1. Product and Company Identification

**Material name**: C4923Series  
**Version #**: 02  
**Issue date**: 16-Oct-2012  
**Revision date**: 17-Jan-2014  
**Product use**: Inkjet printing  
**CAS #**: Mixture  
**Company identification**: Hewlett-Packard Company  
3000 Hanover Street  
Palo Alto, CA 94304-1185  
United States  
Telephone 650-857-5020  
Hewlett-Packard health effects line  
(Toll-free within the US) 1-800-457-4209  
(Direct) 1-760-710-0048  
HP Customer Care Line  
(Toll-free within the US) 1-800-474-6836  
(Direct) 1-208-323-2551  
Email: hpcustomer.inquiries@hp.com

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

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,5-pentanediol</td>
<td>111-29-5</td>
<td>&lt; 15</td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td>616-45-5</td>
<td>&lt; 5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-hazardous components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&gt; 60</td>
</tr>
<tr>
<td>Alkyldicarboxylic acid</td>
<td>Proprietary</td>
<td>&lt; 7.5</td>
</tr>
<tr>
<td>Tetraethylene glycol</td>
<td>112-60-7</td>
<td>&lt; 5</td>
</tr>
<tr>
<td>Substituted naphthalenesulfonate salt # 7</td>
<td>Proprietary</td>
<td>&lt; 2.5</td>
</tr>
</tbody>
</table>

**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.
### 5. Fire Fighting Measures

<table>
<thead>
<tr>
<th>Flammable properties</th>
<th>None known.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extinguishing media</td>
<td>CO2, water, dry chemical, or foam</td>
</tr>
<tr>
<td>Suitable extinguishing media</td>
<td>None known.</td>
</tr>
<tr>
<td>Unsuitable extinguishing media</td>
<td>None known.</td>
</tr>
<tr>
<td>Fire fighting equipment/instructions</td>
<td>Not available.</td>
</tr>
<tr>
<td>Specific methods</td>
<td>None established.</td>
</tr>
<tr>
<td>Hazardous combustion products</td>
<td>Refer to section 10.</td>
</tr>
</tbody>
</table>

### 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. |

### 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. |

### 8. Exposure Controls / Personal Protection

| Exposure guidelines | Exposure limits have not been established for this product. |
| Engineering controls | Use in a well ventilated area. |
| Personal protective equipment | Use personal protective equipment to minimize exposure to skin and eye. |
| General | General hygiene considerations |
| Handle in accordance with good industrial hygiene and safety practice. |

### 9. Physical & Chemical Properties

| Appearance | Not available. |
| Physical state | Liquid. |
| Form | Not available. |
| Color | Yellow |
| Odor | Not available. |
| pH | 3.8 - 4.2 |
| Vapor pressure | Not determined |
| Boiling point | Not determined |
| Melting point/Freezing point | Not available. |
| Solubility (water) | Soluble in water |
| Specific gravity | Not available. |
| Flash point | Not available. |
| Viscosity | >= 2 cp |
| VOC | Not available |
| Other information | For other VOC regulatory data/information see Section 15. |
10. Chemical Stability & Reactivity Information

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

**Conditions to avoid**
No information available

**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.

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

11. Toxicological Information

**Toxicological data**

**Components** | **Species** | **Test Results**
--- | --- | ---
2-pyrrolidone (CAS 616-45-5)

**Acute**

*Oral*

LD50

Guinea pig | 6500 mg/kg

Rat | 6500 mg/kg

Alkyldicarboxylic acid (CAS Proprietary)

**Acute**

*Oral*

LD50

Rat | 2260 mg/kg

Tetraethylene glycol (CAS 112-60-7)

**Acute**

*Dermal*

LD50

Rabbit | 22570 mg/kg

*Oral*

LD50

Rat | 32700 mg/kg

29 g/kg

**Carcinogenicity**
No data available.

**Serious eye damage/eye irritation**
Not available.

**Further information**
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

**Aquatic toxicity**
Static acute toxicity (trout), survival (100 mg/L) = 100%
Static acute toxicity (trout), survival (10 mg/L) = 100%

**Ecotoxicological data**

**Product** | **Species** | **Test Results**
--- | --- | ---
Yellow ink (CAS Mixture)

**Aquatic**

*Acute*

Fish

LC50

Fathead minnow (Pimephales promelas) | < 400 mg/l, 96 hours

**Components**

**Species** | **Test Results**
--- | ---
2-pyrrolidone (CAS 616-45-5)

**Aquatic**

Crustacea

EC50

Water flea (Daphnia pulex) | 13.21 mg/l, 48 hours

Alkyldicarboxylic acid (CAS Proprietary)

Fish

LC50

Fish | 101, 96 Hours

**Aquatic**

Crustacea

EC50

Water flea (Daphnia magna) | 350 - 400 mg/l, 48 hours
Ecotoxicity  
No data available.

Persistence and degradability  
Not available.

Bioaccumulation / Accumulation

Bioaccumulative potential

Octanol/water partition coefficient log Kow

<table>
<thead>
<tr>
<th>Compound</th>
<th>log Kow</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone</td>
<td>-0.85</td>
</tr>
<tr>
<td>Alkyldicarboxylic acid</td>
<td>-0.59</td>
</tr>
</tbody>
</table>

Partition coefficient

<table>
<thead>
<tr>
<th>Compound</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone</td>
<td>-0.85</td>
</tr>
<tr>
<td>Alkyldicarboxylic acid</td>
<td>-0.59</td>
</tr>
</tbody>
</table>

13. Disposal Considerations

Disposal instructions

Do not allow this material to drain into sewers/water supplies.
Dispose of waste material according to Local, State, Federal, and Provincial Environmental 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 information

Exposure Limits (See Section 8): Executive regulation of Minister of Labour and Social Policy dated Nov. 29, 2002 concerning the highest exposure limits and volume of factors harmful for health and environment at work (Official Journal of Laws no 217/2002 item 1833 with further amendments).
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.

16. Other Information

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

**NFPA ratings**
- Health: 1
- Flammability: 0
- 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.

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

**Issue date**
16-Oct-2012

**This data sheet contains changes from the previous version in section(s):**
- Hazards Identification: Other hazards
- 9. Physical & Chemical Properties: Other information
- Ecological Information: Ecotoxicity
- 12. Ecological Information: Aquatic toxicity

**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

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response Compensation and Liability Act</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>COC</td>
<td>Cleveland Open Cup</td>
</tr>
<tr>
<td>DOT</td>
<td>Department of Transportation</td>
</tr>
<tr>
<td>EPCRA</td>
<td>Emergency Planning and Community Right-to-Know Act (aka SARA)</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety and Health</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
</tr>
<tr>
<td>REC</td>
<td>Recommended</td>
</tr>
<tr>
<td>REL</td>
<td>Recommended Exposure Limit</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act of 1986</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-Term Exposure Limit</td>
</tr>
<tr>
<td>TCLP</td>
<td>Toxicity Characteristics Leaching Procedure</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substances Control Act</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</td>
</tr>
</tbody>
</table>