

CZ638Series[C]-MSDS\_US-English-08.pdf

CZ638Series[M]-MSDS\_US-English-08.pdf

CZ638Series[Y]-MSDS\_US-English-08.pdf



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Identification of the preparation** CZ638Series[C]  
**Product use** Inkjet printing  
**Version #** 08  
**Revision date** 09-Mar-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.

Causes skin irritation.

### Acute health effects

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

#### Skin contact

*1,5-pentanediol*

Contact with skin may result in irritation.

*Copper phthalocyanine direct dye salt*

Contact with skin may result in irritation.

*Ethyl alkyldiol*

Contact with skin may result in mild irritation.

*Metal nitrate # 2*

Contact with skin may result in irritation.

#### Eye contact

*1,5-pentanediol*

Contact with eyes may result in irritation.

*Copper phthalocyanine direct dye salt*

Contact with eyes may result in irritation.

Risk of serious damage to eyes.

*Ethyl alkyldiol*

Contact with eyes may result in mild irritation.

*Metal nitrate # 2*

Contact with eyes may result in irritation.

#### Inhalation

*Metal nitrate # 2*

Inhalation may result in respiratory irritation.

#### Ingestion

*Metal nitrate # 2*

Contains nitrate salts, may cause methemoglobinemia.

## 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

None known.

### 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
1,5-pentanediol	111-29-5	< 10
Copper phthalocyanine direct dye salt	Proprietary	< 5
Ethyl alkyldiol	Proprietary	< 10
Metal nitrate # 2	Proprietary	< 2.5
Water	7732-18-5	> 65

### 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

**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** Cyan  
**Odor** Not available.  
**Odor threshold** Not available.  
**Physical state** Liquid  
**Form** Not available.  
**pH** 8 - 8.4  
**Melting point** Not available.  
**Freezing point** Not available.  
**Boiling point** Not determined  
**Flash point** > 200 °F (> 93.3 °C) Pensky-Martens Closed Cup  
**Evaporation rate** Not determined  
**Flammability limits in air, upper, % by volume** Not available.  
**Flammability limits in air, lower, % by volume** Not available.  
**Vapor pressure** Not determined  
**Vapor density** Not available.  
**Specific gravity** Not available.  
**Relative density** Not available.  
**Solubility (water)** Soluble in water  
**Auto-ignition temperature** Not available.  
**Decomposition temperature** Not available.  
**VOC** < 265 g/L

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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

**Serious eye damage/eye irritation** Not available.  
**Further information** This ink formulation has not been tested for toxicological effects. Refer to Section 2 for potential health effects and Section 4 for first aid measures.

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## 12. Ecological Information

**Aquatic toxicity** This product has not been tested for ecological effects.  
**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.

**CERCLA (Superfund) reportable quantity**

None

**Occupational Safety and Health Administration (OSHA)**

**29 CFR 1910.1200 hazardous chemical** Yes

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - Yes  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** Yes

**State regulations**

**US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**

Not regulated.

**US. Rhode Island RTK**

Not regulated.

**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.

**Other information** VOC content (less water, less exempt compounds) = < 860 g/L (U.S. requirement, not for emissions)

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## 16. Other Information

<b>Other information</b>	This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).
<b>HMIS® ratings</b>	Health: 1 Flammability: 2 Physical hazard: 0
<b>NFPA ratings</b>	Health: 1 Flammability: 2 Instability: 0
<b>Disclaimer</b>	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.
<b>Issue date</b>	09-Mar-2013
<b>Manufacturer information</b>	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
<b>Explanation of abbreviations</b>	

<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



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Identification of the preparation** CZ638Series[M]  
**Product use** Inkjet printing  
**Version #** 08  
**Revision date** 09-Mar-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.

Causes skin irritation.

### Acute health effects

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

#### Skin contact

*1,5-pentanediol*

Contact with skin may result in irritation.

*2-pyrrolidone*

Contact with skin may result in irritation.

*Alkyldiol ethoxylate*

Contact with skin may result in severe irritation.

*Ethyl alkyldiol*

Contact with skin may result in mild irritation.

*Metal nitrate # 2*

Contact with skin may result in irritation.

#### Eye contact

*1,5-pentanediol*

Contact with eyes may result in irritation.

*2-pyrrolidone*

Contact with eyes may result in irritation.

*Alkyldiol ethoxylate*

Contact can cause moderate to severe irritation and possible injury to the eyes.

*Ethyl alkyldiol*

Contact with eyes may result in mild irritation.

*Metal nitrate # 2*

Contact with eyes may result in irritation.

#### Inhalation

*2-pyrrolidone*

Inhalation may result in respiratory irritation.

*Metal nitrate # 2*

Inhalation may result in respiratory irritation.

**Ingestion***2-pyrrolidone*

Ingestion may result in nausea, vomiting and diarrhea.

*Alkyldiol ethoxylate*

Ingestion may cause irritation of mouth, throat, nausea, vomiting and diarrhea.

*Metal nitrate # 2*

Contains nitrate salts, may cause methemoglobinemia.

**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**

None known.

**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.

**3. Composition / Information on Ingredients**

Components	CAS #	Percent
2-pyrrolidone	616-45-5	< 7.5
1,5-pentanediol	111-29-5	< 10
Alkyldiol ethoxylate	Proprietary	< 2.5
Ethyl alkyldiol	Proprietary	< 10
Metal nitrate # 2	Proprietary	< 2.5
Polycyclic sulfonic acid, TMA salt	Proprietary	< 7.5
Water	7732-18-5	> 65

**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).

**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

**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.

**6. Accidental Release Measures****Personal precautions**

Wear appropriate personal protective equipment.

<b>Environmental precautions</b>	Do not let product enter drains. Do not flush into surface water or sanitary sewer system.
<b>Methods for containment</b>	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.
<b>Methods for cleaning up</b>	Soak up with inert absorbent material.
<b>Other information</b>	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.

## 7. Handling and Storage

<b>Handling</b>	Avoid contact with skin, eyes and clothing.
<b>Storage</b>	Keep out of the reach of children. Keep away from excessive heat or cold.

## 8. Exposure Controls / Personal Protection

<b>Exposure guidelines</b>	Exposure limits have not been established for this product.
<b>Engineering controls</b>	Use in a well ventilated area.
<b>Personal protective equipment</b>	
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>General</b>	Use personal protective equipment to minimize exposure to skin and eye.

## 9. Physical & Chemical Properties

<b>Appearance</b>	Not available.
<b>Color</b>	Magenta
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>Physical state</b>	Liquid
<b>Form</b>	Not available.
<b>pH</b>	8 - 8.4
<b>Melting point</b>	Not available.
<b>Freezing point</b>	Not available.
<b>Boiling point</b>	Not determined
<b>Flash point</b>	> 200 °F (> 93.3 °C) Pensky-Martens Closed Cup
<b>Evaporation rate</b>	Not determined
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Vapor pressure</b>	Not determined
<b>Vapor density</b>	Not available.
<b>Specific gravity</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility (water)</b>	Soluble in water
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>VOC</b>	< 266 g/L

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Incompatible materials</b>	Incompatible with strong bases and oxidizing agents.
<b>Hazardous decomposition products</b>	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
<b>Possibility of hazardous reactions</b>	Will not occur.

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## 11. Toxicological Information

**Serious eye damage/eye irritation** Not available.

**Further information** This ink formulation has not been tested for toxicological effects. Refer to Section 2 for potential health effects and Section 4 for first aid measures.

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## 12. Ecological Information

**Aquatic toxicity** This product has not been tested for ecological effects.

**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.

### CERCLA (Superfund) reportable quantity

None

### Occupational Safety and Health Administration (OSHA)

**29 CFR 1910.1200 hazardous chemical** Yes

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - Yes  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** Yes

### State regulations

#### US. Massachusetts RTK - Substance List

2-pyrrolidone (CAS 616-45-5)

#### US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

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**US. Pennsylvania RTK - Hazardous Substances**

2-pyrrolidone (CAS 616-45-5)

Listed.

**US. Rhode Island RTK**

Not regulated.

**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/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

**Other information**

VOC content (less water, less exempt compounds) = < 812 g/L (U.S. requirement, not for emissions)

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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: 2  
Physical hazard: 0

**NFPA ratings**

Health: 1  
Flammability: 2  
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**

09-Mar-2013

**This data sheet contains changes from the previous version in section(s):**

Composition / Information on Ingredients: Ingredients

**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



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Identification of the preparation** CZ638Series[Y]  
**Product use** Inkjet printing  
**Version #** 08  
**Revision date** 09-Mar-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  
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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.

Causes skin irritation.

### Acute health effects

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

#### Skin contact

*1,5-pentanediol*

Contact with skin may result in irritation.

*2-pyrrolidone*

Contact with skin may result in irritation.

*Ethyl alkyldiol*

Contact with skin may result in mild irritation.

*Metal nitrate # 2*

Contact with skin may result in irritation.

*Substituted naphthalenesulfonate salt # 13*

Contact with skin may result in irritation.

#### Eye contact

*1,5-pentanediol*

Contact with eyes may result in irritation.

*2-pyrrolidone*

Contact with eyes may result in irritation.

*Ethyl alkyldiol*

Contact with eyes may result in mild irritation.

*Metal nitrate # 2*

Contact with eyes may result in irritation.

*Substituted naphthalenesulfonate salt # 13*

Contact with eyes may result in irritation.

#### Inhalation

*2-pyrrolidone*

Inhalation may result in respiratory irritation.

*Metal nitrate # 2*

Inhalation may result in respiratory irritation.

*Substituted naphthalenesulfonate salt # 13*

Inhalation may result in respiratory irritation.

**Ingestion***2-pyrrolidone*

Ingestion may result in nausea, vomiting and diarrhea.

*Metal nitrate # 2*

Contains nitrate salts, may cause methemoglobinemia.

**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**

None known.

**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.

**3. Composition / Information on Ingredients**

Components	CAS #	Percent
2-pyrrolidone	616-45-5	< 7.5
1,5-pentanediol	111-29-5	< 10
Ethyl alkyldiol	Proprietary	< 10
Metal nitrate # 2	Proprietary	< 2.5
Substituted naphthalenesulfonate salt # 13	Proprietary	< 7.5
Water	7732-18-5	> 65

**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).

**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

**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.

**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

**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** Yellow  
**Odor** Not available.  
**Odor threshold** Not available.  
**Physical state** Liquid  
**Form** Not available.  
**pH** 8 - 8.4  
**Melting point** Not available.  
**Freezing point** Not available.  
**Boiling point** Not determined  
**Flash point** > 200 °F (> 93.3 °C) Pensky-Martens Closed Cup  
**Evaporation rate** Not determined  
**Flammability limits in air, upper, % by volume** Not available.  
**Flammability limits in air, lower, % by volume** Not available.  
**Vapor pressure** Not determined  
**Vapor density** Not available.  
**Specific gravity** Not available.  
**Relative density** Not available.  
**Solubility (water)** Soluble in water  
**Auto-ignition temperature** Not available.  
**Decomposition temperature** Not available.  
**VOC** < 266 g/L  
**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

**Serious eye damage/eye irritation** Not available.

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**Further information**

This ink formulation has not been tested for toxicological effects.  
Refer to Section 2 for potential health effects and Section 4 for first aid measures.

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**12. Ecological Information**

**Aquatic toxicity** This product has not been tested for ecological effects.

**Persistence and degradability** Not available.

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**13. Disposal Considerations**

**Disposal instructions** Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Do not allow this material to drain into sewers/water supplies.

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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.

**CERCLA (Superfund) reportable quantity**

None

**Occupational Safety and Health Administration (OSHA)**

**29 CFR 1910.1200 hazardous chemical** Yes

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - Yes  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** Yes

**State regulations****US. Massachusetts RTK - Substance List**

2-pyrrolidone (CAS 616-45-5)

**US. New Jersey Worker and Community Right-to-Know Act**

Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**

2-pyrrolidone (CAS 616-45-5) Listed.

**US. Rhode Island RTK**

Not regulated.

**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/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

**Other information**

Exposure Limits (See Section 8): Executive regulation of Minister of Labour and Social Policy dated Nov. 29, 2002 concerning the highest exposure limits and volume of factors harmful for health and environment at work (Official Journal of Laws no 217/2002 item 1833 with further amendments).  
VOC content (less water, less exempt compounds) = < 812 g/L (U.S. requirement, not for emissions)  
VOC data based on formulation (Organic compounds minus solids)

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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: 2  
Physical hazard: 0

**NFPA ratings**

Health: 1  
Flammability: 2  
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**

09-Mar-2013

**This data sheet contains changes from the previous version in section(s):**

Composition / Information on Ingredients: Ingredients  
9. Physical & Chemical Properties: Other information  
13. Disposal Considerations: Disposal instructions  
15. Regulatory Information: Other information

**Manufacturer information**

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## 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