

Material Safety Data Sheet

1. Article and Corporate Identification

Product: Epson Ink Cartridge T544100
for use with Epson Stylus Pro 4000 UCM & 9600 UCM Printers

Manufacturer/Distributor: Epson America, Inc.
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The **EPSON** T544100 Ink Cartridge

2. Composition Information

This is an aqueous ink formulation

Ink Composition	CAS No.	% By Weight
Carbon Black	1333-86-4	< 3 %
Proprietary dyes and pigments	-	< 5 %
Proprietary organic materials	-	5 –10 %
Glycerols	-	15 –20%
Water	7732-18-5	balance

3. Hazard Identification

3.1 Emergency Overview: Ink component is a light black liquid 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: Ink contact with eye may be mildly irritating. See Section 11 for Toxicology.

Skin: Ink 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 ink vapors may cause respiratory irritation. See Section 11 for Toxicology.

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

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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 rewearing. Seek medical attention if irritation continues.
- 4.3 *Inhalation:* Remove subject to ventilated fresh air. Consult physician if necessary.
- 4.4 *Ingestion:* Seek medical attention if stomach continues to be upset.

5. Fire Fighting Measures

- 5.1 *Flammability:* Flash point is greater than 230 deg. F / 110 deg. C (closed cup in accordance with ASTM D3278)
- 5.2 *Extinguishing Media:* Dry chemical or carbon dioxide
- 5.3 *Fire Fighting Instructions:* No special fire fighting procedures are required other than breathing apparatus. No special explosion hazards are known.

6. Accidental Release Measures

If a spill occurs, use sponges to wipe-up ink, 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 drink ink. Do not store the cartridge in high or freezing temperatures. Keep cartridge out of direct sunlight. Do not dismantle cartridge. Do not store cartridges with oxidizing agents or explosives. Make sure cartridge is dry before insertion into printer housing.

8. Exposure Controls and Personal Protection

- 8.1 *Engineering Controls:* None required
- 8.2 *Exposure Controls:* None required
- 8.3 *Personal Protection:* None required when cartridges are used as intended

9. Physical and Chemical Properties of Ink Formulation

<i>Appearance:</i>	Black Liquid
<i>Odor:</i>	None
<i>pH:</i>	9 - 10
<i>Boiling point:</i>	Approximately 212 deg. F / 100 deg. C
<i>Freezing point:</i>	Less than 32 deg. F / 0 deg. C
<i>Melting point:</i>	Less than 32 deg. F / 0 deg. C
<i>Flash point:</i>	Greater than 230 deg. F / 110 deg. C (closed cup, ASTM D3278)
<i>Autoflammability:</i>	None
<i>Explosive properties:</i>	None

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<i>Oxidizing properties:</i>	None
<i>Vapor density:</i>	Greater than 1 (air = 1)
<i>Relative density:</i>	1.07 at 68 deg. F / 20 deg. C
<i>Solubility in water:</i>	Complete
<i>Solubility in fat:</i>	No data available
<i>Partition coefficient:</i>	No data available
<i>Viscosity:</i>	Less than 5 mPa-s

10. Stability and Reactivity

<i>Stability:</i>	Stable
<i>Hazardous polymerization:</i>	Will not occur
<i>Hazardous decomposition products:</i>	None
<i>Incompatible materials:</i>	Oxidizers and explosives

11. Toxicology and Health Hazards

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

Acute Health Hazards:

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

Chronic Health Hazards: None known

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

<i>Toxicity Data:</i>	Oral LD50	Dermal LD50	Inhalant LC50	OSHA Regulated?
	> 5000mg/kg(Rats)	> 2000mg/kg(Rats)	Not Applicable	Not Established

12. Ecological Information

No data available on the adverse effects of this material on the environment

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)

16. Other Information

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

This is a revised Material Safety Data Sheet which replaces all prior U.S. MSDS for this product.

This "Material Safety Data 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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