1. Product and Company Identification

Material name: C4838A
Use of the preparation: Inkjet printing
Version #: 05
Revision date: 02-16-2009
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
(Toll-free within the US) 1-800-457-4209
(Direct) 1-503-494-7199
HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomerinquiries@hp.com

Date prepared: Feb 16, 2009

2. Hazards Identification

Emergency overview:
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:
1,5-pentanediol
Contact with skin may result in irritation.
2-pyrrolidone
Contact with skin may result in irritation.
Alkyldicarboxylic acid
Contact with skin may result in irritation.
Tetraethylene glycol
Contact with skin may result in irritation.

Eye contact:
1,5-pentanediol
Contact with eyes may result in irritation.
2-pyrrolidone
Contact with eyes may result in irritation.
Alkyldicarboxylic acid
Contact can cause moderate to severe irritation and possible injury to the eyes.
Tetraethylene glycol
Contact with eyes may cause irritation.

Inhalation:
2-pyrrolidone
Inhalation may result in respiratory irritation.
Alkyldicarboxylic acid
Inhalation may result in respiratory irritation.
Tetraethylene glycol
Inhalation may result in respiratory irritation.

Ingestion:
2-pyrrolidone
Ingestion may result in nausea, vomiting and diarrhea.
Alkyldicarboxylic acid
Ingestion can cause gastrointestinal irritation, 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
None known.

Carcinogenicity
None of the components present in this formulation at concentrations equal to or greater than 0.1% are listed by EU, MAK, IARC, NTP or OSHA.

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>1,5-pentanediol</td>
<td>111-29-5</td>
<td>&lt; 20</td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td>616-45-5</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>Alkyldicarboxylic acid</td>
<td>Proprietary</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>Substituted napthalenesulfonate salt #7</td>
<td>Proprietary</td>
<td>&lt; 2.5</td>
</tr>
<tr>
<td>Tetraethylene glycol</td>
<td>112-60-7</td>
<td>&lt; 2.5</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

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. Get medical attention if irritation develops or persists.

Inhalation
Remove 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

Suitable extinguishing media
Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing media
None known.

Unusual fire and explosion hazard
None known.

Special firefighting procedures
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.
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

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

**Personal protective equipment**

**General**
Use personal protective equipment to minimize exposure to skin and eye.

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

9. Physical & Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Color</strong></td>
<td>Yellow</td>
</tr>
<tr>
<td><strong>Odor threshold</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Physical state</strong></td>
<td>Liquid.</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>3.8 - 4.2</td>
</tr>
<tr>
<td><strong>Melting point</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Freezing point</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Boiling point</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>&gt; 200 °F (&gt; 93.3 °C); Pensky-Martens Closed Cup</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Flammability</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Flammability limits in air, upper, % by volume</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Flammability limits in air, lower, % by volume</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>&gt; 1 (air = 1.0)</td>
</tr>
<tr>
<td><strong>Specific gravity</strong></td>
<td>1 - 1.2</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Solubility (water)</strong></td>
<td>Soluble in water</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water)</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>VOC</strong></td>
<td>&lt; 3 %</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>&gt; 2 cp</td>
</tr>
</tbody>
</table>

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
Not available.

12. Ecological Information
Aquatic toxicity
LC50/96h/Fathead minnows =/<= 400 mg/L
Static acute toxicity (trout), survival (100 mg/L) = 100%
Static acute toxicity (trout), survival (10 mg/L) = 100%
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
IATA
Proper shipping name
Not applicable
Hazard class
Not applicable
UN number
None
Packing group
N/A
Packaging exceptions
None
Packaging non bulk
None
Labels required
None

15. Regulatory Information
US federal regulations
US TSCA 12(b): Does not contain listed chemicals.
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.

State regulations
US - Pennsylvania RTK - Hazardous Substances: Listed substance
2-pyrrolidone (616-45-5) Listed.
16. Other Information

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

NFPA ratings
- Health: 1
- Flammability: 0
- Instability: 0

Issue date
Feb 16 2009  4:43AM

Revision
5

Replaces sheet dated
Feb 5 2009  4:42PM

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.

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

Manufacturer information
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(Toll-free within the US) 1-800-457-4209