



# MATERIAL SAFETY DATA SHEET

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## 1. Product and Company Identification

<b>Material name</b>	C4903A
<b>Use of the preparation</b>	Inkjet printing
<b>Version #</b>	01
<b>Revision date</b>	12-23-2008
<b>CAS #</b>	Mixture
<b>Company identification</b>	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
<b>Date prepared</b>	Dec 23, 2008
<b>MSDS number</b>	321644

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## 2. Hazards Identification

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

**Acute health effects**

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

**Skin contact**

*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.

*Alkoxy ether phosphate*  
Contact with skin may result in severe irritation.

*Cyan 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.

*Alkoxy ether phosphate*  
Contact with eyes may result in irritation.

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

*Tetraethylene glycol*  
Contact with eyes may cause irritation.



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## 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.

*Alkoxy ether phosphate*  
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.

*Alkoxy ether phosphate*  
Irritating to mouth, throat, and stomach.

## 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

Component/substance	CAS number	% by weight
Water	7732-18-5	> 70
1-(2-hydroxyethyl)-2-pyrrolidone	3445-11-2	< 10
2-pyrrolidone	616-45-5	< 10
Aliphatic diol	Proprietary	< 5
Tetraethylene glycol	112-60-7	< 5
Cyan pigment	No Data	< 3
Alkoxy ether phosphate	Proprietary	< 2

### 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. 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.

## 5. Fire Fighting Measures

### Flash point and method

> 230 °F (> 110 °C) US EPA Method 1020; Setaflash Closed Tester

### Hazardous combustion products

Refer to section 10.



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<b>Flammable properties</b>	Combustion generates toxic fumes of fluoride and/or fluorine compounds; phosphorous oxides.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	CO2, water, dry chemical, or foam
<b>Unsuitable extinguishing media</b>	None known.
<b>Unusual fire and explosion hazard</b>	Combustion generates toxic fumes of fluoride and/or fluorine compounds; phosphorous oxides.
<b>Special firefighting procedures</b>	Wear self contained breathing apparatus for fire fighting if necessary.

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## 6. Accidental Release Measures

<b>Personal precautions</b>	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>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.

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## 7. Handling and Storage

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

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## 8. Exposure Controls / Personal Protection

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

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## 9. Physical & Chemical Properties

<b>Color</b>	Cyan
<b>Odor threshold</b>	Not available.
<b>Physical state</b>	Liquid.
<b>pH</b>	8.7 - 9.1
<b>Melting point</b>	Not available.
<b>Freezing point</b>	Not available.
<b>Boiling point</b>	Not determined
<b>Flash point</b>	> 230 °F (> 110 °C) US EPA Method 1020; Setaflash Closed Tester
<b>Evaporation rate</b>	Not determined
<b>Flammability</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not determined
<b>Vapor pressure</b>	Not determined
<b>Vapor density</b>	> 1 (air = 1.0)
<b>Specific gravity</b>	1 - 1.1
<b>Relative density</b>	Not available.
<b>Solubility (water)</b>	Soluble in water



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Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not determined
Decomposition temperature	Not available.
Viscosity	> 3 cP

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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

Not available.

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## 12. Ecological Information

Ecotoxicity	96.00 hr, LC50 > 750 mg/l, fathead minnow (pimephales promelas)
Persistence and degradability	Not available.

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## 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 <a href="http://www.hp.com/recycle">http://www.hp.com/recycle</a> .
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## 14. Transport Information

### IATA

Not regulated as dangerous goods.

**General** Not a regulated article under United States DOT, IATA, ADR, IMDG, or RID.

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## 15. Regulatory Information

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

### 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

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** No

**International 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.



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## State regulations

US - Pennsylvania RTK - Hazardous Substances: Listed substance  
2-pyrrolidone (616-45-5) Listed.

## 16. Other Information

<b>HMIS® ratings</b>	Health: 1 Flammability: 1 Physical hazard: 0
<b>NFPA ratings</b>	Health: 1 Flammability: 1 Instability: 0
<b>Issue date</b>	Dec 23 2008 12:22AM
<b>Revision</b>	1
<b>Replaces sheet dated</b>	Dec 18 2008 5:05AM
<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.

## 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

<b>Manufacturer information</b>	Hewlett-Packard Company 1000 NE Circle Boulevard Corvallis, OR 97330-4239 US (Direct) 1-503-494-7199 (Toll-free within the US) 1-800-457-4209
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