1. Identification

Product identifier: C4991Series

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>Aliphatic diol*</td>
<td>Proprietary*</td>
<td>&lt;10</td>
<td></td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td></td>
<td>616-45-5</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Substituted phthalocyanine salt #1</td>
<td>Proprietary</td>
<td>&lt;2.5</td>
<td></td>
</tr>
</tbody>
</table>
1,4-Dioxane

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,4-Dioxane</td>
<td></td>
<td>123-91-1</td>
<td>&lt;0.1</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
Remove 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
Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing media
None known.

Specific hazards arising from the chemical
None known.

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

<table>
<thead>
<tr>
<th>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
</tr>
<tr>
<td>1,4-Dioxane (CAS 123-91-1)</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
</tr>
<tr>
<td>PEL</td>
<td>360 mg/m3</td>
</tr>
<tr>
<td></td>
<td>100 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
</tr>
<tr>
<td>1,4-Dioxane (CAS 123-91-1)</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>20 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. NIOSH: Pocket Guide to Chemical Hazards</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
</tr>
<tr>
<td>1,4-Dioxane (CAS 123-91-1)</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
</tr>
<tr>
<td>Ceiling</td>
<td>3.6 mg/m3</td>
</tr>
<tr>
<td></td>
<td>1 ppm</td>
</tr>
</tbody>
</table>
US. Workplace Environmental Exposure Level (WEEL) Guides

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aliphatic diol</td>
<td>TWA</td>
<td>10 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.

**US. ACGIH Threshold Limit Values**
- 1,4-Dioxane (CAS 123-91-1) Can be absorbed through the skin.

**US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants**
- P-DIOXANE; 1,4-DIOXACYCLOHEXANE; 1,4-DIETHYLENE DIOXIDE (CAS 123-91-1) Can be absorbed through the skin.

**US. Minnesota Hazardous Substances List (Minn. Rules 5206.0400).**
- 1,4-Dioxane (CAS 123-91-1) Skin designation applies.

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**
- 1,4-Dioxane (CAS 123-91-1) Can be absorbed through the skin.

**US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A**
- 1,4-Dioxane (CAS 123-91-1) Can be absorbed through the skin.

**Appropriate engineering controls**
- Use in a well ventilated area.
- Provide adequate ventilation.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**
- Not required under intended use.

**Skin protection**
- Not available.
- Protected gloves not required under intended use.

**Hand protection**
- Not available.

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

**Respiratory protection**
- Not available.

**Thermal hazards**
- Not available.

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

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**9. Physical and chemical properties**

**Appearance**
- Physical state: Liquid.
- Form: Not available.
- Color: Cyan
- Odor: Not available.
- Odor threshold: Not available.
- pH: 7 - 8
- Melting point/freezing point: Not available.
- Initial boiling point and boiling range: Not determined
- Flash point: > 200.0 °F (> 93.3 °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
- Vapor density: >= 1 (air = 1.0)
- Relative density: Not available.
Solubility
- Solubility (water): Soluble in water

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

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

Other information: For other VOC regulatory data/information see Section 15.
- Oxidizing properties: Not determined
- VOC: < 143 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

Information on likely routes of exposure
- Inhalation: Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
- Skin contact: Contact with skin may result in mild irritation.
- Eye contact: Contact with eyes may result in mild irritation.
- Ingestion: Health injuries are not known or expected under normal use.

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.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Oral LD50</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>

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
- IARC Monographs. Overall Evaluation of Carcinogenicity
  - 1,4-Dioxane (CAS 123-91-1): 2B Possibly carcinogenic to humans.
- US. National Toxicology Program (NTP) Report on Carcinogens
  - 1,4-Dioxane (CAS 123-91-1): Reasonably Anticipated to be a Human Carcinogen.

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.

12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>C4991Series</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></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>

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,4-Dioxane (CAS 123-91-1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Inland silverside (Menidia beryllina) 6700 mg/l, 96 hours</td>
</tr>
<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)
- 1,4-Dioxane: -0.27
- 2-pyrrolidone: -0.85
- Aliphatic diol: -0.106

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. Dispose of in compliance with federal, state, and local 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)
1,4-Dioxane (CAS 123-91-1) 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
1,4-Dioxane (CAS 123-91-1)

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

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations
US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
1,4-DIOXANE (CAS 123-91-1) Listed: January 1, 1988

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
1,4-Dioxane (CAS 123-91-1)

Other information
VOC data based on formulation (Organic compounds minus solids) VOC content (less water, less exempt compounds) = <956 g/L (U.S. requirement, not for emissions)

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
12-Jun-2015

Revision date
02-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.

Revision information
1. Product and Company Identification: Alternate Trade Names
Composition / Information on Ingredients: Ingredients
Toxicological information: Eye contact
Toxicological information: Ingestion
Toxicological information: Inhalation
Toxicological information: Skin contact
**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>