1. Product and Company Identification

<table>
<thead>
<tr>
<th>Material name</th>
<th>C4810A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of the preparation</td>
<td>Inkjet printing</td>
</tr>
<tr>
<td>Revision date</td>
<td>22-May-2009</td>
</tr>
<tr>
<td>CAS #</td>
<td>Mixture</td>
</tr>
<tr>
<td>Company identification</td>
<td>Hewlett-Packard Company</td>
</tr>
<tr>
<td></td>
<td>3000 Hanover Street</td>
</tr>
<tr>
<td></td>
<td>Palo Alto, CA 94304-1185</td>
</tr>
<tr>
<td></td>
<td>United States</td>
</tr>
<tr>
<td></td>
<td>Telephone 650-857-1501</td>
</tr>
<tr>
<td>Hewlett-Packard health effects line</td>
<td>(Toll-free within the US) 1-800-457-4209</td>
</tr>
<tr>
<td></td>
<td>(Direct) 1-503-494-7199</td>
</tr>
<tr>
<td>HP Customer Care Line</td>
<td>(Toll-free within the US) 1-800-474-6836</td>
</tr>
<tr>
<td></td>
<td>(Direct) 1-208-323-2551</td>
</tr>
<tr>
<td>Email: <a href="mailto:hpcustomerinquiries@hp.com">hpcustomerinquiries@hp.com</a></td>
<td></td>
</tr>
<tr>
<td>Date prepared</td>
<td>May 21, 2009</td>
</tr>
</tbody>
</table>

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

Routes of exposure
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.

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). None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.
Material Safety Data Sheet

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Component/substance</th>
<th>CAS number</th>
<th>% by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&lt; 80</td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td>616-45-5</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>Carbon black</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).

4. First Aid Measures

- **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.

5. Fire Fighting Measures

- **Flash point and method**: > 200 °F (> 93.3 °C); Pensky-Martens Closed Cup
- **Hazardous combustion products**: Refer to section 10.
- **Flammable properties**: None known.
- **Extinguishing media**: CO2, water, dry chemical, or foam
- **Unsuitable extinguishing media**: None known.
- **Unusual fire and explosion hazard**: None established.

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>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (1333-86-4)</td>
<td>TWA</td>
<td>3.5 mg/m3</td>
</tr>
</tbody>
</table>

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

Personal protective equipment

<table>
<thead>
<tr>
<th>Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Use personal protective equipment to minimize exposure to skin and eye.</td>
</tr>
<tr>
<td>Skin protection</td>
<td>Protected gloves not required under intended use.</td>
</tr>
<tr>
<td>General hygiene considerations</td>
<td>Handle in accordance with good industrial hygiene and safety practice.</td>
</tr>
</tbody>
</table>

9. Physical & Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid.</td>
</tr>
<tr>
<td>pH</td>
<td>7.8 - 8.8</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 200 °F (&gt; 93.3 °C); Pensky-Martens Closed Cup</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limits in air, upper, % by volume</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limits in air, lower, % by volume</td>
<td>Not determined</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>Specific gravity</td>
<td>1 - 1.2</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</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>VOC</td>
<td>&lt; 3 %</td>
</tr>
<tr>
<td>Viscosity</td>
<td>&gt; 2 cp</td>
</tr>
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</table>

10. Chemical Stability & Reactivity Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stability</td>
<td>Stable under recommended storage conditions.</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>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Will not occur.</td>
</tr>
</tbody>
</table>
11. Toxicological Information

Carcinogenicity

IARC Monographs on Occupational Exposures to Chemical Agents: Evidence of carcinogenicity in humans
Carbon black (1333-86-4) Inadequate data.
US ACGIH Threshold Limit Values: A4 carcinogen
Carbon black (1333-86-4) Group A4 Not classifiable as a human carcinogen.

Symptoms and target organs

Target Organs (NIOSH)
Carbon black (1333-86-4) Eyes
Carbon black (1333-86-4) Respiratory system

12. Ecological Information

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

Persistency 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

IATA

Proper shipping name Not applicable
Hazard class Not applicable
UN number None
Packing group N/A
Packaging exceptions None

General
Not a regulated article under United States DOT, IATA, ADR, IMDG, or RID.

15. Regulatory Information

US federal regulations
US TSCA 12(b): Contains tetrahydrofuran (CASRN 109-99-9), subject to export notification requirements.

CERCLA (Superfund) reportable quantity
None

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

Section 302 extremely hazardous substance
No

Section 311 hazardous chemical
No

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

16. Other Information

HMIS® ratings
Health: 1
Flammability: 0
Physical hazard: 0

NFPA ratings
Health: 1
Flammability: 0
Instability: 0

Issue date
May 21 2009 6:29PM

Revision
7

Replaces sheet dated
May 20 2009 4:41PM

Manufacturer information
Hewlett-Packard Company
1000 NE Circle Boulevard
Corvallis, OR 97330-4239 US
(Direct) 1-503-494-7199
(Toll-free within the US) 1-800-457-4209

Other information
This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).

Disclaimer
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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