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Product Information Sheet

1. Article and Corporate Identification

Product: Standard Capacity Toner Cartridge, S050435

Manufacturer/Distributor:

Medical Emergency Number:

2. Hazard Identification

Most Important Hazards: Not classified as dangerous. (1999/45/EC)
Specific Hazards: None.
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.

3. Composition / Information on Ingredients

Substance or preparation; **Preparation**
Ingredients;

Chemical Name (Common Name)	CAS No.	Weight %
Styrene acrylate copolymer-1	Confidential	50 - 60 %
Magnetite	Confidential	40 – 50 %
Styrene acrylate copolymer-2	Confidential	1 – 5 %
Wax	Confidential	1 – 5 %

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), Form, 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 Protections: Avoid inhalation, ingestion, eye and skin contact in case of accidental toner release.

Environmental Precaution: No special precaution.

Methods for Cleaning Up: Gather the released toner not to blow away and to 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, dray and dark place keeping away from fire. Keep away from children.

8. Exposure Controls and Personal Protection

Control Parameters <Reference Data>:

ACGIH TLV (2000): Total Dust 10 mg/m^3

OSHA PEL (2006) : Total Dust 15 mg/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 of Ink Formulation

Appearance:

Physical state: Solid

Form: Fine Powder

Color: Black

Odor: Odorless

pH: N.A.

Melting Point: 140℃

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: 0.8 (Bulk density)

Solubility: Almost insoluble in water.

10. Stability and Reactivity

Stability and Reactivity: Stable under normal use.

Hazardous Decomposition Products: None

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11. Toxicology and Health Hazards

Acute oral toxicity: Rat, LD_{50} > 2,500 mg/kg
(Estimated from other products containing same materials.)

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

Acute inhalation toxicity: Rat, LD_{50} (4hr) > 5.13 mg/l
(Estimated from other products containing same materials.)

Acute eye toxicity: Rabbit, Mild irritant
(Estimated from other products containing same materials.)

Acute skin toxicity: Rabbit, Non-irritant
(Estimated from other products containing same materials.)

Skin sensitization: Mouse, Non-Sensitize
(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, according to IARC, Japan Association on Industrial Health, ACGIH, EPA, OSHA, NTP, ILO, MAK, California Proposition 65, TRGS905 and EU Directive (67/648/EEC).

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 (16 mg/m^3) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animal in the middle (4 mg/m^3) exposure group. But no pulmonary change was reported in the lowest (1 mg/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 incinerate toner and toner containers. Dangerous sparks may cause burn. Any disposal practice should be done under conditions which meet local, state and federal laws and regulations relating to waste (contact local or state environmental agency for specific rules).

14. Transportation Information

UN No.: None
UN Shipping Name: None
UN Classification: None
UN Packing Group: None
Special Precautions: None

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15. Regulatory Considerations

EU Information:

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

Symbol and Indication: Not required.
R-Phrase: Not required.
S-Phrase: Not required.
Special Markings: Not required.
Hazardous ingredients for labeling: Not required.

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 (Maximal 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)