomposition product may occur in case of incomplete combustion

Styrene

## 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-skingsensitive

### Specific 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  
Effects on The Reproductive System : No data is available on this product.  
Teratogenic : not available.

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## 12.Ecological Information

Persistence/Degradability : non-biodegradable

### Bioaccumulation

Not known in bioaccumulation.

### Ecotoxicity

Acute Toxicity for Fish : >500 (mg/kg/96hr)  
Acute Toxicity for Daphnia : not available (mg/kg/48hr)  
Algae Inhibition Test : not available (mg/kg/72hr)

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## 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 35°C.

### Specific Materials to Avoid

None in normal use.

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## 15.Regulation Information

### Regulations

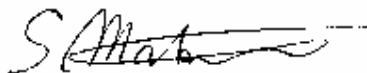
not known

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## 16.Other Information

### 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



Signature

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