1. Product and Company Identification

Identification of the preparation: CN046Series

Product use: Inkjet printing

Version #: 02

Revision date: 21-Oct-2012

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

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:

Avoid contact with skin Contact with skin may result in irritation.

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.

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.

Tetraethylene glycol
Contact with eyes may cause irritation.

Inhalation:

Inhalation may result in respiratory irritation.

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
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.

**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.

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**3. Composition / Information on Ingredients**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-(2-hydroxyethyl)-2-pyrrolidone</td>
<td>3445-11-2</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td>616-45-5</td>
<td>&lt; 7.5</td>
</tr>
<tr>
<td>Aliphatic diol</td>
<td>Proprietary</td>
<td>&lt; 5</td>
</tr>
<tr>
<td>Cyan Colorant</td>
<td>Proprietary</td>
<td>&lt; 2.5</td>
</tr>
<tr>
<td>Tetraethylene glycol</td>
<td>112-60-7</td>
<td>&lt; 5</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&gt; 65</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).

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**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.

**General advice**
No additional information.

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**5. Fire Fighting Measures**

**Flammable properties**
None known.

**Extinguishing media**

- **Suitable extinguishing media**: For small (incipient) fires, use media such as foam, sand, dry chemical, or carbon dioxide. For large fires use very large (flooding) quantities of water and/or foam, applied as a mist or spray.

- **Unsuitable extinguishing media**: None known.

**Specific methods**
None established.

**Hazardous combustion products**
Refer to section 10.

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**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.

**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 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.

Engineering controls  
Use in a well ventilated area.

Personal protective equipment

- General hygiene considerations  
Handle in accordance with good industrial hygiene and safety practice.

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

9. Physical & Chemical Properties

Appearance  
Not available.

Color  
Cyan

Odor  
Not available.

Odor threshold  
Not available.

Physical state  
Liquid

Form  
Not available.

pH  
8.8

Melting point  
Not available.

Freezing point  
Not available.

Boiling point  
Not available.

Flash point  
> 212 °F (> 100 °C) Pensky-Martens Closed Cup US EPA Method 1020

Evaporation rate  
Not available.

Flammability limits in air, upper, % by volume  
Not available.

Flammability limits in air, lower, % by volume  
Not available.

Vapor pressure  
Not available.

Vapor density  
Not available.

Specific gravity  
Not available.

Relative density  
Not available.

Solubility (water)  
Not available.

Auto-ignition temperature  
Not available.

Decomposition temperature  
Not available.

VOC  
< 291 g/L

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.

Possibility of hazardous reactions  
Will not occur.

11. Toxicological Information

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

**Ecotoxicity**
No information available. This product is highly soluble in water.

**Aquatic toxicity**
No data available for this product.

**Persistence and degradability**
Not available.

## 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

**Further information**
Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.

**DOT**
Not regulated as dangerous goods.

**IATA**
Not regulated as dangerous goods.

**IMDG**
Not regulated as dangerous goods.

**RID**
Not regulated as dangerous goods.

## 15. Regulatory Information

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

**DEA Exempt Chemical Mixtures Code Number**
Not regulated.

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**
Not regulated.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**
Not listed.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**
Not regulated.

**CERCLA (Superfund) reportable quantity**
None

**Occupational Safety and Health Administration (OSHA)**

<table>
<thead>
<tr>
<th>29 CFR 1910.1200</th>
<th>hazardous chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

**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

**State regulations**

**US. Massachusetts RTK - Substance List**
2-pyrrolidone (CAS 616-45-5)
US. New Jersey Worker and Community Right-to-Know Act
Not regulated.

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

US. Rhode Island RTK
Not regulated.

**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.

**Other information**
VOC content (less water, less exempt compounds) = < 1148 g/L (U.S. requirement, not for emissions)

**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: 1
Physical hazard: 0

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

**Issue date**
21-Oct-2012

**This data sheet contains changes from the previous version in section(s):**
Product and Company Identification: Alternate Trade Names
Composition / Information on Ingredients: Disclosure Overrides

**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
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</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>
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<tr>
<td>REL</td>
<td>Recommended Exposure Limit</td>
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<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act of 1986</td>
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<tr>
<td>STEL</td>
<td>Short-Term Exposure Limit</td>
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<tr>
<td>TCLP</td>
<td>Toxicity Characteristics Leaching Procedure</td>
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<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
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<tr>
<td>TSCA</td>
<td>Toxic Substances Control Act</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</td>
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</table>