

Product Information Sheet

1. Article and Corporate Identification

Product: Epson Toner Cartridge S050190
for use with Epson AcuLaser CX11N and CX11NF Printers

Distributor: Epson America, Inc.
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Long Beach, CA 90806
United States
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2. Composition Information

Toner is a moist powdered formulation

Ink Composition	CAS No.	% By Weight
Styrene/Acrylate polymer mixture	-	60 - 70%
Mn-Mg-Sr ferrite powder	-	10 - 20%
Proprietary acrylic resin	-	1 -10%
Amorphous silica	7631-86-9	1 - 10%
Carbon black	1333-86-4	1 – 10%
Titanium dioxide	13463-67-7	<1%

3. Hazard Identification

3.1 *Emergency Overview:* Toner is a moist black powder that may cause eye irritation. Avoid contact with eyes or clothing. In the case of skin contact, wash with soap and water. Keep out of reach of children.

3.2 *Potential Health Effects:*

Eyes: Toner contact with eye may be mildly irritating. See Section 11 for Toxicology.

Skin: Toner contact with skin may cause irritation, swelling, or redness. It is not expected to cause an allergic skin reaction. See Section 11 for Toxicology.

Inhalation: Intentional exposure to toner may cause respiratory irritation. See Section 11 for Toxicology.

Ingestion: May cause upset stomach. See Section 11 for Toxicology.

4. First Aid Measures

- 4.1 *Eyes:* Immediately flush with room temperature, low pressure, clean water for at least 15 minutes. Seek medical attention if eye irritation continues.
- 4.2 *Skin:* Wash surface areas with soap and water. Wash soiled clothing before re-wearing. Seek medical attention if irritation continues.
- 4.3 *Inhalation:* Remove subject to ventilated fresh air and rinse mouth. Consult physician if necessary or if cough develops.
- 4.4 *Ingestion:* Rinse mouth with water. Seek medical attention if stomach continues to be upset.

5. Fire Fighting Measures

Flammability: Flash point is greater than 230 deg. F / 110 deg. C (closed cup in accordance with ASTM D3278)

Extinguishing Media: Dry chemical or carbon dioxide

Fire Fighting Instructions: Breathing apparatus required. No special explosive hazards are known.

6. Accidental Release Measures

Shut off ignition sources. If a spill occurs, use sponges to wipe-up toner, then rinse area with damp cloth. Place waste in closed container for disposal. Use proper ventilation. Do not dispose of waste to the sewer. No eye or skin protection required during clean-up. Wash hands with soap and water.

7. Precautions for Safe Handling and Use

Keep out of reach of children and do not dismantle or incinerate cartridge. Keep cartridge in dark, cool, dry, and well ventilated area. Do not store cartridges with oxidizing agents. Make sure cartridge is dry before insertion into printer housing. Avoid dispersing toner.

8. Exposure Controls and Personal Protection

Engineering Controls: None required when cartridges are used as intended

Exposure Controls: None required when cartridges are used as intended. Otherwise,
ACGIH TLV (2003): 10mg/cubic meter (total)
3mg/cubic meter (respiratory)

Personal Protection: None required when cartridges are used as intended

9. Physical and Chemical Properties of Toner Formulation

<i>Appearance:</i>	Moist Black Powder
<i>Odor:</i>	Slight
<i>pH:</i>	Organically neutral
<i>Boiling point:</i>	Not applicable
<i>Freezing point:</i>	Not applicable
<i>Softening point:</i>	120 – 130 deg. C
<i>Flash point:</i>	>230 deg. F / 110 deg. C (CC)
<i>Auto flammability:</i>	Over 300 deg. C
<i>Explosive properties:</i>	None

Oxidizing properties: None
Vapor density: Not applicable
Relative density: 1.12 at 68 deg. F / 20 deg. C
Solubility in water: Negligible
Solubility in fat: No data available
Partition coefficient: No data available
Viscosity: Less than 5mPa-s

10. Stability and Reactivity

Stability: Stable
Hazardous polymerization: Will not occur
Hazard decomposition products: None
Incompatible materials: Oxidizers and explosives

11. Toxicology and Health Hazards

Routes Of Overexposure: Eye, skin, inhalation, and oral

Acute Health Hazards:

- Overexposure of eye surface to toner may be mildly irritating
- Overexposure of skin to toner contact may cause irritation and in some people swelling and redness
- Intentional inhalation overexposure to toner may result in respiratory tract irritation
- Intentional or accidental oral ingestion may cause an upset stomach

Chronic Health Hazards: Use of this product, as intended, does not result in inhalation of fugitive excessive dust. In an inhalation study with rats chronically exposed to a typical developer, a mild to moderate degree of lung fibrosis was observed in approximately 90% of rats in the high concentration exposure group (16mg/cubic meter), and a minimal to mid degree of fibrosis was noted in approximately 20% of the animal in the middle exposure group (4mg/cubic meter). But no pulmonary change was reported in the lowest exposure group (1mg/cubic meter), the most relevant level to potential human exposure.

Carcinogenicity: With excessive exposure, carbon black has been listed as a possible human carcinogen. However, as engineered within this toner cartridge, emissions to air of carbon black during normal printing use has not been found. IARC, the International Agency for Research on Cancer, has found printing toners to be not classifiable as human carcinogens.

Titanium dioxide is classified as “possibly carcinogenic to humans” (Group 2B). In animal chronic inhalation studies, the tumor formulation observed in only rats with animal chronic inhalation 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. Epidemiological studies to date have not revealed any evidence of the relation between exposure to titanium dioxide and diseases of the respiratory tract beyond the general effects of dust.

Toxicity Data:

Oral LD50	Dermal LD50	Inhalant LC50	OSHA Regulated?
>5000mg/kg(Rats)	>5000mg/kg(Rats)	4.1mg/L/4hr(Rat)	Not Established

12. Ecological Information

Acute Toxicity: 96hr LC 50: >500 mg/L (practically non-toxic)
48hr EC 50 (Daphnia magna): >100 mg/L (practically non-toxic)

13. Disposal Considerations

Used and unused cartridges are not a federal RCRA hazardous waste. Disposal should be in accordance with federal, state, and local requirements.

14. Transportation Information

Not regulated as a Hazardous Material by DOT, IMO, or IATA

15. Regulatory Considerations

<i>U.S. DOT Hazard Class Regulated?</i>	No
<i>U.S. OSHA Inhalation Hazard?</i>	No
<i>In U.S., NFPA/HMIS Hazard Rating:</i>	Health (1), Flammability (1), Instability/Reactivity (0), Other (0)
<i>EU RoHS compliant?</i>	Yes
<i>California Proposition 65:</i>	Yes, titanium dioxide (CAS# 13463-67-7) as <1.0% by weight of toner formulation

16. Other Information

This PIS adheres to U.S. regulatory requirements and standards and may not meet the regulatory requirements in other locations.

This is a revised Product Information Sheet which replaces all prior U.S. PIS for this product.

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. Epson does not warrant the completeness or accuracy of the information contained herein. It is subject to revision from time to time.

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