1. Product and Company Identification

Identification of the preparation: C4810Series
Product use: Inkjet printing
Version #: 09
Revision date: 13-Sep-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
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Email: hpcustomer.inquiries@hp.com

2. Hazards Identification

Emergency overview: Contact with skin and eyes may result in irritation. 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: 2-pyrrolidone
Contact with skin may result in irritation.

Eye contact: 2-pyrrolidone
Contact with eyes may result in irritation.

Inhalation: 2-pyrrolidone
Inhalation may result in respiratory irritation.

Ingestion: 2-pyrrolidone
Ingestion may result in nausea, vomiting and diarrhea.

Potential health effects: Potential routes of overexposure to this product are skin and eye contact.

Routes of exposure: 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.

Chronic health effects: Carbon Black: Chronic inhalation studies performed with fine dust particles resulted in lung tumors in animals. The IARC classification was based upon these results. IARC also concluded "there is inadequate evidence in humans for the carcinogenicity of carbon black." Inhalation of fine dust particles is not expected to occur during normal conditions of use of this ink.

Carcinogenicity: 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.
None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&lt; 80</td>
</tr>
</tbody>
</table>
2-pyrrolidone  616-45-5  < 10
Carbon black  1333-86-4  < 5

**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**

**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

**5. Fire Fighting Measures**

**Flammable properties**
None known.

**Extinguishing media**

**Suitable extinguishing media**
CO2, water, dry chemical, or foam

**Unsuitable extinguishing media**
None known.

**Specific methods**
None established.

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

**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.

**Methods for containment**
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.

**Methods for cleaning up**
Soak up with inert absorbent material.

**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 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>ACGIH Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (1333-86-4)</td>
<td>TWA</td>
<td>3.0000 mg/m3</td>
<td>Inhalable fraction.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>U.S. - Tennessee Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (1333-86-4)</td>
<td>TWA</td>
<td>3.5000 mg/m3</td>
</tr>
</tbody>
</table>
Exposure guidelines
Exposure limits have not been established for this product.

Engineering controls
Use in a well ventilated area.
Provide adequate ventilation.

Personal protective equipment
Skin protection
Protected gloves not required under intended use.

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
Black.

Odor
Not available.

Odor threshold
Not available.

Physical state
Liquid

Form
Not available.

pH
7.8

Melting point
Not available.

Freezing point
Not available.

Boiling point
Not determined

Flash point
200 °F (93.3 °C) Pensky-Martens Closed Cup

Evaporation rate
Not determined

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

Flammability limits in air, lower, % by volume
Not determined

Vapor pressure
Not determined

Vapor density
Not available.

Specific gravity
1

Relative density
Not available.

Solubility (water)
Soluble in water

Auto-ignition temperature
Not available.

Decomposition temperature
Not available.

Viscosity
2 cp

VOC
Not available.

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

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

Carcinogenicity
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.

ACGIH Carcinogens
Carbon black (CAS 1333-86-4) A3 Confirmed animal carcinogen with unknown relevance to humans.
IARC Monographs. Overall Evaluation of Carcinogenicity
Carbon black (CAS 1333-86-4) 2B Possibly carcinogenic to humans.

IARC Monographs: Evidence of carcinogenicity in humans
Carbon black (CAS 1333-86-4) Inadequate data.

Serious eye damage/eye irritation
Not available.

Symptoms and target organs
Target Organs (NIOSH)
Carbon black (CAS 1333-86-4) Eyes Respiratory system

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
Aquatic toxicity
LC50/96h/Fathead minnows => 750 mg/L

Persistence and degradability
Not available.

13. Disposal Considerations
Disposal instructions
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
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.

CERCLA (Superfund) reportable quantity
None

Occupational Safety and Health Administration (OSHA)
29 CFR 1910.1200 hazardous chemical
Yes

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance
No

Section 311 hazardous chemical
Yes

State regulations
US - Pennsylvania RTK - Hazardous Substances: Listed substance
2-pyrrolidone (CAS 616-45-5) Listed.
Carbon black (CAS 1333-86-4) Listed.
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: 2
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 2
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

13-Sep-2012

This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Alternate Trade Names
Hazards Identification: Carcinogenicity
Composition / Information on Ingredients: Composition comments
9. Physical & Chemical Properties: Color
9. Physical & Chemical Properties: Other information
11. Toxicological Information: Carcinogenicity
14. Transport Information: Further information
15. Regulatory Information: US federal regulations
15. Regulatory Information: Regulatory information

Manufacturer information

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Explanation of abbreviations

ACGIH  American Conference of Governmental Industrial Hygienists
CAS    Chemical Abstracts Service
CERCLA Comprehensive Environmental Response Compensation and Liability Act
CFR    Code of Federal Regulations
COC    Cleveland Open Cup
DOT    Department of Transportation
EPCRA  Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC   International Agency for Research on Cancer
NIOSH  National Institute for Occupational Safety and Health
NTP    National Toxicology Program
OSHA   Occupational Safety and Health Administration
PEL    Permissible Exposure Limit
RCRA   Resource Conservation and Recovery Act
REC    Recommended
REL    Recommended Exposure Limit
SARA   Superfund Amendments and Reauthorization Act of 1986
STEL   Short-Term Exposure Limit
TCLP   Toxicity Characteristics Leaching Procedure
TLV    Threshold Limit Value
TSCA   Toxic Substances Control Act
VOC    Volatile Organic Compounds