1. Product and Company Identification

**Material name**: CN824Series

**Version #**: 03

**Issue date**: 16-Apr-2010

**Revision date**: 15-Nov-2013

**Product use**: Inkjet printing.

**CAS #**: Mixture

**Synonym(s)**: HP SA110 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

**Hazardous components**

<table>
<thead>
<tr>
<th>Hazardous component</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;60</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;2.5</td>
</tr>
</tbody>
</table>

**Non-hazardous components**

<table>
<thead>
<tr>
<th>Non-hazardous component</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyl carbitol acetate</td>
<td>124-17-4</td>
<td>&lt;15</td>
</tr>
<tr>
<td>Acrylic Polymer</td>
<td>Mixture</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Acrylic Resin</td>
<td>Proprietary</td>
<td>&lt;5</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>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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></td>
<td>TWA</td>
<td>20 ppm</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>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexanone (CAS 108-94-1)</td>
<td>PEL</td>
<td>200 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 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>25 ppm</td>
</tr>
<tr>
<td></td>
<td></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>10 ppm</td>
</tr>
<tr>
<td></td>
<td></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></td>
<td></td>
<td>25 ppm</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) (Closed Cup)
VOC < 879 g/L
Other information No information available
Other data
Chemical family Nur Solvent Based ink

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyl carbitol acetate (CAS 124-17-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Dermal</td>
<td>Rabbit</td>
<td>5500 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14.8 ml/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Rat</td>
<td>73.7 mg/l, 4 Hours</td>
</tr>
<tr>
<td>Oral</td>
<td>Guinea pig</td>
<td>2340 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Mouse</td>
<td>6500 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rabbit</td>
<td>2260 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>6500 mg/kg</td>
</tr>
</tbody>
</table>

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

| Acute Dermal | Rabbit | 1500 mg/kg |
| Oral | Rat | 2400 mg/kg |

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

| Acute Dermal | Rabbit | 8000 mg/kg |
| Oral | Mouse | 5130 mg/kg |
| | Rat | 3914 mg/kg |
| Other | Mouse | 54.5 mg/kg |
| | 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></td>
<td>Cylohexanone (CAS 108-94-1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fish</td>
<td>LC50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fathead minnow (Pimephales promelas) 481 - 578 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

Ecotoxicity
No information available.

Persistence and degradability
Not available.

Bioaccumulation / Accumulation

Bioaccumulative potential
Octanol/water partition coefficient log Kow
Cyclohexanone 0.81
N-Methyl-2-pyrrolidone -0.54

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-pyrolidone (CAS 872-50-4) 1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance
N-Methyl-2-pyrolidone (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)

<table>
<thead>
<tr>
<th>Hazard categories</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate Hazard - No</td>
<td></td>
</tr>
<tr>
<td>Delayed Hazard - Yes</td>
<td></td>
</tr>
<tr>
<td>Fire Hazard - Yes</td>
<td></td>
</tr>
<tr>
<td>Pressure Hazard - No</td>
<td></td>
</tr>
<tr>
<td>Reactivity Hazard - No</td>
<td></td>
</tr>
</tbody>
</table>

SARA 302 Extremely hazardous substance
No

SARA 311/312 Hazardous chemical
No

Other information
VOC content (less water, less exempt compounds) = 879 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-pyrolidone (CAS 872-50-4) Listed.

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

US. Pennsylvania RTK - Hazardous Substances
Cyclohexanone (CAS 108-94-1) Listed.
N-Methyl-2-pyrolidone (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

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.
Material name: CN824Series
11322 Version #: 03 Revision date: 15-Nov-2013 Issue date: 16-Apr-2010

Other information
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):
Product and Company Identification: Synonyms
Composition / Information on Ingredients: Ingredients
5. Fire Fighting Measures: Protective equipment and precautions for firefighters
15. Regulatory Information: Other information
HazReg Data: Pacific Rim

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>