1. Product and Company Identification

Material name: CN816Series
Version #: 04
Issue date: 16-Apr-2010
Revision date: 14-Nov-2013
Product use: Inkjet printing.
CAS #: Mixture
Synonym(s): HP SA100 Light Yellow 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) 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: Harmful by inhalation and in contact with skin. Contact with skin and eyes may result in irritation. Inhalation may result in respiratory irritation.

Potential health effects

Eyes: Contact with eyes may cause irritation. Avoid contact with eyes. Contact with eyes may result in irritation and Direct contact with the eye may cause discomfort and redness.

Skin: Avoid contact with skin. Harmful in contact with skin. Prolonged and/or repeated skin contact may result in mild irritation or redness and Contact with skin may result in irritation and Harmful if absorbed through the skin.

Inhalation: Avoid breathing vapors or mists of this product. Harmful if inhaled. Vapors and/or aerosols which may be formed at elevated temperatures may be irritating to eyes and respiratory tract. Inhalation may result in respiratory irritation.

Ingestion: May be harmful if swallowed. Ingestion may result in nausea, vomiting and diarrhea. Swallowing large amounts may cause digestive discomfort. Harmful if swallowed.

Chronic effects: May cause harm to the unborn child.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Glycol, Monobutyl Ether Acetate</td>
<td>112-07-2</td>
<td>&lt;50</td>
</tr>
<tr>
<td>Propylene Glycol Monomethyl Ether Acetate</td>
<td>108-65-6</td>
<td>&lt;15</td>
</tr>
<tr>
<td>Cyclohexanone</td>
<td>108-94-1</td>
<td>&lt;10</td>
</tr>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td>872-50-4</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>Butyl carbitol acetate</td>
<td>124-17-4</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Acrylic Polymer</td>
<td>Mixture</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Yellow Colorant</td>
<td>Mixture</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>
4. First Aid Measures

General advice

No information

First aid procedures

Eye contact

In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.

Skin contact

In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water. Wash clothing separately before reuse. Get medical attention if irritation develops or persists.

Inhalation

Move person to fresh air immediately. If symptoms persist, get immediate medical attention.

Ingestion

Rinse mouth out with water. If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. Fire Fighting Measures

Extinguishing media

Suitable extinguishing media: sand, carbon dioxide (CO2) and Alcohol foam.

Protection of firefighters

Firefighters should wear full protective clothing including self contained breathing apparatus. Avoid runoff into storm sewers and ditches which lead to waterways.

Fire fighting equipment/instructions

Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

Personal precautions

Avoid contact with skin. Avoid inhalation of vapors or mists. Do not touch or walk through spilled material. Ensure adequate ventilation. Remove all sources of ignition. Use personal protective equipment to minimize exposure to skin and eye. In the case of vapor formation use a respirator with an approved filter.

Environmental precautions

Do not flush into surface water or sanitary sewer system.

Methods for cleaning up

Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Other information

Dispose of in compliance with federal, state, and local regulations.

7. Handling and Storage

Handling

Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists of this product. Use with adequate ventilation. Wear personal protective equipment.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Keep away from oxidizers.

8. Exposure Controls / Personal Protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyclohexanone (CAS 108-94-1)</td>
<td>STEL</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Ethylene Glycol, Monobutyl Ether Acetate (CAS 112-07-2)</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
<tr>
<td>TWA</td>
<td>20 ppm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyclohexanone (CAS 108-94-1)</td>
<td>PEL</td>
<td>200 mg/m3</td>
</tr>
</tbody>
</table>
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
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</tr>
<tr>
<td>Ethylene Glycol, Monobutyl Ether Acetate (CAS 112-07-2)</td>
<td>TWA</td>
<td>5 ppm</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexanone (CAS 108-94-1)</td>
<td>TWA</td>
<td>100 mg/m3</td>
</tr>
<tr>
<td>Ethylene Glycol, Monobutyl Ether Acetate (CAS 112-07-2)</td>
<td>TWA</td>
<td>33 mg/m3</td>
</tr>
</tbody>
</table>

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Methyl-2-pyrrolidone (CAS 872-50-4)</td>
<td>TWA</td>
<td>40 mg/m3</td>
</tr>
<tr>
<td>Propylene Glycol Monomethyl Ether Acetate (CAS 108-65-6)</td>
<td>TWA</td>
<td>50 ppm</td>
</tr>
</tbody>
</table>

US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexanone (CAS 108-94-1)</td>
<td>TWA</td>
<td>100 mg/m3</td>
</tr>
<tr>
<td>Ethylene Glycol, Monobutyl Ether Acetate (CAS 112-07-2)</td>
<td>TWA</td>
<td>33 mg/m3</td>
</tr>
</tbody>
</table>

Exposure guidelines

**US. ACGIH Threshold Limit Values**

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

**Personal protective equipment**

- **Eye / face protection**: Contact with skin and eyes may result in irritation. Wear safety glasses; chemical goggles (if splashing is possible). Eye wash fountain and emergency showers are recommended.
- **Skin protection**: Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant gloves.
- **Respiratory protection**: Provide adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment.
- **General hygiene considerations**: Do not get this material in contact with skin. Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Launder contaminated clothing before reuse.

9. Physical & Chemical Properties

- **Appearance**: Not available.
- **Physical state**: Liquid.
- **Form**: Liquid.
- **Color**: Not available.
- **Odor**: Solvent.
- **pH**: Not available.
- **Vapor pressure**: Not available.
- **Boiling point**: Not available.
- **Melting point/Freezing point**: Not available.
- **Solubility (water)**: Not available.
- **Specific gravity**: Not available.
- **Flash point**: 161.60 °F (72.00 °C)
- **VOC**: < 876 g/L
- **Other information**: No information available.
10. Chemical Stability & Reactivity Information

Chemical stability: Stable at normal conditions.

Conditions to avoid: Heat, flames and sparks. This product may react with oxidizing agents.

Incompatible materials: Incompatible with strong bases and oxidizing agents.

Hazardous decomposition products: Not available.

Possibility of hazardous reactions: None known.

11. Toxicological Information

Toxicological data

Components | Species | Test Results
--- | --- | ---

Butyl carbitol acetate (CAS 124-17-4)

**Acute**

*Dermal*

LD₅₀ | Rabbit | 5500 mg/kg
LD₅₀ | | 14.8 ml/kg

*Inhalation*

LC₅₀ | Rat | 73.7 mg/l, 4 Hours

*Oral*

LD₅₀ | Guinea pig | 2340 mg/kg
LD₅₀ | Mouse | 6500 mg/kg
LD₅₀ | Rabbit | 2260 mg/kg
LD₅₀ | Rat | 6500 mg/kg

Ethylene Glycol, Monobutyl Ether Acetate (CAS 112-07-2)

**Acute**

*Dermal*

LD₅₀ | Rabbit | 1500 mg/kg

*Oral*

LD₅₀ | Rat | 2400 mg/kg

*Other*

LD₅₀ | Mouse | 754 mg/kg

N-Methyl-2-pyrrolidone (CAS 872-50-4)

**Acute**

*Dermal*

LD₅₀ | Rabbit | 8000 mg/kg

*Oral*

LD₅₀ | Mouse | 5130 mg/kg
LD₅₀ | Rat | 3914 mg/kg
LD₅₀ | | 4.2 ml/kg

*Other*

LD₅₀ | Mouse | 54.5 mg/kg
LD₅₀ | Rat | 80.5 mg/kg

Carcinogenicity

ACGIH Carcinogens

2-BUTOXYETHYL ACETATE (EGBEA) (CAS 112-07-2) | A3 Confirmed animal carcinogen with unknown relevance to humans.
CYCLOHEXANONE (CAS 108-94-1)  A3 Confirmed animal carcinogen with unknown relevance to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Cyclohexanone (CAS 108-94-1)  3 Not classifiable as to carcinogenicity to humans.

Serious eye damage/eye irritation  Not available.

Further information  Complete toxicity data are not available for this specific formulation

12. Ecological Information

Aquatic toxicity  No information available.

Ecotoxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexanone (CAS 108-94-1)</td>
<td>Fish</td>
<td>481 - 578 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

Ecotoxicity  No information available.

Persistence and degradability  Not available.

Bioaccumulation / Accumulation

<table>
<thead>
<tr>
<th>Bioaccumulative potential</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Octanol/water partition coefficient log Kow</td>
<td></td>
</tr>
<tr>
<td>Cyclohexanone</td>
<td>0.81</td>
</tr>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td>-0.54</td>
</tr>
</tbody>
</table>

Partition coefficient

| Cyclohexanone               | 0.81                                |
| N-Methyl-2-pyrrolidone      | -0.54                               |

13. Disposal Considerations

Waste codes

US RCRA Hazardous Waste U List: Reference

Cyclohexanone (CAS 108-94-1)  U057

Disposal instructions  Do not dispose of together with general office waste.
Do not allow this material to drain into sewers/water supplies.
Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
Ensure collection and disposal with an appropriately licensed waste contractor.

14. Transport Information

DOT

Basic shipping requirements:

UN number  NA1993
Proper shipping name  Combustible liquid n.o.s. (2-methoxy-1-methylethyl acetate, Cyclohexanone) -Not regulated in quantities less than 119 gallons
Hazard class  Combustible
Packing group  III

IATA  Not regulated as dangerous goods.

IMDG  Not regulated as dangerous goods.

RID  Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations  All ingredients are listed or exempt
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.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

N-Methyl-2-pyrrolidone (CAS 872-50-4) 1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

N-Methyl-2-pyrrolidone (CAS 872-50-4) Listed.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity

Cyclohexanone: 5000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - Yes
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) = 876 g/L (U.S. requirement, not for emissions)
VOC data based on formulation (Organic compounds minus solids)

Other regulations
Notified according to EU Regulations.

State regulations

US - California Proposition 65 - CRT: Listed date/Developmental toxin

US - New Jersey RTK - Substances: Listed substance
Cyclohexanone (CAS 108-94-1) Listed.
Ethylene Glycol, Monobutyl Ether Acetate (CAS 112-07-2) Listed.
N-Methyl-2-pyrrolidone (CAS 872-50-4) Listed.

US. Massachusetts RTK - Substance List
Cyclohexanone (CAS 108-94-1)
N-Methyl-2-pyrrolidone (CAS 872-50-4)

US. Pennsylvania RTK - Hazardous Substances
Cyclohexanone (CAS 108-94-1) Listed.
N-Methyl-2-pyrrolidone (CAS 872-50-4) Listed.

US. Rhode Island RTK
Cyclohexanone (CAS 108-94-1)

16. Other Information

HMIS® ratings
Health: 2
Flammability: 2
Physical hazard: 1
Personal protection: B

NFPA ratings
Health: 2
Flammability: 2
Instability: 1

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

**Issue date**
16-Apr-2010

**This data sheet contains changes from the previous version in section(s):**
5. Fire Fighting Measures: Protective equipment and precautions for firefighters

**Manufacturer information**
Hewlett-Packard Company
3000 Hanover Street
Palo Alto, California  94304-1112 US
(Direct) +972 (9) 892-4628

**Explanation of abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response Compensation and Liability Act</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>COC</td>
<td>Cleveland Open Cup</td>
</tr>
<tr>
<td>DOT</td>
<td>Department of Transportation</td>
</tr>
<tr>
<td>EPCRA</td>
<td>Emergency Planning and Community Right-to-Know Act (aka SARA)</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety and Health</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
</tr>
<tr>
<td>REC</td>
<td>Recommended</td>
</tr>
<tr>
<td>REL</td>
<td>Recommended Exposure Limit</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act of 1986</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-Term Exposure Limit</td>
</tr>
<tr>
<td>TCLP</td>
<td>Toxicity Characteristics Leaching Procedure</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substances Control Act</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</td>
</tr>
</tbody>
</table>