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Product Information Sheet

1. Article and Corporate Identification

***Product**:* Epson Developer Cartridge S050166

Manufacturer/Distributor: Seiko Epson Corporation
80 Harashinden, Hirooka,
Shiojiri-shi, Nagano-ken, 399-0785
JAPAN
TEL: +81-263-52-2552
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Medical Emergency Number: Not available

2. Composition Information

This toner is a preparation.

Ink Composition	**CAS No.**	**% By Weight**
Carbon Black	1333-86-4	1 – 5 %
Proprietary organic materials	–	> 90 %
Proprietary organic pigments	–	1 – 5 %

3. Hazard Identification

3.1 Hazardous Classification: There are no significant hazards associated with this product.
3.2 Adverse Human Health Effects: No symptoms expected with intended use.
3.3 Environmental Effects: No data available

4. First Aid Measures

4.1 Eyes: Immediately flush with a large amount of water for at least 15 minutes. If irritation persists, get medical attention.

4.2 Skin: Wash with soap and water.

4.3 Inhalation: Remove to fresh air. Rinse mouth with a large amount of water. If cough or other symptoms develop, get medical attention.

4.4 Ingestion: Rinse mouth with water. Give several glasses of water to drink. If necessary, get medical attention.

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5. Fire Fighting Measures

5.1 *Flammable Properties:* This material has no unusual fire or explosive hazards.
5.2 *Extinguishing Media:* Water spray, form or dry chemical.
5.3 *Fire Fighting Instructions:* Be careful not to disperse into air.
5.4 *Fire and expression hazards:* If dispersed in air, like most finely divided organic powders, may form an explosive mixture.

6. Accidental Release Measures

6.1 *Personal protections:* Not applicable under intended use.
6.2 *Methods for cleaning up:* Wipe off with wet cloth and be careful not to disperse into air.

7. Precautions for Safe Handling and Use

7.1 *Handling:* Do not incinerate toner or a toner cartridge. **Do not dismantle a cartridge.** Avoid dispersing toner.
7.2 *Storage:* Keep in dark, cool, dry and well-ventilated area. Keep out of reach of children.

8. Exposure Controls and Personal Protection

8.1 *Engineering Controls:* No specific controls are needed.

8.2 *Exposure Controls:* ACGIH-TLV(USA) **:** 10mg/m^3
OSHA(USA) **:** 15mg/m^3
DFG-MAK(EU) **:** 6 mg/m^3
Worksafe-TWA(Austl)：10mg/m^3

8.3 *Personal Protection:* None required when cartridges are used as intended

9. Physical and Chemical Properties of Ink Formulation

*Based on properties of chemically similar material.

Appearance:	Black powder
Odor:	Little odor
Boiling point:	Not applicable
Softening point:	120 – 130°C*
Vapor pressure	Not applicable
Solubility in water:	Insoluble
Specific gravity:	1.2
Flash point:	Not applicable
Auto-Ignition Temperature:	Over 300°C*
Explosion limit:	Not applicable
Other data:	None

10. Stability and Reactivity

Stability and Reactivity:	Stable
Spontaneous combustibility/Reactivity with water:	None
Self-reactivity/Explosive:	None
Dust explosion:	Like most organic materials in powder form, it can form explosive mixtures when dispersed in air.

Hazardous decomposition products: CO and CO_2, when combusting

11. Toxicology and Health Hazards

*Based on toxicology data of chemically similar material.

Acute Health Hazards:

Toxicity Data:	Oral LD_{50}	Dermal LD_{50}	Inhalant LC_{50}
	> 5000mg/kg(Rats)*	> 2000mg/kg(Rabbit)*	> 0.74mg/L/4hr*

Irritation Skin: Not an irritant (Rabbit)*
Eye: Not an irritant (Rabbit)*

Skin sensitization: No data

Mutagenicity: Negative in Ames Assay

Carcinogenicity: Carbon Black is classified as "Group 2B (possibly carcinogenic to humans)" by IARC. But we obtained the results from a Chronic Toner Inhalation Study, that commercially available toner has no evidence of human carcinogens. All other ingredients are not classified as "Carcinogens".

Reproduction and Development: Not classified as "Reproductive and Development chemicals".

Chronic toxicity of long term toxicity :

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 lungs for a prolonged interval. Use of this product, as intended, does not result in inhalation of excessive dust.
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 rats in the high concentration (16mg/m^3) exposure group, and a minimal to mid degree of fibrosis was noted in 22% of the animals 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.*

12. Ecological Information

Biodegradability: Not available.
Bioaccumulation: Not available.
Acute Toxicity: Not available.

13. Disposal Considerations

Disposal should be in accordance with national and local requirements.

14. Transportation Information

No hazardous classification

15. Regulatory Considerations

Not classified as hazardous preparation under Council Directive 88/379/EEC.

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16. Other Information

This "Product Information Sheet" contains health, safety, and environmental information. It does not replace any precautionary language or use and disposal information which accompanies the product. The information contained herein is believed to be accurate at the time of preparation, but should only be used as a guide. It is subject to revision from time to time. EPSON does not warrant the completeness or accuracy of the information contained herein.

In consideration of our environment and world neighbors, all genuine EPSON toner cartridges are engineered and based on an "Ecologically Friendly" technology. EPSON toner cartridges contain no CFCs or harsh liquid solvents.