1. Product and Company Identification

Material name: CC639 Series

Version: 03

Issue date: 30-Jan-2013

Revision date: 24-Jan-2014

Product use: Inkjet printing

CAS #: Mixture

Company identification: Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304-1185
United States
Telephone 650-857-5020

Hewlett-Packard health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-760-710-0048
HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomer.inquiries@hp.com

2. Hazards Identification

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

Other hazards: 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. 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. 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>Hazardous components</th>
<th>CAS</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone</td>
<td>616-45-5</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>1,5-pentanediol</td>
<td>111-29-5</td>
<td>&lt; 5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-hazardous components</th>
<th>CAS</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&gt;70</td>
</tr>
<tr>
<td>Modified carbon black #6</td>
<td>Proprietary</td>
<td>&lt; 5</td>
</tr>
<tr>
<td>Substituted diol</td>
<td>Proprietary</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).

Carbon black is present only in a bound form in this preparation.

4. First Aid Measures

General advice: No information

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.
### 5. Fire Fighting Measures

**Flammable properties**
None known.

**Extinguishing media**

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

- Unsuitable extinguishing media
  - None known.

**Fire fighting equipment/instructions**
Not available.

**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 cleaning up**
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

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

**Engineering controls**
Use in a well ventilated area.

**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

**Appearance**
Not available.

**Physical state**
Not available.

**Form**
Not available.

**Color**
Black.

**Odor**
Not available.

**pH**
7.5 - 8.2

**Vapor pressure**
Not determined

**Boiling point**
Not determined

**Melting point/Freezing point**
Not available.

**Solubility (water)**
Soluble in water

**Specific gravity**
Not available.

**Flash point**
Not available.

**Viscosity**
>= 2 cp

**VOC**
< 147 g/l

**Other information**
For other VOC regulatory data/information see Section 15.
10. Chemical Stability & Reactivity Information

Chemical stability
Stable under recommended storage conditions.

Conditions to avoid
No information 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.

Possibility of hazardous reactions
Will not occur.

11. Toxicological Information

Toxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Guinea pig</td>
<td>6500 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>6500 mg/kg</td>
</tr>
<tr>
<td>Substituted diol (CAS Proprietary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>&gt; 5.1 mg/l, 4 Hours</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Rat</td>
<td>&gt; 5.1 mg/l, 4 Hours</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>

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.

Serious eye damage/eye irritation
Not available.

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

Ecotoxicological data

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC639 Series (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</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>
<tr>
<td>Components</td>
<td>Species</td>
<td>Test Results</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>

Ecotoxicity
No data available.

Persistence and degradability
Not available.

Bioaccumulation / Accumulation

Bioaccumulative potential
Octanol/water partition coefficient log Kow
2-pyrrolidone -0.85
Partition coefficient
2-pyrrolidone -0.85

13. Disposal Considerations

Disposal instructions
Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
Do not allow this material to drain into sewers/water supplies.
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.

RID
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.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number
Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))
Not regulated.

DEA Exempt Chemical Mixtures Code Number
Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

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

SARA 302 Extremely hazardous substance
No

SARA 311/312 Hazardous chemical
No

Other information
Exposure Limits (See Section 8): Executive regulation of Minister of Labour and Social Policy dated Nov. 29, 2002 concerning the highest exposure limits and volume of factors harmful for health and environment at work (Official Journal of Laws no 217/2002 item 1833 with further amendments).

VOC content (less water, less exempt compounds) = <709 g/L (U.S. requirement, not for emissions)

VOC data based on formulation (Organic compounds minus solids)

State regulations

US. Massachusetts RTK - Substance List
2-pyrrolidone (CAS 616-45-5)

US. Pennsylvania RTK - Hazardous Substances
2-pyrrolidone (CAS 616-45-5) Listed.
16. Other Information

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

NFPA ratings
- Health: 1
- Flammability: 1
- 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.

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

Issue date
30-Jan-2013

This data sheet contains changes from the previous version in section(s):
1. Product and Company Identification: Alternate Trade Names

Manufacturer information
Hewlett-Packard Company
3000 Hanover Street
Palo Alto, California 94304-1112 US
(Direct) 1-503-494-7199
(Toll-free within the US) 1-800-457-4209

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