

## Material Safety Data Sheet

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

**1.1. Identification of the preparation:** EPSON Ink Cartridge T053

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

**1.3. Company/undertaking identification**

**Manufacturer/Distributor:** EPSON EUROPE B.V.

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The Netherlands

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**Date Prepared:** 30 June 2009

**Revision:** B

**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 magenta, cyan, yellow, light magenta, light cyan 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.

**Skin:** Ink contact with skin may cause irritation, swelling or redness.

**Inhalation:** Intentional exposure to ink vapors (mist) will cause respiratory irritation.

**Ingestion:** May cause upset stomach.

### 3. Composition/Information on Ingredients

*This is an aqueous ink formulation*

< Magenta ink >

Ink Composition	CAS No.	EEC No.	EU registration No.	% By Weight	EU Symbols	EU R-phrase	EU OELs	Remark
Azo Dye	Trade secret	Trade secret	Not available for the moment	1 - 5	Xi	R-36 R-52/53	None	None
TEGBE	143-22-6	205-592-6	Not available for the moment	about 10	X <sub>i</sub>	R-41	None	None
Diethylene glycol	111-46-6	203-872-2	Not available for the moment	5 - 10	X <sub>n</sub>	R-22	None	None
Triethanol amine	102-71-6	203-049-8	Not available for the moment	< 1	None	None	None	None
Proprietary organic materials	Trade secret	Trade secret	Not available for the moment	5 - 10	None	None	None	None
Glycerols	Trade secret	Trade secret	Not available for the moment	about 10	None	None	None	None
Water	7732-18-5	231-791-2	Exemption	balance	None	None	None	None

<Cyan ink>

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
TEGBE	143-22-6	205-592-6	Not available for the moment	about 10	X <sub>i</sub>	R-41	None	None
Diethylene glycol	111-46-6	203-872-2	Not available for the moment	5 - 10	X <sub>n</sub>	R-22	None	None
Triethanol amine	102-71-6	203-049-8	Not available for the moment	< 1	None	None	None	None
Proprietary organic materials	Trade secret	Trade secret	Not available for the moment	1 - 5	None	None	None	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

<Yellow ink>

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
TEGBE	143-22-6	205-592-6	Not available for the moment	about 10	X <sub>i</sub>	R-41	None	None
Diethylene glycol	111-46-6	203-872-2	Not available for the moment	10 - 15	X <sub>n</sub>	R-22	None	None
Triethanol amine	102-71-6	203-049-8	Not available for the moment	< 1	None	None	None	None
Proprietary organic materials	Trade secret	Trade secret	Not available for the moment	1 - 5	None	None	None	None
Glycerols	Trade secret	Trade secret	Not available for the moment	about 10	None	None	None	None
Water	7732-18-5	231-791-2	Exemption	balance	None	None	None	None

<Light Magenta ink>

Ink Composition	CAS No.	EEC No.	EU registration No.	% By Weight	EU Symbols	EU R-phrase	EU OELs	Remark
Azo Dye	Trade secret	Trade secret	Not available for the moment	< 1	X <sub>i</sub>	R-36 R-52/53	None	None
TEGBE	143-22-6	205-592-6	Not available for the moment	about 10	X <sub>i</sub>	R-41	None	None
Diethylene glycol	111-46-6	203-872-2	Not available for the moment	about 5	X <sub>n</sub>	R-22	None	None
Triethanol amine	102-71-6	203-049-8	Not available for the moment	< 1	None	None	None	None

Proprietary organic materials	Trade secret	Trade secret	Not available for the moment	10 - 15	None	None	None	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

< Light Cyan ink >

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	None	None	None	None
TEGBE	143-22-6	205-592-6	Not available for the moment	about 10	X <sub>i</sub>	R-41	None	None
Diethylene glycol	111-46-6	203-872-2	Not available for the moment	10 - 15	X <sub>n</sub>	R-22	None	None
Triethanol amine	102-71-6	203-049-8	Not available for the moment	< 1	None	None	None	None
Proprietary organic materials	Trade secret	Trade secret	Not available for the moment	1 - 5	None	None	None	None
Glycerols	Trade secret	Trade secret	Not available for the moment	about 10	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:**

Australia: OELs

2, 2-Oxybisethanol (CAS No. 111-46-6)

The Time Weighted Average is: 23 ppm.

The Time Weighted Average is: 100 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**

	<i>Cyan ink</i>	<i>Magenta ink</i>	<i>Yellow ink</i>
<i>Appearance</i>	Cyan Liquid	Magenta Liquid	Yellow Liquid
<i>Odor</i>	Slightly	Slightly	Slightly

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

	<i>Cyan ink</i>	<i>Magenta ink</i>	<i>Yellow ink</i>
<i>pH</i>	9.4 ± 0.5 at 20°C	9.1 ± 0.5 at 20°C	9.1 ± 0.5 at 20°C
<i>Boiling point</i>	No data available	No data available	No data available
<i>Flash point</i>	Not detected until 110 °C (closed cup, ASTM D3278)	Not detected until 110 °C (closed cup, ASTM D3278)	Not detected until 110 °C (closed cup, ASTM D3278)
<i>Autoflammability</i>	None	None	None
<i>Explosive properties</i>	None	None	None
<i>Oxidizing properties</i>	None	None	None
<i>Vapor density</i>	No data available	No data available	No data available
<i>Relative density</i>	1.07 at 20°C	1.08 at 20°C	1.06 at 20°C
<i>Solubility in water</i>	Complete	Complete	Complete
<i>Solubility in fat</i>	No data available	No data available	No data available
<i>Partition coefficient</i>	No data available	No data available	No data available
<i>Viscosity</i>	Less than 5 mPa·s at 20°C	Less than 5 mPa·s at 20°C	Less than 5 mPa·s at 20°C

**9.3. Other information**

	<i>Cyan ink</i>	<i>Magenta ink</i>	<i>Yellow ink</i>
<i>Melting point:</i>	No data available	No data available	No data available

**9.1. General information**

	<i>Light Cyan ink</i>	<i>Light Magenta ink</i>
<i>Appearance</i>	Cyan Liquid	Magenta Liquid
<i>Odor</i>	Slightly	Slightly

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

	<i>Light Cyan ink</i>	<i>Light Magenta ink</i>
<i>pH</i>	9.4+0.5-0.7 at 20°C	9.1 ± 0.5 at 20°C
<i>Boiling point</i>	No data available	No data available
<i>Flash point</i>	Not detected until 110 °C (closed cup, ASTM D3278)	Not detected until 110 °C (closed cup, ASTM D3278)
<i>Autoflammability</i>	None	None
<i>Explosive properties</i>	None	None
<i>Oxidizing properties</i>	None	None
<i>Vapor density</i>	No data available	No data available
<i>Relative density</i>	1.06 at 20°C	1.07 at 20°C
<i>Solubility in water</i>	Complete	Complete
<i>Solubility in fat</i>	No data available	No data available
<i>Partition coefficient</i>	No data available	No data available
<i>Viscosity</i>	Less than 5 mPa·s at 20°C	Less than 5 mPa·s at 20°C

**9.3. Other information**

	<i>Light Cyan ink</i>	<i>Light Magenta ink</i>
<i>Melting point:</i>	No data available	No data available

**10. Stability and Reactivity**

Stability Stable under normal temperature

Hazardous polymerization No data available

**10.1. Conditions to avoid:** High and freezing temperatures

**10.2. Materials to avoid:** Oxidizers and explosives

**10.3. Hazardous decomposition products:** 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

(Cyan, Magenta, Yellow, Light Cyan, Light Magenta ink)

*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>: > 5000mg/kg (Rat)

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

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

*Eye irritating:* Mild irritating (Rabbit)

*Skin irritating:* Non irritating (Rabbit)

*Skin sensitizing:* Not meet the criteria for classification according to EU Directive 1999/45/EC

**12. Ecological Information**

**12.1. Ecotoxicity** No data available on the adverse effects of this ink on the environment

**12.2. Mobility** No data available on the adverse effects of this ink on the environment

**12.3. Persistence and degradability** No data available on the adverse effects of this ink on the environment

**12.4. Bioaccumulative potential** No data available on the adverse effects of this ink on the environment

**12.5. Result of PBT assessment** Has not carried out PBT assessment

**12.6. Other adverse effects** 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

*List of relevant R-phrases:*

R-22	Harmful if swallowed.
R-36	Irritating to eyes
R-41	Risk of serious damage of eyes.
R-52/53	Harmful to aquatic organisms, may cause long-term adverse defects in the aquatic environment.

*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.*