

## Material Safety Data Sheet

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

- 1.1. Product identifier:** EPSON Ink Cartridge T027
- 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)

<Cyan ink>

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
Proprietary organic materials	Trade secret	Trade secret	Not available for the moment	10 - 15	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
Glycerols	Trade secret	Trade secret	Not available for the moment	about 10	None	None	None	None
Colorants	Trade secret	Trade secret	Not available for the moment	1 - 5	None	None	None	None
Triethanol amine	102-71-6	203-049-8	Not available for the moment	< 1	None	None	None	None

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

<Magenta ink>

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	about 10	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
Proprietary organic materials	Trade secret	Trade secret	Not available for the moment	5 - 10	None	None	None	None
Azo Dye	Trade secret	Trade secret	Not available for the moment	1 - 5	Xi	R-36 R-52/53	None	None
Triethanol amine	102-71-6	203-049-8	Not available for the moment	< 1	None	None	None	None

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

<Yellow ink>

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
TEGBE	143-22-6	205-592-6	Not available for the moment	about 10	X <sub>i</sub>	R-41	None	None
Glycerols	Trade secret	Trade secret	Not available for the moment	about 10	None	None	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
Azo Dye	Trade secret	Trade secret	Not available for the moment	1 - 5	Xi	R-41, R-43	None	None
Proprietary organic materials	Trade secret	Trade secret	Not available for the moment	1 - 5	None	None	None	None
Triethanol amine	102-71-6	203-049-8	Not available for the moment	< 1	None	None	None	None

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

<Light Cyan ink>

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
Proprietary organic materials	Trade secret	Trade secret	Not available for the moment	15 - 20	None	None	None	None
Glycerols	Trade secret	Trade secret	Not available for the moment	about 10	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

Colorants	Trade secret	Trade secret	Not available for the moment	< 1	None	None	None	None
Triethanol amine	102-71-6	203-049-8	Not available for the moment	< 1	None	None	None	None

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

<Light Magenta ink>

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	about 15	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
Colorants	Trade secret	Trade secret	Not available for the moment	1 - 5	None	None	None	None
Proprietary organic materials	Trade secret	Trade secret	Not available for the moment	1 - 5	None	None	None	None
Triethanol amine	102-71-6	203-049-8	Not available for the moment	< 1	None	None	None	None

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

#### 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. Do not dismantle cartridge.

### 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 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 end use(s):** Not specified

## SECTION 8: Exposure controls / personal protection

### 8.1. Control parameters:

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

USA: OELs (WEELs)

WEEL 8-hour TWA is : 10 mg/ m<sup>3</sup>

Australia: OELs

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. 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:

<b>Appearance:</b>	Cyan, Magenta, Yellow, Light Cyan, Light Magenta, Liquid
<b>Odour:</b>	Slightly
<b>Odour threshold:</b>	No data available
<b>pH:(Cyan ink)</b>	8.5 ~ 10.0 at 20°C
<b>(Magenta ink)</b>	8.5 ~ 9.8 at 20°C
<b>(Yellow ink)</b>	About 9 at 20°C
<b>(Light Cyan ink)</b>	8.5 ~ 9.8 at 20°C
<b>(Light Magenta ink)</b>	8.0 ~ 9.5 at 20°C
<b>Melting point / freezing point:</b>	No data available
<b>Initial boiling point and boiling range:</b>	
<b>(Cyan, Yellow, Light Magenta ink)</b>	No data available
<b>(Magenta, Light Cyan)</b>	about 100°C
<b>Flash point: (Cyan ink)</b>	Not detected until 110 °C (closed cup, ASTM D3278)
<b>(Magenta, Light Cyan, Light Magenta ink)</b>	Not detected until 100 °C (closed cup, ASTM D3278)
<b>(Yellow ink)</b>	No data available
<b>Evaporation rate:</b>	No data available

<i>Flammability (solid, gas):</i>	Not applicable (liquid)
<i>Upper/lower flammability or explosive limits:</i>	No data available
<i>Vapor pressure:</i>	No data available
<i>Vapor density:</i>	
<i>(Cyan, Light Magenta, Light Cyan ink)</i>	No data available
<i>(Magenta, Yellow ink)</i>	Greater than 1 (air = 1)
<i>Relative density: (Cyan ink)</i>	1.08 at 20°C
<i>(Magenta ink)</i>	1.07 at 20°C
<i>(Yellow ink)</i>	1.06 at 20°C
<i>(Light Cyan ink)</i>	1.06 at 20°C
<i>(Light Magenta ink)</i>	1.07 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
<i>Oral LD<sub>50</sub>:</i>	(Cyan ink) > 2500mg/kg (Rat)
	(Magenta, Light Cyan ink) > 5000mg/kg (Rat)
	(Yellow Light Magenta ink) > 2000mg/kg (Rat)
<i>Dermal LD<sub>50</sub>:</i>	> 2000mg/kg (Rat)
<i>Inhalant LC<sub>50</sub>:</i>	Not applicable
<i>Irritation:</i>	
<i>Eye:</i>	Not meet the criteria for classification according to EU Directive 1999/45/EC
	(Cyan, Magenta, Light Cyan, Light Magenta ink) Minimal irritating (Rabbit)
	(Yellow ink) Non irritating (Rabbit)
<i>Skin:</i>	Not meet the criteria for classification according to EU Directive 1999/45/EC
	(Cyan, Magenta ink) Mild irritating (Rabbit)
	(Yellow, Light Cyan, Light Magenta ink) Non irritating (Rabbit)
<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

- 12.4. Mobility in soil:** No data available  
**12.5. Results of PBT and vPvB assessment:** Has not carried out PBT and vPvB assessment  
**12.6. Other adverse effects:** 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-22 Harmful if swallowed.  
R-36 Irritating to eyes  
R-41 Risk of serious damage of eyes.  
R-43 May cause sensitization by skin contact  
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.*