



# SAFETY DATA SHEET

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Trade name or designation of the mixture** C4821Series  
**Registration number** N/A  
**Synonyms** None.  
**Issue date** 28-Jun-2013  
**Version number** 01

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** Inkjet printing  
**Uses advised against** None known.

### Company identification

Hewlett-Packard, Ltd.  
Cain Road, Amen Corner  
Bracknell, Berkshire, RG12 1HN  
Telephone 44 (0) 879 013 0790

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  
Poison Information Center 0207771 5307

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Directive 67/548/EEC or 1999/45/EC as amended

**Classification** R52/53  
**Emergency overview** Contact with skin and eyes may result in irritation.

Causes skin irritation.

#### Hazard summary

**Physical hazards** Not classified for physical hazards.  
**Health hazards** Not classified as a health hazard.  
**Environmental hazards** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
**Specific hazards** Not available.  
**Main symptoms** Not available.

### 2.2. Label elements

#### Label according to Directive 67/548/EEC or 1999/45/EC as amended

**Contains:** 1,5-pentanediol, 2-pyrrolidone, Alkyldicarboxylic acid, Alkyldiol ethoxylate, Cyan Colorant 1, Cyan Colorant 2, Ethyl alkyldiol, Water

**R-phrases(s)**  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**S-phrases(s)**  
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

**Authorization number** Not available.

**Supplemental label information** Not applicable.

**2.3. 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

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Water	<70	7732-18-5 231-791-2	-	-	
<b>Classification:</b>					
<b>DSD:</b>	-				
<b>CLP:</b>	-				
1,5-pentanediol	<10	111-29-5 203-854-4	-	-	
<b>Classification:</b>					
<b>DSD:</b>	-				
<b>CLP:</b>	-				
2-pyrrolidone	<10	616-45-5 210-483-1	-	-	
<b>Classification:</b>					
<b>DSD:</b>	Xi;R36				
<b>CLP:</b>	Eye Irrit. 2;H319				
Ethyl alkyldiol	<10	Proprietary 201-074-9	-	-	
<b>Classification:</b>					
<b>DSD:</b>	-				
<b>CLP:</b>	-				
Alkyldicarboxylic acid	<7.5	Proprietary 203-740-4	-	-	
<b>Classification:</b>					
<b>DSD:</b>	Xi;R36/37-41				
<b>CLP:</b>	Skin Irrit. 2;H315, Eye Dam. 1;H318, STOT SE 3;H335				
Alkyldiol ethoxylate	<2.5	Proprietary -	-	-	
<b>Classification:</b>					
<b>DSD:</b>	Xn;R21/22, Xi;R38-41, N;R51/53				
<b>CLP:</b>	Acute Tox. 4;H302, Acute Tox. 4;H312, Skin Irrit. 2;H315, Eye Dam. 1;H318, Aquatic Chronic 2;H411				
Cyan Colorant 2	<2.5%	Proprietary -	-	-	
<b>Classification:</b>					
<b>DSD:</b>	Xn;R48/22, N;R51/53				
<b>CLP:</b>	Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319				
Cyan Colorant 1	<1%	Proprietary 223-339-8	-	-	
<b>Classification:</b>					
<b>DSD:</b>	-				
<b>CLP:</b>	-				

#### Composition comments

This ink supply contains an aqueous ink formulation.  
This product has been evaluated using criteria specified in the EU Directives 67/548/EEC and 1999/45/EC, as amended.  
For the full text of the R phrases mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

#### General information

Not available.

#### 4.1. Description of first aid measures

##### Inhalation

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

<b>Skin contact</b>	Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.
<b>Eye contact</b>	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.
<b>Ingestion</b>	If ingestion of a large amount does occur, seek medical attention.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	Not available.
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	No notes to physicians.

---

## SECTION 5: Firefighting measures

<b>General fire hazards</b>	Not available.
<b>5.1. Extinguishing media</b>	
<b>Suitable extinguishing media</b>	CO2, water, dry chemical, or foam
<b>Unsuitable extinguishing media</b>	None known.
<b>5.2. Special hazards arising from the substance or mixture</b>	Not available.
<b>5.3. Advice for firefighters</b>	
<b>Special protective equipment for firefighters</b>	Not available.
<b>Special fire fighting procedures</b>	Not available.

---

## SECTION 6: Accidental release measures

<b>6.1. Personal precautions, protective equipment and emergency procedures</b>	
<b>For non-emergency personnel</b>	Wear appropriate personal protective equipment.
<b>For emergency responders</b>	Not available.
<b>6.2. Environmental precautions</b>	Do not let product enter drains. Do not flush into surface water or sanitary sewer system.
<b>6.3. Methods and material for containment and cleaning up</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>6.4. Reference to other sections</b>	Not available.

---

## SECTION 7: Handling and storage

<b>7.1. Precautions for safe handling</b>	Avoid contact with skin, eyes and clothing.
<b>7.2. Conditions for safe storage, including any incompatibilities</b>	Keep out of the reach of children. Keep away from excessive heat or cold.
<b>7.3. Specific end use(s)</b>	Not available.

---

## SECTION 8: Exposure controls/personal protection

<b>8.1. Control parameters</b>	
<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Recommended monitoring procedures</b>	Not available.
<b>Derived no-effect level (DNEL)</b>	Not available.
<b>Predicted no effect concentrations (PNECs)</b>	Not available.

## 8.2. Exposure controls

**Appropriate engineering controls** Use in a well ventilated area.  
Provide adequate ventilation.

### Individual protection measures, such as personal protective equipment

**General information** Use personal protective equipment to minimize exposure to skin and eye.

**Eye/face protection** Not required under intended use.

#### Skin protection

- **Hand protection** Not available.

- **Other** 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.

**Thermal hazards** Not available.

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

---

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

**Physical state** Liquid.

**Form** Not available.

**Color** Not available.

**Odor** Not available.

**Odor threshold** Not available.

**pH** 3.8 - 4.3

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** Not determined

**Flash point** Not applicable.

**Evaporation rate** Not determined

**Flammability (solid, gas)** Not applicable.

#### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** Not determined

**Flammability limit - upper (%)** Not available.

**Vapor pressure** Not determined

**Relative density** Not available.

**Solubility(ies)** Soluble in water

**Partition coefficient (n-octanol/water)** Not available.

**Decomposition temperature** Not available.

**Viscosity**  $\geq 2$  cp

**Explosive properties** Not available.

**Oxidizing properties** Not determined

**9.2. Other information** No relevant additional information available.

---

## SECTION 10: Stability and reactivity

**10.1. Reactivity** Not available.

**10.2. Chemical stability** Stable under recommended storage conditions.

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

**10.4. Conditions to avoid** Not available.

**10.5. Incompatible materials** Incompatible with strong bases and oxidizing agents.

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

---

**SECTION 11: Toxicological information****General information** Not available.**Information on likely routes of exposure****Ingestion** Not available.**Inhalation** Not available.**Skin contact** Not available.**Eye contact** Not available.**Symptoms** Not available.**11.1. Information on toxicological effects**

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>Skin corrosion/irritation</b>	Not available.	
<b>Serious eye damage/eye irritation</b>	Not available.	
<b>Respiratory sensitization</b>	Not available.	
<b>Skin sensitization</b>	Not available.	
<b>Germ cell mutagenicity</b>	Not available.	
<b>Carcinogenicity</b>	Not available.	
<b>Reproductive toxicity</b>	Not available.	
<b>Specific target organ toxicity - single exposure</b>	Not available.	
<b>Specific target organ toxicity - repeated exposure</b>	Not available.	
<b>Aspiration hazard</b>	Not available.	
<b>Mixture versus substance information</b>	Not available.	
<b>Other 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.	

---

**SECTION 12: Ecological information**

**Aquatic toxicity** LC50/96h/Fathead minnows =/ $<$  400 mg/L  
Static acute toxicity (trout), survival (100 mg/L) = 90%  
Static acute toxicity (trout), survival (10 mg/L) = 100%

EC50/72h/algae =>100gm/L  
EC50/48h/daphnia =>66mg/L

**12.1. Toxicity**

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
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 gorboscha) 239 mg/l, 96 hours

Components	Species	Test Results
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>12.2. Persistence and degradability</b>	Not available.	
<b>12.3. Bioaccumulative potential</b>	Not available.	
<b>Partition coefficient n-octanol/water (log Kow)</b>		
2-pyrrolidone	-0.85	
Alkyldicarboxylic acid	-0.59	
<b>Bioconcentration factor (BCF)</b>	Not available.	
<b>12.4. Mobility in soil</b>	Not available.	
<b>12.5. Results of PBT and vPvB assessment</b>	Not a PBT or vPvB substance or mixture.	
<b>12.6. Other adverse effects</b>	Not available.	

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**Residual waste** Not available.

**Contaminated packaging** Not available.

**EU waste code** Not available.

**Disposal methods/information** 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>.

## SECTION 14: Transport information

### ADR

Not regulated as dangerous goods.

### RID

Not regulated as dangerous goods.

### ADN

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU regulations

##### Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I

Not listed.

##### Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II

Not listed.

##### Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

##### Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry**

Not listed.

**Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA**

Not listed.

#### **Authorizations**

**Regulation (EC) No. 143/2011 Annex XIV Substances Subject to Authorization**

Not listed.

#### **Restrictions on use**

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

Not listed.

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work**

Not regulated.

**Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding**

Not regulated.

#### **Other EU regulations**

**Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances**

Not regulated.

**Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work**

Not regulated.

**Directive 94/33/EC on the protection of young people at work**

Not regulated.

#### **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.

#### **National regulations**

Not available.

#### **15.2. Chemical Safety Assessment**

Not available.

---

### **SECTION 16: Other information**

#### **References**

Not available.

#### **Full text of any statements or R-phrases and H-statements under Sections 2 to 15**

R21/22 Harmful in contact with skin and if swallowed.  
R22 Harmful if swallowed.  
R36 Irritating to eyes.  
R36/37 Irritating to eyes and respiratory system.  
R38 Irritating to skin.  
R41 Risk of serious damage to eyes.  
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.  
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H411 Toxic to aquatic life with long lasting effects.

#### **Safety phrase(s)**

S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

**Revision information**

Product and Company Identification: Synonyms  
Composition / Information on Ingredients: Ingredients  
Fire Fighting Measures: Fire & Explosion Properties  
Physical & Chemical Properties: Physical & Chemical Properties  
Ecological Information: Ecotoxicity  
14. Transport Information: Material Transportation Information  
Regulatory Information: Safety Phrases  
HazReg Data: Europe - EU

**Training information**

Not available.

**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.

**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