

## Material Safety Data Sheet

### 1. Identification of The Substance/Preparation and of The Company/Undertaking

**1.1. Identification of the preparation:** EPSON Ink Cartridge T1574

**1.2. Use of the substance/preparation:** Inkjet Printing

**1.3. Company/undertaking identification**

**Manufacturer/Distributor:** EPSON EUROPE B.V.  
**Address:** Azie building, Atlas ArenA, Hoogoorddreef  
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Zuidoost The Netherlands  
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**Date Prepared:** 29 March 2010

**Revision:** A

**1.4. Emergency telephone:** Giftnotruf Berlin +49 030 19240

### 2. Hazards Identification

**2.1. Emergency Overview:**

This ink does not meet the criteria for dangerous classification according to EU Directive 1999/45/EC. Nevertheless, one of its components does meet the criteria for dangerous classification according to EU Directive 67/548/EEC.

Ink component is a yellow 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.

**2.2. 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. See Section 11 for Toxicology.

**Inhalation:** Intentional exposure to ink vapors (mist) will cause respiratory irritation. See Section 11 for Toxicology.

**Ingestion:** May cause upset stomach.

### 3. Composition/Information on Ingredients

*This is an aqueous ink formulation*

Ink Composition	CAS No.	EEC No.	EU registration No.	% By Weight	EU Symbols	EU R-phrase	EU OELs	Remark
Colorants	Trade secret	Trade secret	Not available for the moment	1 - 5	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
Proprietary organic materials	Trade secret	Trade secret	Not available for the moment	5 - 10	None	None	None	None
Triethanol amine	102-71-6	203-0498	Not available for the moment	< 1	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
Glycerols	Trade secret	Trade secret	Not available for the moment	10 - 15	None	None	None	None
Water	7732-18-5	231-791-2	Exemption	balance	None	None	None	None

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

#### 4. First Aid Measures

- 4.1. Eyes:** Immediately flush with room temperature, low pressure and clean water for at least 15 minutes. Seek medical attention if eye irritation continues.
- 4.2. Skin:** Wash surface areas with soap and water. Wash soiled clothing before wearing again. Consult a physician if irritation continues.
- 4.3. 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.
- 4.4. Ingestion:** Seek medical advice; and attention if stomach continues to be upset.

#### 5. Fire-Fighting Measures

- 5.1. Flammability:** Not Flammable
- 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

- 6.1. Personal precautions:** Eye or Skin protection required during clean-up. Use proper ventilation.
- 6.2. Environmental precautions:** Do not release to sewer, surface- or ground-water.
- 6.3. Methods for cleaning up:** If a spill occurs, use sponges to wipe-up ink, then rinse area with damp cloth. Place waste in closed container for disposal. Do not dispose of waste to the sewer. Wash hands with soap and water.

#### 7. Handling And Storage

- 7.1. Handling:** Keep out of reach of children and do not drink ink. Do not dismantle cartridge.
- 7.2. Storage:** Do not store the cartridge in high or freezing temperatures. Keep cartridge out of direct sunlight. Do not store cartridges with oxidizing agents or explosives. Make sure cartridge is dry before insertion into printer housing.
- 7.3. Specific use(s):** Not specified

#### 8. Exposure Controls and Personal Protection

##### 8.1. Exposure limit values:

###### 1. 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>

2. 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. Occupational exposure control**

Proper ventilation, in prevention

**8.2.1.1. Respiratory protection**

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

**8.2.1.2. Hand protection**

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

**8.2.1.3. Eye protection**

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

**8.2.1.4. Skin protection**

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

**8.2.2. Environmental exposure control**

Not established

**9. Physical and Chemical Properties of Ink Formulation**

**9.1. General information**

Appearance: Yellow Liquid

Odor: None

**9.2. Important health, safety and environmental information**

pH: 8.5~10.0 at 20 °C / 68 °F

Boiling point: No data available

Flash point: Not detected until 120°C/248°F (closed cup, ASTM D3278)

Flammability (solid, gas): None

Explosive properties: None

Oxidizing properties: None

Vapor pressure: No data available

Relative density: 1.06 at 20 °C / 68 °F

Solubility: No data available

Water solubility: Complete

Partition coefficient: n-octanol/water: No data available

Viscosity: Less than 5 mPa·s

Vapor density: Greater than 1 (air = 1)

Evaporation rate: No data available

**9.3. Other information**

Melting point: No data available

## 10. Stability and Reactivity

Stability	Stable under normal temperature
Hazardous polymerization	No data available
<b>10.1. Conditions to avoid:</b>	High and freezing temperatures
<b>10.2. Materials to avoid:</b>	Oxidizers and explosives
<b>10.3. Hazardous decomposition products:</b>	No data available

## 11. Toxicological Information

*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 and anesthesia
- Intentional or accidental oral ingestion may cause an upset stomach

*Chronic Health Hazards:* None known

*Mutagenicity:* Negative (by Ames Test)

*Carcinogenicity:* Not contain any substances listed in IARC Monographs (1,2A and 2B)

*Toxicity Data:* Oral LD<sub>50</sub>: > 2500mg/kg (Rats)

Dermal LD<sub>50</sub>: > 2000mg/kg (Rats)

Inhalant LC<sub>50</sub>: No data available

*Eye irritating:* Minimal irritating (Rabbits, OECD 405)

*Skin irritating:* Mild irritating (Rabbits, OECD 404)

*Skin sensitizing:* Non-sensitizing (Guinea Pig, OECD 406)

## 12. Ecological Information

<b>12.1. Ecotoxicity</b>	No data available on the adverse effects of this ink on the environment
<b>12.2. Mobility</b>	No data available on the adverse effects of this ink on the environment
<b>12.3. Persistence and degradability</b>	No data available on the adverse effects of this ink on the environment
<b>12.4. Bioaccumulative potential</b>	No data available on the adverse effects of this ink on the environment
<b>12.5. Result of PBT assessment</b>	Has not carried out PBT assessment
<b>12.6. Other adverse effects</b>	No data available

## 13. Disposal Considerations

Disposal should be in accordance with federal, state, and local requirements.

## 14. Transport Information

UN Class/UN Number:	Not applicable
DOT, IMO, or IATA :	Not hazardous classification

## 15. Regulatory Information

### *EU Information:*

*Chemical Safety Assessment according to (EC)1907/2006:*

This ink has not carried out any Chemical Safety Assessment yet.

*Symbols and indication according to 1999/45/EC:*

This ink does not meet the criteria for classification as dangerous.

### *US Information:*

TSCA Section 4(a) Final Test Rules Regulated: Not regulated

TSCA Section 8(a) Preliminary Assessment Information Rule (PAIR): Not regulated

TSCA Section 8(a) Inventory Update Rule:

Subject to a Special Regulatory Action under TSCA (2002 EPA Instructions, App. B) 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

## 16. Other Information

<i>List of relevant R-phrases:</i>	R22	Harmful if swallowed.
	R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
	R36/38	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.*