Section 1 : Identification of substance and company undertaking

1.1 Product identifier: EPSON INK CARTRIDGE T544400
1.2 Relevant substance use: Ink for Epson Printers
1.3 Supplier details
   Distributor: Epson America, Inc.
   Address: 3840 Kilroy Airport Way
             Long Beach, CA 90806
             United States
   Telephone: 562.276.1369
   FAX: 562.997.5799
1.4 Emergency telephone number: 562.276.1369

Section 2 : Hazard identification

2.1 GHS classification: Not hazardous
2.2 Label elements
   Symbols: None
   Signal word: None
   Hazard statements: None
   Precautionary statements: P102 Keep out of reach of children
                             P302+P352 IF ON SKIN: Wash with soap and water
                             P332+P313 If skin irritation occurs: Get medical advice/attention.
                             P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Section 3 : Composition/information on ingredients

   Substance/Mixture: Mixture (ink composition)

<table>
<thead>
<tr>
<th>Ink Composition</th>
<th>CAS No.</th>
<th>% By Weight</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>65-70</td>
<td>none</td>
</tr>
<tr>
<td>Glycerols</td>
<td>56-81-5</td>
<td>10-15</td>
<td>none</td>
</tr>
<tr>
<td>Proprietary organic materials</td>
<td>-</td>
<td>5-10</td>
<td>none</td>
</tr>
<tr>
<td>Proprietary dyes and pigments</td>
<td>-</td>
<td>5-10</td>
<td>none</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>107-21-1</td>
<td>1-5</td>
<td>none</td>
</tr>
</tbody>
</table>
Section 4 : First aid measures

4.1 Description of measures

Eyes : Immediately flush with room temperature, low pressure, clean water. Seek medical attention if irritation continues.

Skin : IF ON SKIN: Wash with soap and water. Take off contaminated clothing and wash skin with soap and water.

Inhalation : Remove subject to ventilated fresh air. If not breathing, give artificial respiration right away. If breathing is difficult, give oxygen. Seek immediate medical attention.

Ingestion : Seek medical advice, and attention if stomach continues to be upset.

4.2 Most important symptoms and effects, both acute and delayed: Ink contact with skin may cause irritation, swelling, or redness.

4.3 Indication of any immediate medical attention and special treatment needed: Not necessary

Section 5 : Fire-fighting measures

5.1 Extinguishing media

Suitable media : Water spray, dry chemical, carbon dioxide, or alcohol resistant foam.

Unsuitable media : None

5.2 Special hazards from mixture : None

5.3 Firefighters : Use PPE, avoid a leeward position.

Section 6 : Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

Non-emergency personnel : Eye and skin protection required during clean-up. Use proper ventilation.

Emergency responders : None

6.2 Environmental precautions : Do not release to sewer, surface, or ground water.

6.3 Methods and material for containment and clean-up

Spill containment : Use sponges to wipe-up ink.

Spill clean-up : Rinse area with damp cloth. Place waste in closed container for disposal. Wash hands with soap and water.

Other information : Do not dispose of waste to sewer.

6.4 Reference to other sections: Please refer to Section 13 for disposal.
Section 7: Handling and storage

7.1 Precautions for safe handling

Recommendations:
- Keep out of reach of children and do not drink ink.
- Do not dismantle cartridge.

Occupation hygiene:
- Avoid contact with skin, eyes, and clothing.
- In the case of skin contact, wash with soap and water.

7.2 Safe storage:
- Do not store cartridges in high or freezing temperatures.
- Keep cartridges out of direct sunlight.
- Do not store cartridges with oxidizing agents or explosives.
- Make sure cartridges are dry before insertion into printer housing.

7.3 Specific end uses:
- Not specified

Section 8: Exposure controls / personnel protection

8.1 Control parameters:
- Glycerols (CAS No. 56-81-5)
  ACGIH TLV-TWA 8-hour Exposure Limit is 10 mg/m$^3$ as glycerin mist.
  OSHA Z-1 PEL is 5 mg/m$^3$ as glycerin mist, respirable fraction.
  OSHA Z-1 PEL is 15 mg/m$^3$ as glycerin mist, total dust.
- Ethylene glycol (CAS No. 107-21-1)
  ACGIH TLV-TWA 8-hour Exposure Limit is 100 mg/m$^3$ (vapor).
  CAL PEL is 100 mg/m$^3$ ceiling (vapor).

8.2 Exposure controls

Engineering controls:
- Proper ventilation

Personal protection:
- Personal protective equipment is not required under suitable use.
- If there is a possibility of ink exposure, wear protective gloves, clothing, eye, and face protection.
- Respiratory protection is not required under suitable use.
- Thermal hazards are not known under suitable use.

Environmental exposure controls:
- Not established

Section 9: Physical and chemical properties

9.1 Physical and chemical properties

Appearance:
- Yellow liquid

Odor:
- None

Odor threshold:
- No data available

pH:
- 8.5 - 9.5

Melting point:
- Less than 0°C

Freezing point:
- Less than 0°C

Initial boiling point:
- Greater than 100°C

Boiling range:
- Greater than 100°C

Flash point:
- Greater than 110°C (closed cup, ASTM D3278)

Evaporation rate:
- No data available

Flammability (solid/gas):
- Not applicable (liquid)

Upper/lower flammability:
- No data available
Upper/lower explosive limits : No data available
Vapor pressure : No data available
Vapor density : Greater than 1 (air = 1)
Relative density : 1.07 at 20°C
Solubility(ies) : Soluble in water
Partition coefficient : N-octanol/water, no data available
Auto ignition temp : No data available
 Decomposition temp : No data available
Viscosity : Less than 5 mPa-s at 20°C
Explosive properties : None
Oxidizing properties : None

Section 10 : Stability and reactivity

10.1 Reactivity : Stable under normal temperature and pressure
10.2 Chemical stability : Stable under normal temperature and pressure
10.3 Hazard reactions : None
10.4 Conditions to avoid : High and freezing temperatures
10.5 Incompatible materials : Oxidizers and explosives
10.6 Hazard decomposition : Acrolein (CAS No. 107-02-8); when glycerols are heated over 300°C, they will decompose into acrolein.

Section 11 : Toxicological information

11.1 Toxicological effects

Acute toxicity Oral LD_{50} : >2000 mg/kg (rats)
Acute toxicity Dermal LD_{50} : >2000 mg/kg (rats)
Irritation Eye : No data available
Irritation Skin : No data available
Corrosivity : No data available
Sensitization : No data available
Carcinogenicity : No data available
Mutagenicity : No data available
Reproduction toxicity : No data available
Section 12 : Ecological information

12.1 Toxicity : No data available
12.2 Persistence and degradability : No data available
12.3 Bio accumulative potential : No data available
12.4 Mobility in soil : No data available
12.5 PBT and vPvB assessment : No data available
12.6 Other adverse effects : No data available

Section 13 : Disposal considerations

13.1 Waste treatment : Disposal should be in accordance with federal, state, and local methods : requirements.

Section 14 : Transportation information

14.1 UN number : Not applicable
14.2 Proper shipping name : Not applicable
14.3 Transport hazard class : Not applicable
14.4 Packing group : Not applicable
14.5 Environmental hazards : Not applicable
14.6 Special precautions : Not applicable
14.7 Bulk transport Annex II of MARPOL 73/78 and IBC Code : Not applicable

Section 15 : Regulation information (safety, health, and environmental)

15.1 U.S. Information

- TSCA Sec. 4(a) Final Test Rules : Not Regulated
- TSCA Sec. 5 SNUR : Not Regulated
- TSCA Sec. 8(a) PAIR : Not Regulated
- TSCA Sec. 12(b) 1-time Export : Not Regulated
- Clean Air Act Sec. 112 HAP : Ethylene glycol (CAS# 107-21-1)
- EPCRA Sec. 313 (SARA Title III) : Not Regulated
- NFPA Hazard Rating : Health(1), Flammability(1), Instability/Reactivity(0), Other(0)
- HMIS Hazard Rating : Health(1), Flammability(1), Instability/Reactivity(0), PPE (D)
- California Proposition 65 : Not Regulated

15.2 Canada Information :

- WHMIS Controlled Product : Not applicable (manufactured article)

15.3 Chemical safety assessment : Chemical safety assessment on ink has not been conducted
Section 16 : Other information

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

This is a revised Safety Data Sheet which replaces all prior U.S. SDS for this substance.

This "Safety Data Sheet" contains health, safety, and environmental information. It does not replace any precautionary language or uses and disposal information which may accompany the substance. 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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