



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Identification of the preparation** 51604A Rev B

**Product use** Inkjet printing

**Version #** 05

**Revision date** 07-Jan-2013

**CAS #** Mixture

**Company identification** Hewlett-Packard Company  
3000 Hanover Street  
Palo Alto, CA 94304-1185  
United States  
Telephone 650-857-1501

Hewlett-Packard health effects line  
(Toll-free within the US) 1-800-457-4209  
(Direct) 1-503-494-7199  
HP Customer Care Line  
(Toll-free within the US) 1-800-474-6836  
(Direct) 1-208-323-2551  
Email: hpcustomer.inquiries@hp.com

## 2. Hazards Identification

**Emergency overview** Contact with skin and eyes may result in irritation.

### Acute health effects

Any potential hazards are presumed to be due to exposure to the components.

**Skin contact**

*2-pyrrolidone*  
Contact with skin may result in irritation.

*Alkyldiol*  
Contact with skin may result in irritation.

*Food Black 2 acid salt #3*  
This product may cause an allergic skin reaction.

**Eye contact**

*2-pyrrolidone*  
Contact with eyes may result in irritation.

*Alkyldiol*  
Contact with eyes may result in irritation.

**Inhalation**

*2-pyrrolidone*  
Inhalation may result in respiratory irritation.

*Alkyldiol*  
Inhalation may result in respiratory irritation.

**Ingestion**

*2-pyrrolidone*  
Ingestion may result in nausea, vomiting and diarrhea.

*Ethylene glycol*  
Harmful if swallowed. May cause kidney and liver damage. May depress the central nervous system.

*Food Black 2 acid salt #3*  
Toxic if swallowed.

### Potential health effects

#### Routes of exposure

Potential routes of overexposure to this product are skin and eye contact

Inhalation of vapor and ingestion are not expected to be significant routes of exposure for this product under normal use conditions.

Complete toxicity data are not available for this specific formulation

**Chronic health effects**

Prolonged or repeated skin contact may cause skin irritation or allergic skin sensitization reaction.

**Carcinogenicity**

None of the components present in this formulation at concentrations equal to or greater than 0.1% are listed by EU, MAK, IARC, NTP or OSHA.

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### 3. Composition / Information on Ingredients

Components	CAS #	Percent
Water	7732-18-5	< 40
2-pyrrolidone	616-45-5	< 30
Alkyldiol	Proprietary	< 7.5
Ethylene glycol	107-21-1	< 25
Food Black 2 acid salt #3	Proprietary	< 5

**Composition comments**

This ink supply contains an aqueous ink formulation. This product has been evaluated using criteria specified in 29 CFR 1910.1200 (Hazard Communication Standard).

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### 4. First Aid Measures

**First aid procedures****Eye contact**

Do not rub eyes. Immediately flush with large amounts of clean, warm water (low pressure) for at least 15 minutes or until particles are removed. If irritation persists get medical attention.

**Skin contact**

Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.

**Inhalation**

Remove to fresh air. If symptoms persist, get medical attention.

**Ingestion**

If ingestion of a large amount does occur, seek medical attention.

**General advice**

No additional information

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### 5. Fire Fighting Measures

**Flammable properties**

None known.

**Extinguishing media****Suitable extinguishing media**

Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Unsuitable extinguishing media**

None known.

**Specific methods**

None established.

**Hazardous combustion products**

Refer to section 10.

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### 6. Accidental Release Measures

**Personal precautions**

Wear appropriate personal protective equipment.

**Environmental precautions**

Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

**Methods for containment**

Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps.

**Methods for cleaning up**

Soak up with inert absorbent material.

**Other information**

Soak up with inert absorbent material. Slowly vacuum or sweep the material into a bag or other sealed container. Dispose of in compliance with federal, state, and local regulations. See also section 13 Disposal considerations.

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### 7. Handling and Storage

**Handling**

Avoid contact with skin, eyes and clothing.

**Storage**

Keep out of the reach of children. Keep away from excessive heat or cold.

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## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

#### ACGIH

Components	Type	Value	Form
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Ethylene glycol (107-21-1)	Ceiling	100.0000 mg/m3	Aerosol.
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#### U.S. - Tennessee

Components	Type	Value
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Ethylene glycol (107-21-1)	Ceiling	50.0000 ppm 125.0000 mg/m3
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### Exposure guidelines

Exposure limits have not been established for this product.

### Engineering controls

Use in a well ventilated area.

### Personal protective equipment

#### General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

#### General

Use personal protective equipment to minimize exposure to skin and eye.

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## 9. Physical & Chemical Properties

### Appearance

Not available.

### Color

Not available.

### Odor

Not available.

### Odor threshold

Not available.

### Physical state

Liquid

### Form

Not available.

### pH

7 - 7.4

### Melting point

Not available.

### Freezing point

Not available.

### Boiling point

Not determined

### Flash point

338 - 347 °F (170 - 175 °C) Closed Cup

### Evaporation rate

Not determined

### Flammability limits in air, upper, % by volume

Not available.

### Flammability limits in air, lower, % by volume

Not determined

### Vapor pressure

Not determined

### Vapor density

Not available.

### Specific gravity

1 - 1.2

### Relative density

Not available.

### Solubility (water)

Soluble in water

### Auto-ignition temperature

Not available.

### Decomposition temperature

Not available.

### Viscosity

> 2 cp

### VOC

Not available.

### Other information

For other VOC regulatory data/information see section 15.

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## 10. Chemical Stability & Reactivity Information

### Chemical stability

Stable under recommended storage conditions.

### Incompatible materials

Incompatible with strong bases and oxidizing agents.

### Hazardous decomposition products

Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

**Possibility of hazardous reactions** Will not occur.

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## 11. Toxicological Information

**Oral toxicity** LD50/oral/rat >2500 mg/kg (OECD 401)  
Not classified for acute oral toxicity according to EU Directive 67/548/EEC and 1999/45/EC.

### Carcinogenicity

#### ACGIH Carcinogens

Ethylene glycol (CAS 107-21-1) A4 Not classifiable as a human carcinogen.

**Acute toxicity** Non- irritant in rabbit (OECD 404)  
Not classified for dermal irritation according to EU Directive 67/548/EEC and 1999/45/EC.

**Serious eye damage/eye irritation** Non - irritant in rabbit (OECD 405)

**Sensitization** Sensitizer in guinea pig (OECD 406)  
Repeated contact may cause allergic reactions in very susceptible persons.

### Symptoms and target organs

#### Target Organs (NIOSH)

Ethylene glycol (CAS 107-21-1) Central Nervous System  
Eyes  
Respiratory system  
Skin

**Further information** Complete toxicity data are not available for this specific formulation  
Refer to Section 2 for potential health effects and Section 4 for first aid measures.

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## 12. Ecological Information

**Aquatic toxicity** LC50/96h/Fathead minnows => 750 mg/L

**Persistence and degradability** Not available.

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## 13. Disposal Considerations

**Disposal instructions** Dispose of in compliance with federal, state, and local regulations.

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## 14. Transport Information

**Further information** Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

### RID

Not regulated as dangerous goods.

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## 15. Regulatory Information

**US federal regulations** US TSCA 12(b): Does not contain listed chemicals.

#### DEA Exempt Chemical Mixtures Code Number

Not regulated.

#### Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

#### Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Ethylene glycol (CAS 107-21-1) 1.0 %

#### US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Ethylene glycol (CAS 107-21-1) Listed.

**CERCLA (Superfund) reportable quantity**

None

**Occupational Safety and Health Administration (OSHA)****29 CFR 1910.1200** No  
**hazardous chemical****Superfund Amendments and Reauthorization Act of 1986 (SARA)****Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No**Section 302 extremely hazardous substance** No**Section 311 hazardous chemical** No**State regulations****US - New Jersey Community RTK (EHS Survey): Listed substance**

Ethylene glycol (CAS 107-21-1) Substance no. 0878

**US - New Jersey RTK - Substances: Listed substance**

Ethylene glycol (CAS 107-21-1) Listed.

**US. Massachusetts RTK - Substance List**2-pyrrolidone (CAS 616-45-5)  
Ethylene glycol (CAS 107-21-1)**US. New Jersey Worker and Community Right-to-Know Act**

Ethylene glycol (CAS 107-21-1) 500 LBS

**US. Pennsylvania RTK - Hazardous Substances**2-pyrrolidone (CAS 616-45-5) Listed.  
Ethylene glycol (CAS 107-21-1) Listed.**US. Rhode Island RTK**

Ethylene glycol (CAS 107-21-1)

**Regulatory information**

All chemical substances in this HP product have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NDL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

Contains Food Black 2 acid salt

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**16. Other Information****Other information**

This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).

**HMIS® ratings**Health: 1  
Flammability: 1  
Physical hazard: 0**NFPA ratings**Health: 1  
Flammability: 1  
Instability: 0**Disclaimer**

This Safety Data Sheet document is provided without charge to customers of Hewlett-Packard Company. Data is the most current known to Hewlett-Packard Company at the time of preparation of this document and is believed to be accurate. It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application. This document was prepared to the requirements of the jurisdiction specified in Section 1 above and may not meet regulatory requirements in other countries.

**Issue date**

07-Jan-2013

**This data sheet contains changes from the previous version in section(s):**Composition / Information on Ingredients: Disclosure Overrides  
9. Physical & Chemical Properties: Other information  
14. Transport Information: Further information

**Manufacturer information**

Hewlett-Packard Company  
3000 Hanover Street  
Palo Alto, California 94304-1112 US  
(Direct) 1-503-494-7199  
(Toll-free within the US) 1-800-457-4209

**Explanation of abbreviations**

<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>CAS</b>	Chemical Abstracts Service
<b>CERCLA</b>	Comprehensive Environmental Response Compensation and Liability Act
<b>CFR</b>	Code of Federal Regulations
<b>COC</b>	Cleveland Open Cup
<b>DOT</b>	Department of Transportation
<b>EPCRA</b>	Emergency Planning and Community Right-to-Know Act (aka SARA)
<b>IARC</b>	International Agency for Research on Cancer
<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>NTP</b>	National Toxicology Program
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>REC</b>	Recommended
<b>REL</b>	Recommended Exposure Limit
<b>SARA</b>	Superfund Amendments and Reauthorization Act of 1986
<b>STEL</b>	Short-Term Exposure Limit
<b>TCLP</b>	Toxicity Characteristics Leaching Procedure
<b>TLV</b>	Threshold Limit Value
<b>TSCA</b>	Toxic Substances Control Act
<b>VOC</b>	Volatile Organic Compounds