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## Ink Cartridge (Y) (H086082-00)

**MSDS Number:** MSDSH086082-00-00-OT-E--- **Effective Date:** 09/05/2008

### 1. Product Identification

**Product Name:** Ink Cartridge (Y) (H086082-00)  
**Synonyms:** None  
**Use:** Inkjet Printing Ink

### 2. Hazards Identification

#### 2.1 Emergency Overview:

This ink does not meet the criteria for dangerous classification according to EU Directive 1999/45/EC. Ink component is 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. At extremely high temperature (over 300 deg. C), glycerol will decompose into acrolein, which has eye irritant. See Section 10.

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

**Inhalation:** Intentional exposure to ink vapors (mist) will cause respiratory irritation. At extremely high temperature (over 300 deg. C), glycerol will decompose into acrolein, which has respiratory irritant. See Section 10.

**Ingestion:** May cause upset stomach.

### 3. Composition Information

**Composition comments:** This is an aqueous ink formulation. This product has been evaluated using criteria specified in OSHA Hazard Communication Standard.

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	65 – 70	None	None	None	None
Hydrophilic Organic Solvents*1	Trade secret	Trade secret	Not available for the moment	10 – 15	None	None	None	None
Glycerol	56-81-5	200-289-5	Not available for the moment	5 – 10	None	None	None	None

TEGBE	143-22-6	202-592-6	Not available for the moment	5 – 10	Xi	R-41	None	None
Colorants*1	Trade secret	Trade secret	Not available for the moment	5 – 10	None	None	None	None
Triethanolamine	102-71-6	203-049-8	Not available for the moment	< 1	None	None	None	None
Additives*1	Trade secret	Trade secret	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.

\*1: The components are not regulated as hazardous substances by OSHA Hazard Communication Standard and EU Directive 1999/45/EC.

## 4. First Aid Measures

- 4.1 Eyes:** Immediately flush with room temperature, low pressure, 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 rewearing. 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 advise; 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:** Not established as ink

Glycerol (CAS No. 56-81-5)

US: ACGIH Threshold Limit Values (2008)

Glycerin (CAS No. 56-81-5) Mist

The 8-Hour Exposure Limit (TLV-TWA) is: 10 mg/m<sup>3</sup>

US: OSHA Table Z-1 Limits for Air Contaminants (June 30, 1993)(29 CFR 1910.1000)(1971 Permissible Exposure Limits (PELs))

Glycerin (CAS No. 56-81-5) Mist, Respirable Fraction

OSHA Z-1 PEL is:5 mg/m<sup>3</sup>

Glycerin (CAS No. 56-81-5) Mist, Total Dust

OSHA Z-1 PEL is:15 mg/m<sup>3</sup>

Australia: OELs

Glycerin (CAS No. 56-81-5) Mist (Inspirable Dust)

The Time Weighted Average is:10 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

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## 9. Physical and Chemical Properties of Ink Formulation

### 9.1 General information

**Appearance:** Yellow liquid.

**Odor:** Slightly.

### 9.2 Important health, safety and environmental information

**pH:** 8.8 ~ 9.6 at 20°C

**Boiling point:** No data available

**Flash point:** Does not flash until 100°C(closed cup)

**Flammability(solid, gas):** Not applicable

**Explosive properties:** None

**Oxidizing properties:** None

**Vapor density:** No data available

**Relative density:** 1.062 at 20°C

**Solubility:** No data available

**Water solubility:** Soluble

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

**Viscosity:** Less than 5 mPa · s at 20°C

**Vapor density:** Greater than 1(air=1)

**Evaporation rate:** No data available

### 9.1 Other information

**Melting point:** -18°C

## 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:** Acrolein (CAS number 107-02-8); When glycerol is heated over 300 deg. C, it will decompose into acrolein.

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## 11. Toxicological and Health Hazards

**Routes of Overexposure:** Eye, skin, inhalation, and oral

**Acute Health Hazards:**

- Overexposure of eye surface to the fluid may be mildly irritating
- Overexposure of skin to the fluid contact may cause irritation and in some people swelling and redness
- Intentional inhalation overexposure to the fluid vapors may result in respiratory tract irritation
- Intentional or accidental oral ingestion may cause an upset stomach

**Chronic Health Hazards:** None known

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

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

**Toxicity Data: Oral LD<sub>50</sub>:** Not meet the criteria for classification according to EU Directive 1999/45/EC

**Dermal LD<sub>50</sub>:** Not meet the criteria for classification according to EU Directive 1999/45/EC

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

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

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

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

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## 12. Ecological Information

**12.1 Ecotoxicity:** No data available on the adverse effects of this material on the environment

**12.2 Mobility:** No data available on the adverse effects of this material on the environment

**12.3 Persistence and degradability:** No data available on the adverse effects of this material on the environment

**12.4 Bioaccumulative potential:** No data available on the adverse effects of this material on the environment

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

**12.6. Other adverse effects:** No data available

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## 13. Disposal Considerations

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

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## 14. Transport Information

UN Class/UN Number: Not applicable

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## 15. Regulatory Considerations

**EU information:**

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

MSDS – Ink Cartridge (Y) (H086082-00-00-OT-E)

Produced: 9/5/08

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

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## 16. Other Information

List of relevant R-phrases: R-41 Risk of serious damage of eyes.

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.

**Revision Information:** Initial MSDS Development.

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**Disclaimer:**

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