KYOCERA

MATERIAL SAFETY DATA SHEET

Date/ Revision: September 27, 2004

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : Black Toner for DC-1415,1435,1455

Manufacturer

Name : KYOCERA MITA CORPORATION

Address : 2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan, 540-8585

Contact Point

Name : KYOCERA MITA CORPORATION

Address : 2-28, 1-Chome, Tamatsukuri, Chuo-ku, Osaka, Japan, 540-8585

Telephone Number : +81-6-6764-3555

2. COMPOSITION/ INFORMATION ON INGREDIENTS

Substance or preparation ; Preparation

Major Ingredients ;

Chemical Name(Common Name)	CAS No.	Weight %
Styrene acrylate copolymer	-	80-90
Carbon black	1333-86-4	5-10
Polypropylene	-	1-5
Chromate(1-), bis[1-[[5-chloro-2-(hydroxy-.kappa.O)phenyl]azo-.kappa.N1]-2-naphthalenolato(2-)-.kappa.O]-, hydrogen	31714-55-3	<1

Hazardous Ingredients:

Chemical Name: Carbon black — 5-10%

CAS No.: 1333-86-4 — EC No.: 215-609-9

ACGIH TLV: 3.5mg/m^3 — OSHA PEL: 3.5mg/m^3

IARC: 2B — MAK: III 3B

Symbol(EC): Not listed — R-Phrase(EC): Not listed

Chemical Name: Chromate(1-), bis[1-[[5-chloro-2-(hydroxy-.kappa.O)phenyl]azo-.kappa.N1]-2-naphthalenolato(2-)-.kappa.O]-, hydrogen — <1%

CAS No.: 31714-55-3 — EC No.: 250-774-0

ACGIH TLV: Not listed — OSHA PEL: Not listed

IARC: Not listed MAK: Not listed
Symbol(EC): Xi R-Phrase(EC): R43

3. HAZARDS IDENTIFICATION

Most Important Hazards : Not classified as dangerous.(1999/45/EC)
Specific Hazards : Contains “Chromate(1-), bis[1-[[5-chloro-2-(hydroxy-.kappa.O)phenyl]azo-.kappa.N1]-2-naphthalenolato(2-)-.kappa.O]-, hydrogen”. May produce an allergic reaction.
Other Information on Hazards : Potential Health Effects
Ingestion : Ingestion is not applicable route of entry for intended use.
Inhalation : Prolonged inhalation of excessive dusts may cause lung damage. Use of this product, as intended,does not result in inhalation of excessive dusts.
Eye Contact : May cause eye irritation.
Skin Contact : Unlikely to cause skin irritation.

4. FIRST-AID MEASURES

Inhalation : Remove from exposure to fresh air and gargle with plenty of water. Consult a doctor in case of such a symptoms as coughing.
Skin Contact : Wash with soap and water.
Eye Contact : Flush with water immediately and see a doctor if irritating.
Ingestion : Rinse out the mouth. Drink one or two glasses of water to dilute. Seek medical treatment if necessary.

5. FIRE-FIGHTING MEASURES

Extinguishing Media : Water (Sprinkle with Water), Foam, Powder, CO_2 or Dry Chemical Extinguisher
Fire-Fighting Procedure : Pay attention not to blow away toner powder. Drain water off around and decrease the atmosphere temperature to extinguish the fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions : Avoid inhalation, ingestion, eye and skin contact in case of accidental toner release.
Environmental Precautions : No special precaution.
Method for Cleaning Up : Gather the released toner not to blowing away and wipe up with a wet cloth.

7. HANDLING AND STORAGE

Handling : Never open the toner container.

Storage : Keep the toner container tightly closed and store in a cool, dry and dark place keeping away from fire.
Keep away from children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters<Reference Data>:

ACGIH TLV(2000) : Carbon Black 3.5mg/m^3, Total Dust 10mg/m^3

OSHA PEL(1993) : Carbon Black 3.5mg/m^3, Total Dust 15mg/m^3

Protective Equipment : Respiratory protection, eye protection, hand protection, skin and body protection are not required under normal use.

Ventilation : Ventilator is not required under normal use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state: Solid Form: Fine powder Color: Black Odor: Odorless

pH : N.A.

Melting Point : 144°C

Explosion Properties : Dust explosion is improbable under normal use.
Experimental explosiveness of toner is classified into the same rank such kind of powder as flour, dry milk and resin powder according to the pressure rising speed.

Specific Gravity : 1.1 (H_2O=1)

Solubility : Almost insoluble in water

10. STABILITY AND REACTIVITY

Stability/ Reactivity : Stable under normal use.

Hazardous Decomposition Products : None

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : (rat)LD_{50}>2,000mg/kg
(Estimated from other products containing same materials.)

Acute dermal toxicity : (rat)LD_{50}>2,000mg/kg
(Estimated from other products containing same materials.)

Acute inhalation toxicity : (rat)LC_{50}(4hr)>5.46mg/l
(Estimated from other products containing same materials.)

Acute eye irritation : (rabbit) Mild irritant
(Estimated from other products containing same materials.)

Acute skin irritation : (rabbit)Non-irritant
(Estimated from other products containing same materials.)

Skin sensitisation : (guinea pig)0% sensitisation rate
(Estimated from other products containing same materials.)

Mutagenicity : Ames Test is Negative.

Reproductive Toxicity : No reproductive toxicant, according to MAK, California Proposition 65, TRGS905 and EU Directive(67/548/EEC).

Carcinogenicity : No carcinogen or potential carcinogen(except carbon black), according to IARC,Japan Association on Industrial Health, ACGIH, EPA, OSHA,NTP, ILO, MAK, California Proposition 65, TRGS 905 and EU Directive(67/548/EEC).

In 1996, the IARC reevaluated carbon black as a Group2B 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 rat recieving chronic inhalation exposures to free carbon black at level 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, a two-years cancer bioassay using a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development in rats.

Chronic effects:

In a study in rats by chronic inhalation exposure to a typical toner, a mild to moderate degree of lung fibrosis was observed in 92% of the rats in the high concentration(16mg/m^3) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animal in the middle(4mg/m^3) exposure group. But no pulmonary change was reported in the lowest(1mg/m^3) exposure group, the most relevant level to potential human exposures.

Other information : None

12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL CONSIDERATIONS

Do not dispose of the waste toner container as domestic, general waste.

Do not incinerate toner and toner containers. Dangerous sparks may cause burn.

14. TRANSPORT INFORMATION

UN No. : None

UN Shipping Name : None

UN Classification : None

UN Packing Group : None

Special Precautions : None

15. REGULATORY INFORMATION

EU Information

Label information according to the Directives 67/548/EEC and 1999/45/EEC.

Symbol and Indication : Not required

R-Phrase : Not required

S-Phrase : Not required

Special markings : Contains “Chromate(1-), bis[1-[[5-chloro-2-(hydroxy-.kappa.O)phenyl]azo-.kappa.N1]-2-naphthalenolato(2-)-.kappa.O]-, hydrogen”.

May produce an allergic reaction.

Hazardous ingredients for labeling:

Chromate(1-), bis[1-[[5-chloro-2-(hydroxy-.kappa.O)phenyl]azo-.kappa.N1]-2-naphthalenolato(2-)-.kappa.O]-, hydrogen

US Information

All components in this product comply with order under TSCA.

16. OTHER INFORMATION

To the best of our knowledge, the information contained herein is accurate.
However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein.

<Abbreviation>

ACGIH	: American Conference of Governmental Industrial Hygienists
PEL	: Permissible Exposure Limit
OSHA	: Occupational Safety and Health Administration
TLV	: Threshold Limit Value
MAK	: MAK(Maximale Arbeitsplatzkonzentrationen) under Deutsche Forschungsgemeinschaft
TRGS	: Technische Regeln für Gefahrstoffe(Deutsche)
IARC	: International Agency for Research on Cancer
EPA	: Environmental Protection Agency(USA)
NTP	: National Toxicology Program
ILO	: International Labour Office
UN	: Nnited Nations
TSCA	: Toxic Substances Control Act(USA)

<Reference>

• ISO 11014-1 Safety data sheet for chemical products
• Commission Directive 91/155/EEC and 2001/58/EC
• Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats
H.Muhle et.al
Fundamental and Applied Toxicology 17.280-299(1991)
• Lung Clearance and Retention of Toner, Utilizing a Tracer Technique,
during Chronic Inhalation Exposure in Rats
B.Bellmann
Fundamental and Applied Toxicology 17.300-313(1991)