

## Material Safety Data Sheet

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1. Product identifier:** EPSON Ink cartridge T5434
- 1.2. Relevant identified uses of the substance or mixture and uses advised against:**  
Identified uses; Ink for Inkjet Printing
- 1.3. Details of the supplier of the safety data sheet:**  
**Distributor:** EPSON EUROPE B.V.  
**Address:** Azie building, Atlas ArenA, Hoogoorddreef  
 5,1101 BA Amsterdam  
 Zuidoost The Netherlands  
[www.epson-europe.com](http://www.epson-europe.com)  
**TEL:** +31-20-314-5000 **FAX:** +31-20-314-5100  
**e-mail:** [chemicals@epson-europe.com](mailto:chemicals@epson-europe.com)  
**Date Prepared:** 30 May 2012  
**Revision:** A
- 1.4. Emergency telephone number:** Giftnotruf Berlin +49 030 19240

### SECTION 2: Hazards identification

- 2.1. Classification of the mixture:**  
Classification (1999/45/EC); Not Classified
- 2.2. Label elements:** Label in Accordance with 1999/45/EC  
**Symbol(s);** None  
**Indication(s) of danger;** None  
**Risk phrase;** None  
**Safety advice;** None
- 2.3. Other hazards:**  
Classification (PBT,vPvB(EC)No1907/2006); No data available

### SECTION 3: Composition/information on ingredients

#### Substance / Mixture: Mixture (Ink Composition)

Ink Composition	CAS No.	EEC No.	EU registration No.	% By Weight	EU Symbols	EU R-phrase	EU OELs	Remark
Water	7732-18-5	231-791-2	Exemption	< 80	None	None	None	None
Glycerols	Trade secret	Trade secret	Not available for the moment	10 - 15	None	None	None	None
Proprietary organic materials	Trade secret	Trade secret	Not available for the moment	5 - 10	None	None	None	None
Ethylene glycol	107-21-1	203-473-3	Not available for the moment	1 - 5	X <sub>n</sub>	R22	See section 8	None
Colorants	Trade secret	Trade secret	Not available for the moment	1 - 5	None	None	None	None
Triethanolamine	102-71-6	203-049-8	Not available for the moment	< 1	None	None	None	None
Ethylene glycol monobutyl ether (*)	111-76-2	203-905-0	Not available for the moment	< 1	X <sub>n</sub>	R20/21/22 R36/38	See section 8	None

Please refer to the section 16, where the full text of each relevant R-phrase.

\*: This indication is not required under EU REACH Regulation(EC) No. 1907/2006 as the ratio of ink is less than 1wt%

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**4.1.1. Eyes :** Immediately flush with room temperature, low pressure and clean water for at least 15 minutes.  
Seek medical attention if eye irritation continues.

**4.1.2. Skin :** Wash surface areas with soap and water. Wash soiled clothing before wearing again.  
Consult a physician if irritation continues.

**4.1.3. 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.

**4.1.4. Ingestion :** Seek medical advice; and attention if stomach continues to be upset.

### 4.2. Most important symptoms and effects, both acute and delayed:

Skin: 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

**5.1.1. Suitable extinguishing media:** Dry chemical , carbon dioxide or water.

**5.1.2. Unsuitable extinguishing media:** None

**5.2. Special hazards arising from the substance or mixture:** None

**5.3. Advice for firefighters:** No special fire fighting procedures are required other than breathing apparatus.  
No special explosion hazards are known.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**6.1.1. For non-emergency personnel:** Eye or Skin protection required during clean-up. Use proper ventilation.

**6.1.2. For emergency responders:** None

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

### 6.3. Methods and material for containment and cleaning up

**6.3.1. Advice on how to contain a spill:** Use sponges to wipe-up ink.

**6.3.2. Advice how to clean-up a spill:** Rinse area with damp cloth. Place waste in closed container for disposal.  
Wash hands with soap and water.

**6.3.3. Any other information:** Do not dispose of waste to the sewer.

**6.4. Reference to other sections:** None

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**7.1.1. Recommendations:** Keep out of reach of children and do not drink ink.

**7.1.2. Advice on general occupational hygiene:**

Avoid contact with eyes or clothing. In the case of skin contact, wash with soap and water.

### 7.2. Conditions for safe storage, including any incompatibilities:

Do not store the ink in high or freezing temperatures. Keep the ink out of direct sunlight. Do not store the ink with oxidizing agents or explosives. Make sure the ink stored in a dry area.

**7.3. Specific end use(s):** Not specified

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters:

Ethylene glycol (CAS No. 107-21-1)

EU: Ethylene glycol (CAS No. 107-21-1)

The threshold limit is: 52 mg/m<sup>3</sup>

The threshold limit is: 20 ppm

The STEL is: 104 mg/m<sup>3</sup>

The STEL is: 40 ppm

US: ACGIH Threshold Limit Values (2008)

Ethylene glycol (CAS No. 107-21-1), AEROSPL ONLY

The Ceiling Exposure Limit is: 100 mg/m<sup>3</sup>

US: OSHA Table Z-1-A (29 CFR 1910.1000)(Revoked June 30, 1993)

Ethylene glycol (CAS No. 107-21-1)

OSHA ceiling concentration is: 50 ppm

OSHA ceiling concentration is: 125 mg/m<sup>3</sup>

Australia: OELs

Ethylene glycol (CAS No. 107-21-1), VAPOUR

The Time Weighted Average is: 20 ppm.

The Time Weighted Average is: 52 mg/m<sup>3</sup>

The Short Term Exposure Limited is: 40 ppm

The Short Term Exposure Limited is: 104 mg/m<sup>3</sup>

Ethylene glycol monobutyl ether (CAS No. 111-76-2)

EU: 2-Butoxyethanol (EGBE)(CAS No.111-76-2)

The threshold limit is: 98 mg/m<sup>3</sup>

The threshold limit is: 20 ppm

The STEL is: 248 mg/m<sup>3</sup>

The STEL is: 50 ppm

US: ACGIH Threshold Limit Values (2008)

2-Butoxyethanol (CAS No.111-76-2)

The 8-Hour Exposure Limit (ELV-TWA) is: 20 ppm

US: OSHA Table Z-1-A (29 CFR 1910.1000)(Revoked June 30, 1993)

2-Butoxyethanol (EGBE)(CAS No.111-76-2)

OSHA ceiling concentration is: 50 ppm

OSHA ceiling concentration is: 240 mg/m<sup>3</sup>

Australia: OELs

2-Butoxyethanol (EGBE)(CAS No.111-76-2), Skin designation

The Time Weighted Average is: 20 ppm.

The Time Weighted Average is: 96.9 mg/m<sup>3</sup>

The Short Term Exposure Limited is: 50 ppm

The Short Term Exposure Limited is: 242 mg/m<sup>3</sup>

## 8.2. Exposure Controls

**8.2.1. Appropriate engineering controls:** Proper ventilation, in prevention

**8.2.2. Individual protection measures, such as personal protective equipment**

**8.2.2.1. Use of personal protective equipment:**

Not required under suitable use as setting the cartridge on the printer.

**8.2.2.2. Detailed specification on equipment to provide adequate and suitable protection**

**(a) eye/face protection:** Not required under suitable use as setting the cartridge on the printer.

**(b) skin protection: hand protection & others:**

Not required under suitable use as setting the cartridge on the printer.

**(c) respiratory protection:** Not required under suitable use as setting the cartridge on the printer.

**(d) thermal hazards:** Not required under suitable use as setting the cartridge on the printer.

**8.2.3. Environmental exposure controls:** Not established

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties:**

**Appearance:** Yellow liquid

**Odour:** Slightly

**Odour threshold:** No data available

**pH:** 8.5 ~ 10.0 at 20°C

**Melting point / freezing point:** No data available

**Initial boiling point and boiling range:** No data available

**Flash point:** Not detected until 120°C (Closed cup, ASTM D3278)

**Evaporation rate:** No data available

<i>Flammability (solid, gas):</i>	None
<i>Upper/lower flammability or explosive limits:</i>	No data available
<i>Vapor pressure:</i>	No data available
<i>Vapor density:</i>	Greater than 1 (air = 1)
<i>Relative density:</i>	1.06 at 20°C
<i>Solubility(ies):</i>	Complete
<i>Partition coefficient: n-octanol/water:</i>	No data available
<i>Auto-ignition temperature:</i>	No data available
<i>Decomposition temperature:</i>	No data available
<i>Viscosity:</i>	Less than 5 mPa·s at 20°C
<i>Explosive properties:</i>	None
<i>Oxidizing properties:</i>	None
<b>9.2. Other information:</b>	None

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity:</b>	Stable under normal temperature
<b>10.2. Chemical stability:</b>	Stable under normal temperature
<b>10.3. Possibility of hazardous reactions:</b>	None
<b>10.4. Conditions to avoid:</b>	High and freezing temperatures
<b>10.5. Incompatible materials:</b>	Oxidizers and explosives
<b>10.6. Hazardous decomposition products:</b>	No data available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects:

<i>Acute toxicity:</i>	Not meet the criteria for classification according to EU Directive 1999/45/EC	
Oral LD <sub>50</sub> :	>2500mg/kg (Rats)	
Dermal LD <sub>50</sub> :	>2000mg/kg (Rats)	
Inhalant LC <sub>50</sub> :	Not applicable	
<i>Irritation</i>	<i>Eye:</i>	Not meet the criteria for classification according to EU Directive 1999/45/EC Minimal irritating (Rabbits, OECD 405)
	<i>Skin:</i>	Not meet the criteria for classification according to EU Directive 1999/45/EC Mild irritating (Rabbits, OECD 404)
<i>Corrosivity:</i>	Not meet the criteria for classification according to EU Directive 1999/45/EC	
<i>Sensitisation</i>	<i>Skin:</i>	Not meet the criteria for classification according to EU Directive 1999/45/EC Non-sensitizing
<i>Carcinogenicity:</i>	Not meet the criteria for classification according to EU Directive 1999/45/EC Not contain any substances listed in IARC Monographs (1,2A and 2B)	
<i>Mutagenicity:</i>	Not meet the criteria for classification according to EU Directive 1999/45/EC Negative (by Ames Test)	
<i>Toxicity for reproduction:</i>	Not meet the criteria for classification according to EU Directive 1999/45/EC	

## SECTION 12: Ecological information

<b>12.1. Toxicity:</b>	No data available
<b>12.2. Persistence and degradability:</b>	No data available
<b>12.3. Bioaccumulative potential:</b>	No data available
<b>12.4. Mobility in soil:</b>	No data available
<b>12.5. Results of PBT and vPvB assessment:</b>	Has not carried out PBT and vPvB assessment
<b>12.6. Other adverse effects:</b>	No data available

## SECTION 13: Disposal considerations

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

**SECTION 14: Transport information**

- 14.1. *UN number:* Not applicable
- 14.2. *UN proper shipping name:* Not applicable
- 14.3. *Transport hazard class(es):* Not applicable
- 14.4. *Packing group:* Not applicable
- 14.5. *Environmental hazards:* Not applicable
- 14.6. *Special precautions for user:* Not applicable
- 14.7. *Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:* Not applicable

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:**

*EU Information:*

- Regulation (EC) No 2037/2000: Is not subject
- Regulation (EC) No 850/2004: Is not subject
- Regulation (EC) No 689/2008: Is not subject

*US Information:*

- TSCA Section 4(a) Final Test Rules Regulated: Not regulated
- TSCA Section 5 Significant New Use Rule Regulation: Not regulated
- TSCA Section 8(a) Preliminary Assessment Information Rule (PAIR): Not regulated
- TSCA Section 12(b) One-Time Export Notification Regulated: Not regulated
- California Proposition 65: Not regulated

*Canada Information:*

- WHMIS Controlled Product: Not applicable (Manufactured article)

*Australia Information:*

- Statement of Hazardous Nature: Not classified as hazardous according to criteria of NOHSC

**15.2. Chemical safety assessment:** This ink has not carried out any Chemical Safety Assessment yet.

**SECTION 16: Other information**

*List of relevant R-phrases:*

- R-20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- R-22 Harmful if swallowed.
- R-36/38 Irritating to eyes and skin.

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