

Material Safety Data Sheet (ISO form)

Date prepared 24/10/1995

1. Product and Company Identification

Product Name: RICOH TONER CASSETTE TYPE 70

Company Name: Ricoh Company Ltd. (OEM product)
 Department: Environment Safety Center, Corporate Environment Office
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2. Composition/Information on Ingredients

Substance or Preparation
Preparation

Chemical Nature

| Ingredients | CAS.No. | Contents (%) |
|--------------------------|-------------|--------------|
| Polyester Resin | 117581-13-2 | >80 |
| Carbon Black | 1333-86-4 | 1~5% |
| Polypropylene | 9003-07-0 | 1~5% |
| Organic pigment | | 1-5% |
| Quaternary ammonium salt | | <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. In addition, 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

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

Flush with water for 15 minutes. If unsuccessful, get medical attention.

Ingestion

Dilute stomach contents with several glasses of water. If unsuccessful, get medical attention.

5. **Fire-Fighting Measures**

Extinguishing Media

CO₂, dry chemicals, foam or water

Specific Method

Generally by sprinkling or extinguisher

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).

7. **Handling and Storage**

Handling (technical measures, precautions, safe handling material)

Do not handle 'windy' areas, since flying powder may enter eyes.

Minimize breathing dust.

Storage (technical measures, storage conditions, packaging material)

Avoid direct sunlight.

Do not expose to temperature 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
Odor: Slight plastic odor

Information

| | | | |
|------------------------------|---|----------------------|------|
| pH | : not applicable | Measuring Temp.(°C) | :- |
| Boiling Point(°C) | : not applicable | | |
| Flash Point(°C) | : no Flash Point | | |
| Explosion Properties (°C) | : This product is considered a non-explosive material under normal use condition. | | |
| Vapor Pressure(Pa) | :not applicable | Measuring Temp.(°C) | :- |
| Vapor Density(AIR=1) | :not applicable | | |
| Density (g/cm ³) | :approx. 1.2 | Measuring Temp. (°C) | : 25 |

Solubility

Water Solubility(g/L) : Insoluble
Water Solubility Measuring Temp. (°C) : 25
Other Solvent name :-
Other Solvent Solubility(g/L) :-
Other Solvent Solubility Measuring Temp. (°C):-

Octanol/Water Partition Coefficient
Not known

10. Stability and Reactivity

Conditions to Avoid
Not applicable in normal use.

Materials to Avoid
Not applicable in normal use.

Hazardous Decomposition Products
Will not occur

11. Toxicological Information

Acute Toxicity

Acute Oral Toxicity : Rat: >5000mg/kg
 Acute Dermal Toxicity : Rat: >2000mg/kg
 Acute Inhalation Toxicity : Rat: >0.74mg/l for 4 hours

Sensitization

Acute Skin Irritation : None irritant (rabbits)
 Acute Eye Irritation : not applied (rabbits)
 Acute Allergenic Effects: : no applicable information has been found

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 (Ames test)

Effects on the Reproductive System:

No data is available on this product.

Teratogenic

No data is available on this product

12. Ecological Information

Persistence/Degradability: not known
 Bio-accumulation not known in bio-accumulation
 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 safe and appropriate manner and in accordance with governmental regulations.

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 and do not store over 35°C (for quality issues)

Specific Materials to Avoid

None in normal use.

15. Regulation Information

Regulations

Not known

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