



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material name** C4801Series  
**Version #** 04  
**Issue date** 19-Apr-2011  
**Revision date** 03-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

<b>Hazardous components</b>	<b>CAS #</b>	<b>Percent</b>
1,5-pentanediol	111-29-5	<10
2-pyrrolidone	616-45-5	<10
<b>Non-hazardous components</b>	<b>CAS #</b>	<b>Percent</b>
Water	7732-18-5	<70
Ethyl alkyldiol	Proprietary	<10
Alkyldicarboxylic acid	Proprietary	<7.5
Alkyldiol ethoxylate	Proprietary	<2.5
Cyan Colorant 2	Proprietary	<2.5%
Cyan Colorant 1	Proprietary	<1%

**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. 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.

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## 5. Fire Fighting Measures

### Flammable properties

None known.

### Extinguishing media

#### Suitable extinguishing media

CO<sub>2</sub>, water, dry chemical, or foam

#### 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.  
Provide adequate ventilation.

### Personal protective equipment

#### General

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

#### Eye / face protection

Not required under intended use.

#### Skin protection

Protected gloves not required under intended use.

#### Respiratory protection

For use other than intended use (such as in the event of a large spill), goggles and respirators may be required.

#### 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 - 4.3

### Vapor pressure

Not determined

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<b>Boiling point</b>	Not determined
<b>Melting point/Freezing point</b>	Not available.
<b>Solubility (water)</b>	Soluble in water
<b>Specific gravity</b>	Not available.
<b>Flash point</b>	Not available.
<b>Viscosity</b>	>= 2 cp
<b>VOC</b>	Not available
<b>Other information</b>	For other VOC regulatory data/information see Section 15.

## 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.

## 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
<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.	

## 12. Ecological Information

<b>Aquatic toxicity</b>	Static acute toxicity (trout), survival (100 mg/L) = 90% Static acute toxicity (trout), survival (10 mg/L) = 100%
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### Ecotoxicological data

Product	Species	Test Results
C4801Series (CAS Mixture)		
<i>Acute</i>		
Algae	EC50	Algae > 100 mg/l, 72 hours
Crustacea	EC50	Daphnia > 66 mg/l, 48 hours
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50	Fathead minnow (Pimephales promelas) < 400 mg/l, 96 hours
Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia pulex) 13.21 mg/l, 48 hours

Components	Species	Test Results
Alkyldicarboxylic acid (CAS Proprietary)		
Fish	LC50	Fish
		101, 96 Hours
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna)
		350 - 400 mg/l, 48 hours
Fish	LC50	Pink salmon (Oncorhynchus gorbuscha)
		239 mg/l, 96 hours
Crustacea	EC50	Daphnia
		50 - 100 mg/l, 48 Hours
		102, 48 Hours
Fish	LC50	Fish
		1000, 96 Hours
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna)
		10330 - 16360 mg/l, 48 hours
Fish	LC50	Bleak (Alburnus alburnus)
		> 10000 mg/l, 96 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/NDSL), 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**  
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**Other information**  
This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).

**Issue date**  
19-Apr-2011

**This data sheet contains changes from the previous version in section(s):**  
Ecological Information: Ecotoxicity  
12. Ecological Information: Aquatic toxicity

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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