1. Identification

Product identifier: C4990Series
Other means of identification: None.
Recommended use: Inkjet printing
Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information
HP Inc.
1501 Page Mill Road
Palo Alto, CA 94304-1112
United States
Telephone: 650-857-5020
HP Inc. health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-760-710-0048
HP Inc. 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>80-90</td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td></td>
<td>616-45-5</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Substituted napthalenesulfonate salt*</td>
<td></td>
<td>Proprietary*</td>
<td>&lt;5</td>
</tr>
</tbody>
</table>
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. Get medical attention if irritation develops or persists.

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
None known.

Special protective equipment and precautions for firefighters
None established.

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
This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit.

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.
Provide adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection
Not available.

Skin protection

Hand protection
Not available.

Other
Not available.

Respiratory protection
For use other than intended use (such as in the event of a large spill), goggles and respirators may be required.

Thermal hazards
Not available.

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

9. Physical and chemical properties

Appearance
Liquid.

Physical state
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Black.</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>7.5 - 8</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 230.0 °F (&gt; 110.0 °C) Pensky-Martens Closed Cup</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor density</td>
<td>&gt;= 1 (air = 1.0)</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other information</td>
<td>For other VOC regulatory data/information see Section 15.</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not determined</td>
</tr>
<tr>
<td>VOC</td>
<td>&lt; 86 g/l</td>
</tr>
</tbody>
</table>

### 10. Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under recommended storage conditions.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Will not occur.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Not available.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Incompatible with strong bases and oxidizing agents.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.</td>
</tr>
</tbody>
</table>

### 11. Toxicological information

#### Information on likely routes of exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Under normal conditions of intended use, this material is not expected to be an inhalation hazard.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Contact with skin may result in mild irritation.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Contact with eyes may result in mild irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
</tbody>
</table>

#### Information on toxicological effects

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

Material name: C4990Series

2-pyrrolidone (CAS 616-45-5)

**Acute**
LD50  
Rat  
> 5000 mg/kg

**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**  
Not classified as an irritant according to, OECD 405.

**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.

**IARC Monographs. Overall Evaluation of Carcinogenicity**  
Not listed.

Not regulated.

**US. National Toxicology Program (NTP) Report on Carcinogens**  
Not listed.

**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.

### Ecological information

**Aquatic toxicity**

- LC50/96h/Fathead minnows =>750mg/l
- EC50/48h/daphnia => 100mg/l, OECD 202
- EC50/72h/algae => 100 mg/l, OECD 201

**Ecotoxicity**
Information given is based on data on the components and the ecotoxicology of similar products

<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><strong>Aquatic</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Crustacea</td>
<td>EC50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water flea (Daphnia pulex)</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.

### 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](http://www.hp.com/recycle).

### Transport information

**DOT**  
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

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

Other information

VOC content (less water, less exempt compounds) = <603 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
13-Jun-2015

Revision date
05-Sep-2017

Version #
03

Other information
This SDS 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 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.
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>