1. Product and Company Identification

Material name: CN809Series
Version #: 04
Issue date: 23-Apr-2010
Revision date: 19-Nov-2013
Product use: Inkjet printing.
CAS #: Mixture
Synonym(s): HP FR110 Black 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.

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;60</td>
</tr>
<tr>
<td>Cyclohexanone</td>
<td>108-94-1</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Propylene Glycol Monomethyl Ether Acetate</td>
<td>108-65-6</td>
<td>&lt;10</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;25</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 needed.

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 dry chemical.

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.

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>
</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>
</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>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></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
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
< 881 g/L

Other information
For other VOC regulatory data/information see Section 15.

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.

Material name: CN809Series
Incompatible materials
Not available.

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
| | | 14.8 ml/kg

*Inhalation*
LC50 | Rat | 73.7 mg/l, 4 Hours

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

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
Components | Species | Test Results
---|---|---
Cyclohexanone (CAS 108-94-1)

**Aquatic**
*Fish*
LC50 | Fathead minnow (Pimephales promelas) | 481 - 578 mg/l, 96 hours

Ecotoxicity
No information available.

Persistence and degradability
Not available.

Bioaccumulation / Accumulation
10. Bioaccumulative potential

Octanol/water partition coefficient log Kow

Cyclohexanone 0.81

Partition coefficient

Cyclohexanone 0.81

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.
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) = 881 g/L (U.S. requirement, not for emissions)
VOC data based on formulation (Organic compounds minus solids)
Other regulations

State regulations

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

US. Massachusetts RTK - Substance List
Cyclohexanone (CAS 108-94-1)

US. Pennsylvania RTK - Hazardous Substances
Cyclohexanone (CAS 108-94-1) 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.

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

Issue date
23-Apr-2010

This data sheet contains changes from the previous version in section(s):
5. Fire Fighting Measures: Protective equipment and precautions for firefighters
9. Physical & Chemical Properties: Other information

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