



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material name** C4812Series  
**Version #** 03  
**Issue date** 06-Dec-2012  
**Revision date** 04-Oct-2013  
**Product use** Inkjet printing  
**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.

Causes skin irritation.

**Other hazards** 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.

## 3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
1,5-pentanediol	111-29-5	< 15
2-pyrrolidone	616-45-5	< 7.5
Non-hazardous components	CAS #	Percent
Water	7732-18-5	> 60
Alkyldicarboxylic acid	Proprietary	< 7.5
Tetraethylene glycol	112-60-7	< 5
Magenta Colorant	Proprietary	<2.5

**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).

## 4. First Aid Measures

**General advice** No information

### 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.

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## 5. Fire Fighting Measures

**Flammable properties** None known.  
**Extinguishing media**  
**Suitable extinguishing media** For small (incipient) fires, use media such as foam, sand, dry chemical, or carbon dioxide. For large fires use very large (flooding) quantities of water and/or foam, applied as a mist or spray.  
**Unsuitable extinguishing media** None known.  
**Fire fighting equipment/instructions** Not available.  
**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 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** Use personal protective equipment to minimize exposure to skin and eye.  
**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

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## 9. Physical & Chemical Properties

**Appearance** Not available.  
**Physical state** Liquid.  
**Form** Not available.  
**Color** Not available.  
**Odor** Not available.  
**pH** 3.8 - 4.2  
**Vapor pressure** Not determined  
**Boiling point** Not determined  
**Melting point/Freezing point** Not available.  
**Solubility (water)** Soluble in water  
**Specific gravity** Not available.  
**Flash point** Not available.  
**Viscosity**  $\geq 2$  cp  
**VOC** Not available  
**Other information** For other VOC regulatory data/information see Section 15.

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## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	No information available
<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

### Toxicological data

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Guinea pig	6500 mg/kg
	Rat	6500 mg/kg
Alkyldicarboxylic acid (CAS Proprietary)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	2260 mg/kg <= 10000 mg/kg
Tetraethylene glycol (CAS 112-60-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	22570 mg/kg
<i>Oral</i>		
LD50	Rat	32700 mg/kg 29 g/kg
<b>Carcinogenicity</b>	No data available.	
<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>	Static acute toxicity (trout), survival (100 mg/L) = 100% Static acute toxicity (trout), survival (10 mg/L) = 100%
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### Ecotoxicological data

Product	Species	Test Results
C4812Series (CAS Mixture)		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 417 mg/l, 96 hours
<b>Components</b>	<b>Species</b>	<b>Test Results</b>
2-pyrrolidone (CAS 616-45-5)		
Crustacea	EC50	Water flea ( <i>Daphnia pulex</i> ) 13.21 mg/l, 48 hours
Alkyldicarboxylic acid (CAS Proprietary)		
Fish	LC50	Fish 101, 96 Hours

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Components	Species	Test Results
<b>Aquatic</b>		
Crustacea	EC50 Water flea (Daphnia magna)	350 - 400 mg/l, 48 hours
<b>Ecotoxicity</b>	No data available.	
<b>Persistence and degradability</b>	Not available.	
<b>Bioaccumulation / Accumulation</b>		
<b>Bioaccumulative potential</b>		
<b>Octanol/water partition coefficient log Kow</b>		
2-pyrrolidone		-0.85
Alkyldicarboxylic acid		-0.59
<b>Partition coefficient</b>		
2-pyrrolidone		-0.85
Alkyldicarboxylic acid		-0.59

### 13. Disposal Considerations

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

### 14. Transport Information

**DOT**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**RID**

Not regulated as dangerous goods.

**Further information**

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

### 15. Regulatory Information

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

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

Not listed.

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

Not regulated.

**DEA Exempt Chemical Mixtures Code Number**

Not regulated.

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

Not regulated.

**CERCLA (Superfund) reportable quantity**

None

**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

**SARA 302 Extremely hazardous substance**

No

**SARA 311/312 Hazardous chemical**

No

**Other regulations**

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.

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

2-pyrrolidone (CAS 616-45-5)

**US. Pennsylvania RTK - Hazardous Substances**

2-pyrrolidone (CAS 616-45-5)

Listed.

**US. Rhode Island RTK**

Not regulated.

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**16. Other Information****HMIS® ratings**

Health: 1  
Flammability: 0  
Physical hazard: 0

**NFPA ratings**

Health: 1  
Flammability: 0  
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.

**Other information**

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

**Issue date**

06-Dec-2012

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

Ecological Information: Ecotoxicity  
12. Ecological Information: Aquatic toxicity

**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