

## 1. Product and Company Identification

Material name C4906A

Use of the preparation Inkjet printing

Version # 03

Revision date 20-Nov-2009
CAS # Mixture

Company identification 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

Email: hpcustomer.inquiries@hp.com

Date prepared Nov 20, 2009
MSDS number 323906

#### 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 2-pyrrolidone

Contact with skin may result in irritation.

Substituted diol

Contact with skin may result in irritation.

Tetraethylene glycol

Contact with skin may result in irritation.

**Eye contact** 2-pyrrolidone

Contact with eyes may result in irritation.

Substituted diol

Contact with eyes may result in irritation.

Tetraethylene glycol

Contact with eyes may cause irritation.

**Inhalation** 2-pyrrolidone

Inhalation may result in respiratory irritation.

Tetraethylene glycol

Inhalation may result in respiratory irritation.

**Ingestion** 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

Material nameC4906AMSDS USCreation dateApr 30, 2003Version number 31 / 5



Chronic health effects Carbon Black: Chronic inhalation studies performed with fine dust particles resulted in lung

> tumors in animals. The IARC classification was based upon these results. IARC also concluded "there is inadequate evidence in humans for the carcinogenicity of carbon black." Inhalation of fine dust particles is not expected to occur during normal conditions of use of this

None of the components present in this formulation at concentrations equal to or greater than Carcinogenicity

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
2-pyrrolidone	616-45-5	< 20
Modified Carbon Black #11		< 5
Substituted diol	Proprietary	< 2.5
Tetraethylene glycol	112-60-7	< 2.5
Composition comments	This ink supply contains an aqueous ink formulation.	

omposition comments

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.

Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation Skin contact

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.

5. Fire Fighting Measures

Flash point and method > 200 °F (> 93.3 °C); Setaflash Closed Tester

Refer to section 10. **Hazardous combustion** 

products

Flammable properties None known.

Extinguishing media

Suitable extinguishing Dry chemical, CO2, water spray or regular foam.

media

Unsuitable extinguishing None known.

media

Unusual fire and explosion None known.

hazard

None established. Special firefighting procedures

#### 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.

Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, Methods for containment

sand or diatomaceous earth, commercial sorbents, or recover using pumps.

Methods for cleaning up

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.

Soak up with inert absorbent material.

Material name C4906A MSDS US Creation date Apr 30, 2003 Version number 3 2/5



7. Handling and Storage

Handling Avoid contact with skin, eyes and clothing.

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

8. Exposure Controls / Personal Protection

**Exposure guidelines** Exposure limits have not been established for this product.

Personal protective equipment

General Use personal protective equipment to minimize exposure to skin and eye. Handle in accordance with good industrial hygiene and safety practice. General hygeine

considerations

9. Physical & Chemical Properties

Color Black

**Odor threshold** Not available. Not available. Physical state Hq 9.3 - 9.7**Melting point** Not available. Freezing point Not available. **Boiling point** Not determined

> 200 °F (> 93.3 °C); Setaflash Closed Tester Flash point

**Evaporation rate** Not determined Not available. **Flammability** Flammability limits in air, Not available.

upper, % by volume

Flammability limits in air,

lower, % by volume

Not determined

Not determined Vapor pressure Vapor density > 1 (air = 1.0)

Specific gravity 1 - 1.2

Not available. Relative density Soluble in water Solubility (water) **Partition coefficient** Not available.

(n-octanol/water)

**Auto-ignition temperature** Not available. **Decomposition temperature** Not available.

VOC < 3 % > 2 cp **Viscosity** 

10. Chemical Stability & Reactivity Information

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

Incompatible with strong bases and oxidizing agents. Incompatible materials

**Hazardous decomposition** 

Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, products

carbon dioxide and/or low molecular weight hydrocarbons.

Possibility of hazardous

reactions

Will not occur.

## 11. Toxicological Information

Not available.

Material name C4906A MSDS US Creation date Apr 30, 2003 Version number 3 3/5



12. Ecological Information

**Ecotoxicity** 96.00 hr, LC50 > 750 mg/l, fathead minnow (pimephales promelas)

Persistence and degradability Not available.

13. Disposal Considerations

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

> 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

**IATA** 

Not applicable Proper shipping name Hazard class Not applicable

**UN** number None Packing group N/A Packaging exceptions None

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

15. Regulatory Information

US TSCA 12(b): Contains sodium nitrite (CASRN 7632-00-0), subject to export notification **US federal regulations** 

**CERCLA (Superfund) reportable quantity** 

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - No

Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No

Section 302 extremely hazardous substance

Section 311 hazardous

chemical

Yes

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.

State regulations

US - Pennsylvania RTK - Hazardous Substances: Listed substance

2-pyrrolidone (616-45-5) Listed.

16. Other Information

Issue date

**HMIS®** ratings Health: 1

Flammability: 2 Physical hazard: 0

**NFPA** ratings Health: 1

Flammability: 2 Instability: 0

Nov 20 2009 6:55AM

Revision 3

Version number 3



Replaces sheet dated May 28 2009 10:06AM

Manufacturer information 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

Other information This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation

(29 CFR 1910.1200).

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.

MSDS sections updated 14. Transport Information: General

**Explanation of abbreviations** 

ACGIH American Conference of Governmental Industrial Hygienists

CAS Chemical Abstracts Service

CERCLA Comprehensive Environmental Response Compensation and Liability Act

CFR Code of Federal Regulations

COC Cleveland Open Cup

**DOT** Department of Transportation

**EPCRA** Emergency Planning and Community Right-to-Know Act (aka SARA)

IARC International Agency for Research on Cancer

NIOSH National Institute for Occupational Safety and Health

NTP National Toxicology Program

OSHA Occupational Safety and Health Administration

PEL Permissible Exposure Limit

RCRA Resource Conservation and Recovery Act

REC Recommended

REL Recommended Exposure Limit

SARA Superfund Amendments and Reauthorization Act of 1986

STEL Short-Term Exposure Limit

TCLP Toxicity Characteristics Leaching Procedure

TLV Threshold Limit Value

TSCA Toxic Substances Control Act
VOC Volatile Organic Compounds

Material nameC4906AMSDS USCreation dateApr 30, 2003Version number 35 / 5



## 1. Product and Company Identification

C4907A **Material name** 

Use of the preparation Inkjet printing

Version # 01

**Revision date** 12-23-2008 CAS# Mixture

Hewlett-Packard Company Company identification

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

Date prepared Dec 23, 2008 MSDS number 321646

### 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.

Material name C4907A MSDS US Version number 1 Creation date Jul 31, 2008



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

Do not rub eyes. Immediately flush with large amounts of clean, warm water (low pressure) for Eye contact

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 Refer to section 10.

products

Material name C4907A MSDS US Version number 1 Creation date Jul 31, 2008 2/5



Flammable properties Combustion generates toxic fumes of fluoride and/or fluorine compounds; phosphorous

oxides.

**Extinguishing media** 

Suitable extinguishing

media

CO2, water, dry chemical, or foam

Unsuitable extinguishing

media

None known.

Unusual fire and explosion

hazard

Combustion generates toxic fumes of fluoride and/or fluorine compounds; phosphorous

oxides.

Special firefighting procedures Wear self contained breathing apparatus for fire fighting if necessary.

6. Accidental Release Measures

**Personal precautions**Wear appropriate personal protective equipment.

**Environmental precautions** 

Other information

Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

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.

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.

8. Exposure Controls / Personal Protection

Exposure guidelines Exposure limits have not been established for this product.

Personal protective equipment

General hygeine

General

considerations

Use personal protective equipment to minimize exposure to skin and eye. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

**Color** Cyan

Odor threshold Not available.

Physical state Liquid.

pH 8.7 - 9.1

Melting point Not available.

Freezing point

Not available.

Boiling point

Not determined

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

Evaporation rateNot determinedFlammabilityNot available.Flammability limits in air,Not available.

upper, % by volume Flammability limits in air.

lower, % by volume

Not determined

Vapor pressure Not determined Vapor density > 1 (air = 1.0)

Specific gravity 1 - 1.1

Relative density Not available.

Solubility (water) Soluble in water

Material name C4907A MSDS US

Creation date Jul 31, 2008 Version number 1 3 / 5



Partition coefficient (n-octanol/water)

Not available.

Not determined **Auto-ignition temperature** Not available. **Decomposition temperature** 

**Viscosity** > 3 cP

### 10. Chemical Stability & Reactivity Information

Stable under recommended storage conditions. Chemical stability Incompatible with strong bases and oxidizing agents. Incompatible materials

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.

### 11. Toxicological Information

Not available.

## 12. Ecological Information

96.00 hr, LC50 > 750 mg/l, fathead minnow (pimephales promelas) **Ecotoxicity** 

Persistence and degradability Not available.

#### 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

#### **IATA**

Not regulated as dangerous goods.

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

## 15. Regulatory Information

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

### **CERCLA (Superfund) reportable quantity**

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

Immediate Hazard - No Hazard categories

Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

Section 302 extremely hazardous substance

Section 311 hazardous

Nο

chemical

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.

Material name C4907A MSDS US Creation date Jul 31, 2008 Version number 1 4/5



### State regulations

US - Pennsylvania RTK - Hazardous Substances: Listed substance

2-pyrrolidone (616-45-5) Listed.

16. Other Information

**HMIS®** ratings Health: 1

Flammability: 1

Physical hazard: 0

NFPA ratings Health: 1

Flammability: 1 Instability: 0

Dec 23 2008 12:22AM Issue date

Revision

Dec 18 2008 5:05AM Replaces sheet dated

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Section 1 above and may not meet regulatory requirements in other countries.

**Explanation of abbreviations** 

**ACGIH** American Conference of Governmental Industrial Hygienists

CAS Chemical Abstracts Service

**CERCLA** Comprehensive Environmental Response Compensation and Liability Act

**CFR** Code of Federal Regulations

COC Cleveland Open Cup

DOT Department of Transportation

**EPCRA** Emergency Planning and Community Right-to-Know Act (aka SARA)

**IARC** International Agency for Research on Cancer

**NIOSH** National Institute for Occupational Safety and Health

NTP National Toxicology Program

**OSHA** Occupational Safety and Health Administration

**PEL** Permissible Exposure Limit

Resource Conservation and Recovery Act **RCRA** 

**REC** Recommended

**REL** Recommended Exposure Limit

Superfund Amendments and Reauthorization Act of 1986 **SARA** 

**STEL** Short-Term Exposure Limit

**TCLP** Toxicity Characteristics Leaching Procedure

TLV Threshold Limit Value

**TSCA Toxic Substances Control Act** VOC Volatile Organic Compounds Manufacturer information 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

Material name C4907A MSDS US Version number 1 Creation date Jul 31, 2008 5/5



## 1. Product and Company Identification

C4908A **Material name** 

Use of the preparation Inkjet printing

Version # 01

**Revision date** 12-23-2008 CAS# Mixture

Hewlett-Packard Company Company identification

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(Direct) 1-503-494-7199 **HP Customer Care Line** 

(Toll-free within the US) 1-800-474-6836

(Direct) 1-208-323-2551

Date prepared Dec 23, 2008 MSDS number 322482

### 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.

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.

Material name C4908A MSDS US Creation date Jul 31, 2008



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

None known.

Ingestion may result in nausea, vomiting and diarrhea.

Potential health effects

Potential routes of overexposure to this product are skin and eye contact Routes of exposure

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

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	> 65
1-(2-hydroxyethyl)-2-pyrrolidone	3445-11-2	< 10
2-pyrrolidone	616-45-5	< 10
Aliphatic diol	Proprietary	< 5
Magenta pigment	No Data	< 5
Tetraethylene glycol	112-60-7	< 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

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.

Flammable properties Combustion generates toxic fumes of fluoride and/or fluorine compounds; phosphorous

oxides.

**Extinguishing media** 

Suitable extinguishing

media

CO2, water, dry chemical, or foam

Material name C4908A MSDS US Creation date Jul 31, 2008 Version number 1 2/5



Unsuitable extinguishing

media

None known.

Unusual fire and explosion

hazard

Combustion generates toxic fumes of fluoride and/or fluorine compounds; phosphorous

oxides.

Special firefighting procedures

Wear self contained breathing apparatus for fire fighting if necessary.

6. Accidental Release Measures

Personal precautions

Wear appropriate personal protective equipment.

**Environmental precautions** 

Other information

Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

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.

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.

8. Exposure Controls / Personal Protection

**Exposure guidelines** Exposure limits have not been established for this product.

Personal protective equipment

General

Use personal protective equipment to minimize exposure to skin and eye. Handle in accordance with good industrial hygiene and safety practice.

General hygeine considerations

9. Physical & Chemical Properties

Color Magenta

Not available. **Odor threshold** Physical state Liquid.

8.7 - 9.1 Hq

**Melting point** Not available. Not available. Freezing point Not determined **Boiling point** 

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

**Evaporation rate** Not determined **Flammability** Not available. Not available. Flammability limits in air.

upper, % by volume

Flammability limits in air,

lower, % by volume

Not determined

Not determined Vapor pressure > 1 (air = 1.0)Vapor density

Specific gravity 1 - 1.1

Not available. Relative density Soluble in water Solubility (water) Not available. Partition coefficient

(n-octanol/water)

**Auto-ignition temperature** Not determined **Decomposition temperature** Not available.

> 3 cP **Viscosity** 



### 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.

### 11. Toxicological Information

Not available.

### 12. Ecological Information

**Ecotoxicity** 96.00 hr, LC50 > 750 mg/l, fathead minnow (pimephales promelas)

Not available. Persistence and degradability

# 13. Disposal Considerations

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

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if this service is available in your location, please visit http://www.hp.com/recycle.

### 14. Transport Information

### **IATA**

Not regulated as dangerous goods.

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

## 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

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.

### State regulations

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Listed. 2-pyrrolidone (616-45-5)

Material name C4908A MSDS US Creation date Jul 31, 2008 Version number 1 4/5



### 16. Other Information

**HMIS®** ratings Health: 1

Flammability: 1

Physical hazard: 0

NFPA ratings

Flammability: 1 Instability: 0

Dec 23 2008 4:36AM Issue date

Revision

Dec 18 2008 6:56PM Replaces sheet dated

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#### **Explanation of abbreviations**

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**CAS Chemical Abstracts Service** 

**CERCLA** Comprehensive Environmental Response Compensation and Liability Act

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**IARC** International Agency for Research on Cancer

**NIOSH** National Institute for Occupational Safety and Health

**NTP** National Toxicology Program

**OSHA** Occupational Safety and Health Administration

**PEL** Permissible Exposure Limit

**RCRA** Resource Conservation and Recovery Act

**REC** Recommended

**REL** Recommended Exposure Limit

**SARA** Superfund Amendments and Reauthorization Act of 1986

**STEL** Short-Term Exposure Limit

**TCLP** Toxicity Characteristics Leaching Procedure

TLV Threshold Limit Value

**TSCA Toxic Substances Control Act** VOC Volatile Organic Compounds

Manufacturer information Hewlett-Packard Company

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Material name C4908A MSDS US Creation date Jul 31, 2008 5/5