SAFETY DATA SHEET

1. Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>C4814Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other means of identification</td>
<td>Not available.</td>
</tr>
<tr>
<td>Recommended use</td>
<td>Inkjet printing</td>
</tr>
<tr>
<td>Recommended restrictions</td>
<td>None known.</td>
</tr>
<tr>
<td>Company identification</td>
<td>HP</td>
</tr>
<tr>
<td></td>
<td>1501 Page Mill Road</td>
</tr>
<tr>
<td></td>
<td>Palo Alto, CA 94304-1112</td>
</tr>
<tr>
<td></td>
<td>United States</td>
</tr>
<tr>
<td></td>
<td>Telephone 650-857-5020</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Physical hazards</th>
<th>Not classified.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazards</td>
<td>Not classified.</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Not classified.</td>
</tr>
<tr>
<td>OSHA defined hazards</td>
<td>Not classified.</td>
</tr>
</tbody>
</table>

Label elements

<table>
<thead>
<tr>
<th>Hazard symbol</th>
<th>None.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal word</td>
<td>None.</td>
</tr>
<tr>
<td>Hazard statement</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Precautionary statement

<table>
<thead>
<tr>
<th>Prevention</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
<td>Not available.</td>
</tr>
<tr>
<td>Storage</td>
<td>Not available.</td>
</tr>
<tr>
<td>Disposal</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Hazard(s) not otherwise classified (HNOC)

Carbon black is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans). Carbon black in this preparation, due to its bound form, does not present this carcinogenic risk. 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. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.

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>75-85</td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td></td>
<td>616-45-5</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Carbon black</td>
<td></td>
<td>1333-86-4</td>
<td>&lt;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).

Carbon black is present only in a bound form in this preparation.

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
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

<table>
<thead>
<tr>
<th>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>PEL</td>
<td>3.5 mg/m3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>TWA</td>
<td>3 mg/m3</td>
<td>Inhalable fraction.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. NIOSH: Pocket Guide to Chemical Hazards</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>TWA</td>
<td>0.1 mg/m3</td>
</tr>
</tbody>
</table>

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** Protected gloves not required under intended use.
- **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** Black.

**Odor** Not available.

**Odor threshold** Not available.

**pH** 7.8 - 8.8

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** Not determined

**Flash point** > 199.4 °F (> 93.0 °C) Pensky-Martens 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(ies)**

- **Solubility (water)** Soluble in water
- **Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** >= 2 cp

**Other information**

For other VOC regulatory data/information see Section 15.

**VOC (Weight %)** < 20 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.

11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

Information on toxicological effects

Acute toxicity

Skin corrosion/irritation

Serious eye damage/eye irritation

Respiratory or skin sensitization

Respiratory sensitization

Skin sensitization

Germ cell mutagenicity

Carcinogenicity

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

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

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

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

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

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

Carbon black is classified as a carcinogen by the IARC (possibly carcinogenic to humans, Group 2B) and by the State of California under Proposition 65. In their evaluations of carbon black, both organizations indicate that exposure to carbon black, per se, does not occur when it remains bound within a product matrix, specifically, rubber, ink, or paint. Carbon black is present only in a bound form in this preparation.

IARC Monographs. Overall Evaluation of Carcinogenicity

Carbon black (CAS 1333-86-4) 2B Possibly carcinogenic to humans.

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.

Components

Species

Test Results

2-pyrrolidone (CAS 616-45-5)

Acute

Oral

LD50

Guinea pig

6500 mg/kg

Rat

6500 mg/kg

Carbon black (CAS 1333-86-4)

Acute

Oral

LD50

Rat

> 8000 mg/kg

12. Ecological information

Ecotoxicity

Product

Species

Test Results

C4814Series (CAS Mixture)

Aquatic

Acute

Fish

LC50

Fathead minnow (Pimephales promelas) > 750 mg/l, 96 hours
<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)</td>
</tr>
</tbody>
</table>

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

### 13. Disposal considerations

**Disposal instructions**<br>Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.<br>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**<br>Not regulated as dangerous goods.

**IATA**<br>Not regulated as dangerous goods.

**IMDG**<br>Not regulated as dangerous goods.

**ADR**<br>Not regulated as dangerous goods.

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

### 15. Regulatory information

**US federal regulations**<br>US TSCA 12(b): Does not contain listed chemicals.<br>
**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**<br>Not regulated.<br>
**CERCLA Hazardous Substance List (40 CFR 302.4)**<br>Not listed.<br>
**SARA 304 Emergency release notification**<br>Not regulated.<br>
**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**<br>Not listed.<br>

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**<br>Immediate Hazard - No<br>Delayed Hazard - No<br>Fire Hazard - No<br>Pressure Hazard - No<br>Reactivity Hazard - No<br>
**SARA 302 Extremely hazardous substance**<br>Not listed.<br>
**SARA 311/312**<br>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)
Carbon black (CAS 1333-86-4)

US. New Jersey Worker and Community Right-to-Know Act
Carbon black (CAS 1333-86-4)

US. Pennsylvania Worker and Community Right-to-Know Law
2-pyrrolidone (CAS 616-45-5)
Carbon black (CAS 1333-86-4)

US. Rhode Island RTK
Not regulated.

US. California Proposition 65

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
CARBON BLACK (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE [<= 10 MICROMETERS]) (CAS 1333-86-4)
Listed: February 21, 2003

Other information
VOC content (less water, less exempt compounds) = <106 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 10-Mar-2015
Revision date 24-Aug-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.

Revision Information
1. Product and Company Identification: Alternate Trade Names
Physical & Chemical Properties: Multiple Properties
Other information, including date of preparation or last revision: Disclaimer

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