



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Identification of the preparation** C4823Series

**Product use** Inkjet printing

**Version #** 05

**Revision date** 21-Apr-2011

**CAS #** Mixture

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## 2. Hazards Identification

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

### Acute health effects

#### Skin contact

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

*1,5-pentanediol*

Contact with skin may result in irritation.

*2-pyrrolidone*

Contact with skin may result in irritation.

*Alkyldicarboxylic acid*

Contact with skin may result in irritation.

*Alkyldiol ethoxylate*

Contact with skin may result in severe irritation.

*Ethyl alkyldiol*

Contact with skin may result in mild irritation.

#### Eye contact

*1,5-pentanediol*

Contact with eyes may result in irritation.

*2-pyrrolidone*

Contact with eyes may result in irritation.

*Alkyldicarboxylic acid*

Contact can cause moderate to severe irritation and possible injury to the eyes.

*Alkyldiol ethoxylate*

Contact can cause moderate to severe irritation and possible injury to the eyes.

*Ethyl alkyldiol*

Contact with eyes may result in mild irritation.

#### Inhalation

*2-pyrrolidone*

Inhalation may result in respiratory irritation.

*Alkyldicarboxylic acid*

Inhalation may result in respiratory irritation.

**Ingestion***2-pyrrolidone*

Ingestion may result in nausea, vomiting and diarrhea.

*Alkyldicarboxylic acid*

Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

*Alkyldiol ethoxylate*

Ingestion may cause irritation of mouth, throat, 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

**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**

Components	CAS #	Percent
Water	7732-18-5	60 - 70
1,5-pentanediol	111-29-5	7.5 - 10
2-pyrrolidone	616-45-5	5 - 7.5
Alkyldicarboxylic acid	Proprietary	5 - 7.5
Ethyl alkyldiol	Proprietary	5 - 7.5
Alkyldiol ethoxylate	Proprietary	1 - 2.5
Substituted naphthalenesulfonate salt #7	Proprietary	1 - 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****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****Flammable properties**

None known.

**Extinguishing media****Suitable extinguishing media**

CO2, water, dry chemical, or foam

**Unsuitable extinguishing media**

None known.

**Specific methods**

None established.

**Hazardous combustion products**

Refer to section 10.

**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.

<b>Methods for containment</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>Methods for cleaning up</b>	Soak up with inert absorbent material.
<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.

## 7. Handling and Storage

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

## 8. Exposure Controls / Personal Protection

<b>Exposure guidelines</b>	Exposure limits have not been established for this product.
<b>Engineering controls</b>	Use in a well ventilated area. Provide adequate ventilation.
<b>Personal protective equipment</b>	
<b>Eye / face protection</b>	Not required under intended use.
<b>Skin protection</b>	Protected gloves not required under intended use.
<b>Respiratory protection</b>	For use other than intended use (such as in the event of a large spill), goggles and respirators may be required.
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>General</b>	Use personal protective equipment to minimize exposure to skin and eye.

## 9. Physical & Chemical Properties

<b>Appearance</b>	Not available.
<b>Color</b>	Not available.
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>Physical state</b>	Liquid
<b>Form</b>	Not available.
<b>pH</b>	3.75
<b>Melting point</b>	Not available.
<b>Freezing point</b>	Not available.
<b>Boiling point</b>	Not determined
<b>Flash point</b>	200 °F (93.3 °C) Pensky-Martens Closed Cup
<b>Evaporation rate</b>	Not determined
<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>	Not available.
<b>Specific gravity</b>	1
<b>Relative density</b>	Not available.
<b>Solubility (water)</b>	Soluble in water
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	2 cp
<b>VOC</b>	< 3 %

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Stable under recommended storage conditions.
<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

<b>Serious eye damage/eye irritation</b>	Not available.
<b>Skin sensitization</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>Ecotoxicity</b>	EC50: > 100 mg/l, Algae, 72.00 hr EC50: > 100 mg/l, Daphnia, 48.00 hr  NOEC: 100 mg/l, Algae, 72.00 hr NOEC: 100 mg/l, Daphnia, 48.00 hr  Information given is based on data on the components and the ecotoxicology of similar products
<b>Aquatic toxicity</b>	LC50/96h/Fathead minnows = /< 400 mg/L Static acute toxicity (trout), survival (100 mg/L) = 80% Static acute toxicity (trout), survival (10 mg/L) = 100%
<b>Persistence and degradability</b>	Not available.

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## 13. Disposal Considerations

<b>Disposal instructions</b>	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

<b>Further information</b>	Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.
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### DOT

Not regulated as dangerous goods.

### IATA

#### Basic shipping requirements:

<b>Proper shipping name</b>	Not applicable
<b>Hazard class</b>	Not applicable
<b>UN number</b>	None
<b>Packing group</b>	N/A

#### Additional information:

<b>Packaging exceptions</b>	None
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### IMDG

Not regulated as dangerous goods.

### RID

Not regulated as dangerous goods.

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## 15. Regulatory Information

<b>US federal regulations</b>	US EPA TSCA 12(b): Does not contain listed chemicals.
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### CERCLA (Superfund) reportable quantity

None

### Occupational Safety and Health Administration (OSHA)

<b>29 CFR 1910.1200 hazardous chemical</b>	Yes
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## 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** No

**Section 311 hazardous chemical** Yes

### State regulations

#### US - Pennsylvania RTK - Hazardous Substances: Listed substance

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

**Regulatory information** 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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## 16. Other Information

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

**HMIS® ratings**  
Health: 1  
Flammability: 2  
Physical hazard: 0

**NFPA ratings**  
Health: 1  
Flammability: 2  
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.

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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