



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Identification of the preparation** C4908 Series

**Product use** Inkjet printing

**Version #** 04

**Revision date** 18-Oct-2012

**CAS #** Mixture

**Company identification** Hewlett-Packard Company  
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## 2. Hazards Identification

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

### Acute health effects

#### Skin contact

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

*1-(2-hydroxyethyl)-2-pyrrolidone*  
Contact with skin may result in irritation.

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

*Aliphatic diol*  
Contact with skin may result in irritation.

*Magenta pigment*  
Contact with skin may result in irritation.

*Tetraethylene glycol*  
Contact with skin may result in irritation.

#### Eye contact

*1-(2-hydroxyethyl)-2-pyrrolidone*  
Contact with eyes may result in irritation.

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

*Aliphatic diol*  
Contact with eyes may result in irritation.

*Magenta pigment*  
Contact with eyes may result in irritation.

*Tetraethylene glycol*  
Contact with eyes may cause irritation.

#### Inhalation

*1-(2-hydroxyethyl)-2-pyrrolidone*  
Inhalation may result in respiratory irritation.

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

*Aliphatic diol*  
Inhalation may result in respiratory irritation.

*Tetraethylene glycol*  
Inhalation may result in respiratory irritation.

**Ingestion***1-(2-hydroxyethyl)-2-pyrrolidone*

Ingestion may result in nausea, vomiting and diarrhea.

*2-pyrrolidone*

Ingestion may result in nausea, vomiting and diarrhea.

**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-(2-hydroxyethyl)-2-pyrrolidone	3445-11-2	< 10
2-pyrrolidone	616-45-5	< 7.5
Aliphatic diol	Proprietary	< 5
Magenta pigment	Proprietary	< 5
Tetraethylene glycol	112-60-7	< 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).

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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. If irritation persists get medical attention.

**Inhalation**

Move 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**

Combustion generates toxic fumes of fluoride and/or fluorine compounds; phosphorus oxides.

**Extinguishing media****Suitable extinguishing media**CO<sub>2</sub>, water, dry chemical, or foam**Unsuitable extinguishing media**

None known.

**Specific methods**

Wear self contained breathing apparatus for fire fighting if necessary.

**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.

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

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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** Magenta  
**Odor** Not available.  
**Odor threshold** Not available.  
**Physical state** Liquid  
**Form** Not available.  
**pH** 8.7  
**Melting point** Not available.  
**Freezing point** Not available.  
**Boiling point** Not determined  
**Flash point** 230 °F (110 °C) Setaflash Closed Tester US EPA Method 1020  
**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  
**Relative density** Not available.  
**Solubility (water)** Soluble in water  
**Auto-ignition temperature** Not determined  
**Decomposition temperature** Not available.  
**Viscosity** 3 cP  
**VOC** < 313 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. Decomposition of this product may yield oxides of phosphorus.  
hydrogen fluoride  
fluorinated hydrocarbons  
**Possibility of hazardous reactions** Will not occur.

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## 11. Toxicological Information

<b>Serious eye damage/eye irritation</b>	Not available.
<b>Further information</b>	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

<b>Aquatic toxicity</b>	This product has not been tested for ecological effects.
<b>Persistence and degradability</b>	Not available.

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## 13. Disposal Considerations

<b>Disposal instructions</b>	Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
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HP's Planet Partners (trademark) supplies recycling program enables simple, convenient recycling of HP original inkjet and LaserJet supplies. For more information and to determine if this service is available in your location, please visit <http://www.hp.com/recycle>.

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## 14. Transport Information

<b>Further information</b>	Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.
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### **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

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

<b>29 CFR 1910.1200 hazardous chemical</b>	No
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### **Superfund Amendments and Reauthorization Act of 1986 (SARA)**

<b>Hazard categories</b>	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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<b>Section 302 extremely hazardous substance</b>	No
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<b>Section 311 hazardous chemical</b>	No
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## 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

The components of this product are reported in the following inventories: United States of America, European Union, Switzerland, Canada, Australia, Philippines, Korea, New Zealand and China.

## Other information

Specific Provisions: Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (in the amended version OJ L 396 from 29.05.2007 page 3 with further rectifications and amendments).

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) = <1150 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: 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

18-Oct-2012

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

Product and Company Identification: Alternate Trade Names  
9. Physical & Chemical Properties: Other information  
15. Regulatory Information: Regulatory information  
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