1. Product and Company Identification

**Material name** CH613Series[C]

**Version #** 05

**Issue date** 29-Oct-2010

**Revision date** 04-Jul-2013

**Product use** Inkjet printing

**CAS #** Mixture

**Synonym(s)** Cyan ink

**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) 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** 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.

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;20</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; 60</td>
</tr>
<tr>
<td>Substituted diol</td>
<td>Proprietary</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Modified Cyan Pigment 25</td>
<td>Not Available</td>
<td>&lt;2</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

**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.

**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

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.

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

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
Liquid.

Form
Not available.

Color
Cyan

Odor
Not available.

pH
8.2 - 8.7

Vapor pressure
Not determined

Boiling point
Not determined

Melting point/Freezing point
Not determined

Solubility (water)
Soluble in water

Specific gravity
Not available.

Flash point
Not available.

VOC
< 306 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>Product</th>
<th>Components</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyan ink (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<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><em>Oral</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Guinea pig</td>
<td>6500 mg/kg</td>
</tr>
<tr>
<td>Rat</td>
<td></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><em>Dermal</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>&gt; 5.1 mg/l, 4 Hours</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>

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

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

Ecotoxicological 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>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>

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 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

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))
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
VOC content (less water, less exempt compounds) = < 882 g/L (U.S. requirement, not for emissions)
VOC data based on formulation (Organic compounds minus solids)

Other 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.

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.

US. Rhode Island RTK
Not regulated.

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

29-Oct-2010

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

Hazards Identification: Other hazards
9. Physical & Chemical Properties: Other information

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
1. Product and Company Identification

**Material name**: CH613Series[LC]

**Version #**: 07

**Issue date**: 29-Oct-2010

**Revision date**: 05-Jul-2013

**Product use**: Inkjet printing

**CAS #**: Mixture

**Synonym(s)**: Light cyan ink

**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

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Email: hpcustomer.inquiries@hp.com

2. Hazards Identification

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

**Other hazards**: 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.

3. Composition / Information on Ingredients

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<td>Substituted diol</td>
<td>Proprietary</td>
<td>&lt;10</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

**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.

- **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

**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.

#### 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

#### 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
- Liquid.

#### Form
- Not available.

#### Color
- Light Cyan

#### Odor
- Not available.

#### pH
- 8.2 - 8.7

#### Vapor pressure
- Not determined

#### Boiling point
- Not determined

#### Melting point/Freezing point
- Not determined

#### Solubility (water)
- Soluble in water

#### Specific gravity
- Not available.

#### Flash point
- Not available.

#### VOC
- < 303 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

<table>
<thead>
<tr>
<th>Toxicological data</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light cyan ink (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
</tbody>
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**Components**

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<tr>
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<td></td>
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<td>Acute</td>
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<td>&gt; 2000 mg/kg</td>
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<tr>
<td>Oral</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>

**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

**Aquatic toxicity**

This product has not been tested for ecological effects.

<table>
<thead>
<tr>
<th>Ecotoxicological data</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
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<tr>
<th>Test Results</th>
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</thead>
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<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia pulex)</td>
</tr>
</tbody>
</table>

**Persistence and degradability**

Not available.

**Bioaccumulation / Accumulation**

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

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

**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
VOC content (less water, less exempt compounds) = < 981 g/L (U.S. requirement, not for emissions)
VOC data based on formulation (Organic compounds minus solids)

Other 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.

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.

US. Rhode Island RTK
Not regulated.

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

29-Oct-2010

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

Hazard Identification: Other hazards
9. Physical & Chemical Properties: Other information

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