1. Identification

Product identifier: C4901Series[C][2]

Other means of identification: Not available.

Recommended use: Inkjet printing

Recommended restrictions: None known.

Company identification: HP
1501 Page Mill Road
Palo Alto, CA 94304-1112
United States

Telephone 650-857-5020

HP 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. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Not classified.

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements:

Hazard symbol: None.

Signal word: None.

Hazard statement: Not available.

Precautionary statement:
Prevention: Not available.
Response: Not available.
Storage: Not available.
Disposal: Not available.

Hazard(s) not otherwise classified (HNOC):
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.

Supplemental information:
This product is not classified as hazardous according to OSHA CFR 1910.1200 (HazCom 2012).

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td></td>
<td>7732-18-5</td>
<td>70-85</td>
</tr>
<tr>
<td>1-(2-hydroxyethyl)-2-pyrrolidone</td>
<td></td>
<td>3445-11-2</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td></td>
<td>616-45-5</td>
<td>&lt; 7.5</td>
</tr>
<tr>
<td>Cyan pigment</td>
<td></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
Inhalation  
Move to fresh air. If symptoms persist, get medical attention.

Skin contact  
Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.

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.

Ingestion  
If ingestion of a large amount does occur, seek medical attention.

Most important symptoms/effects, acute and delayed  
Not available.

5. Fire-fighting measures
Suitable extinguishing media  
CO2, water, dry chemical, or foam

Unsuitable extinguishing media  
None known.

Specific hazards arising from the chemical  
Not applicable.

Special protective equipment and precautions for firefighters  
Not available.

Specific methods  
Wear self contained breathing apparatus for fire fighting if necessary.

6. Accidental release measures
Personal precautions, protective equipment and emergency procedures  
Wear appropriate personal protective equipment.

Methods and materials for containment and cleaning up  
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.

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

7. Handling and storage
Precautions for safe handling  
Avoid contact with skin, eyes and clothing.

Conditions for safe storage, including any incompatibilities  
Keep out of the reach of children. Keep away from excessive heat or cold.

8. Exposure controls/personal protection
Occupational exposure limits  
No exposure limits noted for ingredient(s).

Biological limit values  
No biological exposure limits noted for the ingredient(s).

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

Appropriate engineering controls  
Use in a well ventilated area.

Individual protection measures, such as personal protective equipment  

Eye/face protection  
Not available.

Skin protection  

Hand protection  
Not available.

Other  
Not available.

Respiratory protection  
Not available.

Thermal hazards  
Not available.

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

9. Physical and chemical properties
Appearance  
Physical state  
Liquid.

Color  
Cyan
Odor Not available.
Odor threshold Not available.
pH 8.7 - 9.1
Melting point/freezing point Not available.
Initial boiling point and boiling range Not determined
Flash point > 200.0 °F (> 93.3 °C) Setaflash Closed Cup
Evaporation rate Not determined
Flammability (solid, gas) Not available.

**Upper/lower flammability or explosive limits**

Flammability limit - lower (%) Not determined
Flammability limit - upper (%) Not available.
Explosive limit - lower (%) Not available.
Explosive limit - upper (%) Not available.

Vapor pressure Not determined

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

Other information For other VOC regulatory data/information see Section 15.

**VOC (Weight %)** < 307 g/l

### 10. Stability and reactivity

**Reactivity** Not available.
**Chemical stability** Stable under recommended storage conditions.
**Possibility of hazardous reactions** Will not occur.
**Conditions to avoid** Not 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. Decomposition of this product may yield oxides of phosphorus, hydrogen fluoride, fluorinated hydrocarbons.

### 11. Toxicological information

**Symptoms related to the physical, chemical and toxicological characteristics** Not available.

**Information on toxicological effects**

**Acute toxicity** Based on available data, the classification criteria are not met.
**Skin corrosion/irritation** Based on available data, the classification criteria are not met.
**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.
**Respiratory or skin sensitization**

Respiratory sensitization Based on available data, the classification criteria are not met.
Skin sensitization Based on available data, the classification criteria are not met.
Germ cell mutagenicity  Based on available data, the classification criteria are not met.
Carcinogenicity  Based on available data, the classification criteria are not met.
Reproductive toxicity  Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure  Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure  Based on available data, the classification criteria are not met.
Aspiration hazard  Based on available data, the classification criteria are not met.

Further information  Complete toxicity data are not available for this specific formulation. Refer to Section 2 for potential health effects and Section 4 for first aid measures.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Guinea pig</td>
<td>6500 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>6500 mg/kg</td>
</tr>
</tbody>
</table>

12. Ecological information

Aquatic toxicity  This product has not been tested for ecological effects.

Ecotoxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia pulex) 13.21 mg/l, 48 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability  Not available.
Bioaccumulative potential  Not available.
Partition coefficient n-octanol / water (log Kow) 2-pyrrolidone -0.85
Mobility in soil  Not available.
Other adverse effects  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

DOT  Not regulated as dangerous goods.
IATA  Not regulated as dangerous goods.
IMDG  Not regulated as dangerous goods.
ADR  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.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

Other federal regulations
Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

US. Massachusetts RTK - Substance List
2-pyrrolidone (CAS 616-45-5)

US. New Jersey Worker and Community Right-to-Know Act
Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law
2-pyrrolidone (CAS 616-45-5)

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
Not Listed.

Other information

VOC content (less water, less exempt compounds) = <1184 g/L (U.S. requirement, not for emissions)
VOC data based on formulation (Organic compounds minus solids)

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.

16. Other information, including date of preparation or last revision

Issue date 03-Jun-2015
Revision date 23-Sep-2015
Version # 02

Disclaimer
This Safety Data Sheet document is provided without charge to customers of HP. Data is the most current known to HP 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.

Manufacturer information
HP
1501 Page Mill Road
Palo Alto, CA 94304-1112 US
Direct 1-650-857-5020

Material name: C4901Series[C][2]
10793 Version #: 02 Revision date: 23-Sep-2015 Issue date: 03-Jun-2015

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### 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>
SAFETY DATA SHEET

1. Identification
Product identifier C4901Series[M][2]
Other means of identification Not available.
Recommended use Inkjet printing
Recommended restrictions None known.
Company identification HP
1501 Page Mill Road
Palo Alto, CA 94304-1112
United States
Telephone 650-857-5020

HP 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. Hazard(s) identification
Physical hazards Not classified.
Health hazards Not classified.
Environmental hazards Not classified.
OSHA defined hazards Not classified.
Label elements
Hazard symbol None.
Signal word None.
Hazard statement Not available.
Precautionary statement
Prevention Not available.
Response Not available.
Storage Not available.
Disposal Not available.
Hazard(s) not otherwise classified (HNOC) 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.
Supplemental information This product is not classified as hazardous according to OSHA CFR 1910.1200 (HazCom 2012).

3. Composition/information on ingredients
Mixtures
<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
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<tr>
<td>Water</td>
<td>7732-18-5</td>
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<td></td>
</tr>
<tr>
<td>1-(2-hydroxyethyl)-2-pyrrolidine</td>
<td>3445-11-2</td>
<td>&lt; 10</td>
<td></td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td>616-45-5</td>
<td>&lt; 7.5</td>
<td></td>
</tr>
<tr>
<td>Magenta pigment</td>
<td>Proprietary</td>
<td>&lt; 5</td>
<td></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

Inhalation  Move to fresh air. If symptoms persist, get medical attention.
Skin contact  Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.
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.
Ingestion  If ingestion of a large amount does occur, seek medical attention.

Most important symptoms/effects, acute and delayed  Not available.

5. Fire-fighting measures

Suitable extinguishing media  CO2, water, dry chemical, or foam
Unsuitable extinguishing media  None known.
Specific hazards arising from the chemical  Not applicable.
Special protective equipment and precautions for firefighters  Not available.
Specific methods  Wear self contained breathing apparatus for fire fighting if necessary.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures  Wear appropriate personal protective equipment.
Methods and materials for containment and cleaning up  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.
Environmental precautions  Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

7. Handling and storage

Precautions for safe handling  Avoid contact with skin, eyes and clothing.
Conditions for safe storage, including any incompatibilities  Keep out of the reach of children. Keep away from excessive heat or cold.

8. Exposure controls/personal protection

Occupational exposure limits  No exposure limits noted for ingredient(s).
Biological limit values  No biological exposure limits noted for the ingredient(s).
Exposure guidelines  Exposure limits have not been established for this product.
Appropriate engineering controls  Use in a well ventilated area.

Individual protection measures, such as personal protective equipment
Eye/face protection  Not available.
Skin protection
Hand protection  Not available.
Other  Not available.
Respiratory protection  Not available.
Thermal hazards  Not available.

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

9. Physical and chemical properties

Appearance
Physical state  Liquid.
Color  Magenta
Odor: Not available.
Odor threshold: Not available.

pH: 8.7 - 9.1

Initial boiling point and boiling range: Not determined

Flash point: > 200.0 °F (> 93.3 °C) Setaflash Closed Cup

Evaporation rate: Not determined

Flammability (solid, gas): Not available.

Upper/lower flammability or explosive limits:
- Flammability limit - lower (%): Not determined
- Flammability limit - upper (%): Not available.
- Explosive limit - lower (%): Not available.
- Explosive limit - upper (%): Not available.

Vapor pressure: Not determined

Solubility:
- Solubility (water): Soluble in water

Partition coefficient (n-octanol/water): Not available.

Auto-ignition temperature: Not determined

Decomposition temperature: Not available.

Viscosity: >= 3 cP

Other information:
For other VOC regulatory data/information see Section 15.

VOC (Weight %): < 313 g/l

10. Stability and reactivity

Reactivity: Not available.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: Will not occur.

Conditions to avoid: Not 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. Decomposition of this product may yield oxides of phosphorus, hydrogen fluoride, fluorinated hydrocarbons.

11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics: Not available.

Information on toxicological effects:

Acute toxicity: Based on available data, the classification criteria are not met.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Respiratory or skin sensitization:
- Respiratory sensitization: Based on available data, the classification criteria are not met.
- Skin sensitization: Based on available data, the classification criteria are not met.
Germ cell mutagenicity
Based on available data, the classification criteria are not met.

Carcinogenicity
Based on available data, the classification criteria are not met.

Reproductive toxicity
Based on available data, the classification criteria are not met.

Specific target organ toxicity
- single exposure
Based on available data, the classification criteria are not met.

Specific target organ toxicity
- repeated exposure
Based on available data, the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.

Further information
Complete toxicity data are not available for this specific formulation
Refer to Section 2 for potential health effects and Section 4 for first aid measures.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Guinea pig</td>
<td>6500 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>6500 mg/kg</td>
</tr>
</tbody>
</table>

12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magenta ink (CAS Mixture)</td>
<td></td>
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<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fathead minnow (Pimephales promelas) &gt; 750 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability
Not available.

Bioaccumulative potential
Not available.

Partition coefficient n-octanol / water (log Kow)
2-pyrrolidone
-0.85

Mobility in soil
Not available.

Other adverse effects
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

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

ADR
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.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.
SARA 304 Emergency release notification
Not regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not regulated.

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
Not listed.
SARA 311/312
Hazardous chemical
No

Other federal regulations
Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations
US. Massachusetts RTK - Substance List
2-pyrrolidone (CAS 616-45-5)
US. New Jersey Worker and Community Right-to-Know Act
Not listed.
US. Pennsylvania Worker and Community Right-to-Know Law
2-pyrrolidone (CAS 616-45-5)
US. Rhode Island RTK
Not regulated.
US. California Proposition 65
Not Listed.

Other information
VOC content (less water, less exempt compounds) = <1150 g/L (U.S. requirement, not for emissions)
VOC data based on formulation (Organic compounds minus solids)

16. Other information, including date of preparation or last revision

Issue date
03-Jun-2015
Revision date
23-Sep-2015
Version #
02
Disclaimer
This Safety Data Sheet document is provided without charge to customers of HP. Data is the most current known to HP 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.
Material name: C4901Series[M][2]

10794 Version #: 02 Revision date: 23-Sep-2015 Issue date: 03-Jun-2015