1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material name: C5054A
Product use: Inkjet printing
Company identification: Hewlett-Packard Singapore (Sales) Pte. Ltd.
450 Alexandra Road
Singapore
119960
Telephone 62753888

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

CAS #: Mixture

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component/substance</th>
<th>CAS number</th>
<th>% by weight</th>
<th>EU classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&lt; 80</td>
<td></td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td>616-45-5</td>
<td>&lt; 10</td>
<td>Xi, R36/38</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>&lt; 5</td>
<td></td>
</tr>
</tbody>
</table>

Composition comments: This ink supply contains an aqueous ink formulation.

3. HAZARDS IDENTIFICATION

NFPA ratings
Health: 1
Flammability: 0
Instability: 0

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.

Physical hazards
Not classified as a physical hazard.

Health hazards
Not classified as a health hazard.

Environmental hazards
Not classified as an environmental hazard.

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.

5. FIRE-FIGHTING MEASURES

Flash point and method
> 93.3 °C (> 200 °F); Pensky-Martens Closed Cup

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

Extinguishing media which must not be used for safety reasons
None known.

Unusual fire & explosion hazards
None known.

Hazardous combustion products
Refer to section 10.

Specific methods
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.

Containment procedures
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

Occupational exposure limits

ACGIH

<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>

Singapore

<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>

Additional exposure data
Exposure limits have not been established for this product.

Engineering measures
Provide adequate ventilation.
Personal protective equipment

Skin and body protection
Protected gloves not required under intended use.

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

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**: Not available.
- **Color**: Black
- **Physical state**: Liquid
- **Form**: Not available
- **Odor**: Not available
- **Boiling point**: Not determined
- **Melting point**: Not available
- **Freezing point**: Not available
- **Vapor pressure**: Not determined
- **Specific gravity**: 1 - 1.2
- **Solubility (water)**: Soluble in water
- **Viscosity**: > 2 cp
- **Evaporation rate**: Not determined
- **Vapor density**: > 1 (air = 1.0)
- **Odour threshold**: Not available
- **pH**: 7.8 - 8.8
- **Percent volatile**: Not available
- **VOC**: < 3 %
- **Bulk density**: Not available
- **Flash point**: > 93.3 °C (> 200 °F); Pensky-Martens Closed Cup
- **Flammability limits in air, upper, % by volume**: Not available
- **Flammability limits in air, lower, % by volume**: Not determined
- **Auto-ignition temperature**: Not available
- **Flammability**: Not available

10. STABILITY AND REACTIVITY

- **Hazardous decomposition products**: Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
- **Hazardous polymerization**: Will not occur.
- **Materials to avoid**: Incompatible with strong bases and oxidizing agents.
- **Stability**: Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity

- IARC Monographs on Occupational Exposures to Chemical Agents: Evidence of carcinogenicity in humans
  - Carbon black (1333-86-4) Inadequate data.
- **Further information**: This ink formulation has not been tested for toxicological effects. Refer to Section 3 for potential health effects and Section 4 for first aide measures.
12. ECOLOGICAL INFORMATION
Aquatic toxicity LC50/96h/Fathead minnows => 750 mg/L

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
ADR Not regulated as dangerous goods.
IMDG Not regulated as dangerous goods.
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
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.

16. OTHER INFORMATION
Manufacturer 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

List of relevant R phrases R36/38 Irritating to eyes and skin.
Other information This MSDS 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 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 22-May-2009
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