MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

**Material name**: CH252Series
**Version #**: 03
**Issue date**: 03-Jan-2013
**Revision date**: 01-Oct-2013
**Product use**: Inkjet printing
**CAS #**: Mixture
**Synonym(s)**: HP Designjet 788 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**
- Irritating to eyes and skin.
- May cause sensitization by skin contact.
- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Potential health effects**

**Eyes**
- Irritating to eyes. Avoid contact with eyes.

**Skin**
- Contact causes skin irritation. Avoid contact with the skin.

**Inhalation**
- Do not breathe vapour. Inhalation of vapors or mists of the product may be irritating to the respiratory system.

**Ingestion**
- May be harmful if swallowed.

**Other hazards**
- Benzophenone is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans).

- Potential routes of exposure to this product are skin and eye contact, ingestion, and inhalation.
- Contains isocyanates. May produce an allergic reaction.

**Proprietary initiator** - In animal testing, risk of impaired fertility was shown only after repeated ingestion of very high doses of this substance.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>phenoxy ethyl acrylate</td>
<td>48145-04-6</td>
<td>&lt;40</td>
</tr>
<tr>
<td>N-vinylcaprolactam</td>
<td>2235-00-9</td>
<td>&lt;25</td>
</tr>
<tr>
<td>monoalkyl or monoaryl or monoalkylaryl esters of acrylic acid</td>
<td>3076-04-8</td>
<td>&lt;15</td>
</tr>
<tr>
<td>Proprietary initiator</td>
<td>Proprietary</td>
<td>&lt;5</td>
</tr>
<tr>
<td>benzophenone</td>
<td>119-61-9</td>
<td>&lt;2.5</td>
</tr>
</tbody>
</table>

Material name: CH252Series
10838   Version #: 03   Revision date: 01-Oct-2013   Issue date: 03-Jan-2013

Hazardous components

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propoxylated Neopentyl Glycol Diacrylate</td>
<td>&lt;2.5</td>
</tr>
</tbody>
</table>

Non-hazardous components

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylate Ester Resin</td>
<td>&lt;2.5</td>
</tr>
<tr>
<td>Aliphatic Urethane Acrylate</td>
<td>Proprietary</td>
</tr>
<tr>
<td>2-benzyl-2-dimethylamino-4-morpholinobutyrophenone</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

4. First Aid Measures

General advice

No information

First aid procedures

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Skin contact</th>
<th>Inhalation</th>
<th>Ingestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.</td>
<td>Move to fresh air. If symptoms persist, get medical attention.</td>
<td>If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting. Never give anything by mouth to an unconscious person.</td>
</tr>
</tbody>
</table>

5. Fire Fighting Measures

Flammable properties

None known.

Extinguishing media

Suitable extinguishing media

Dry powder. Carbon dioxide (CO2). Water may be ineffective.

Unsuitable extinguishing media

Water.

Protection of firefighters

Protective equipment and precautions for firefighters

Avoid runoff into storm sewers and ditches which lead to waterways.

Fire fighting equipment/instructions

Not available.

6. Accidental Release Measures

Personal precautions

Wear appropriate personal protective equipment. Do not touch or walk through spilled material.

Environmental precautions

Do not let product enter drains. Do not flush into surface water or sanitary sewer system. See also section 13 Disposal considerations.

Methods for cleaning up

Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Other information

Soak up with inert absorbent material. Dispose of in compliance with federal, state, and local regulations.

7. Handling and Storage

Handling

Avoid contact with skin, eyes and clothing.

Storage

Keep away from excessive heat or cold. Do not store in direct sunlight. Do not handle or store near an open flame, heat or other sources of ignition.

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>benzophenone (CAS 119-61-9)</td>
<td>TWA</td>
<td>0.5 mg/m3</td>
</tr>
</tbody>
</table>

Exposure guidelines

Exposure limits have not been established for this product.
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 gloves.
Wear appropriate chemical resistant clothing.

Respiratory protection
Provide adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice. Do not get this material in your eyes, on your skin, or on your clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Launder contaminated clothing before reuse. Keep away from food and drink.

9. Physical & Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Physical state</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Form</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Cyan</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Characteristic</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Boiling point</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Melting point/Freezing point</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Solubility (water)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Specific gravity</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>&gt; 230.00 °F (&gt; 110.00 °C) Closed Cup</td>
</tr>
<tr>
<td><strong>VOC</strong></td>
<td>&lt; 95 g/L</td>
</tr>
<tr>
<td><strong>Other information</strong></td>
<td>For other VOC regulatory data/information see Section 15.</td>
</tr>
</tbody>
</table>

Other data

- **Chemical family**: Acrylate/Polymer/Pigment Blend

10. Chemical Stability & Reactivity Information

- **Chemical stability**: Stable under normal storage conditions.
- **Conditions to avoid**: Exposure to sunlight.
- **Incompatible materials**: Incompatible with strong bases and oxidizing agents. alkaline metals
- **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**: Hazardous polymerization can occur with decreased inhibitor content.

11. Toxicological Information

**Toxicological data**

**Components**

- benzophenone (CAS 119-61-9)
  - **Acute**
  - **Oral**
  - LD50: Mouse, 2895 mg/kg
  - Other
  - LD50: Mouse, 727 mg/kg
  - **Sensitization**: May cause sensitization by skin contact.
  - **Acute effects**: Causes skin irritation.
  - **Carcinogenicity**: Benzophenone is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans).
IARC Monographs. Overall Evaluation of Carcinogenicity

benzophenone (CAS 119-61-9) 2B Possibly carcinogenic to humans.

Serious eye damage/eye irritation
Causes eye irritation.

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

12. Ecological Information

Aquatic toxicity
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Ecotoxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>benzophenone (CAS 119-61-9)</td>
<td>Fish</td>
<td>LC50 Fathead minnow (Pimephales promelas) 9.64 - 12.31 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

Ecotoxicity
No data available.

Persistence and degradability
Not available.

Bioaccumulation / Accumulation

13. Disposal Considerations

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
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

RID
Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations
This product is listed on the U.S. EPA TSCA Inventory.
US TSCA 12(b): Contains 2,4-diethyl-9h-thioxanthen-9-one: Benzophenone, subject to export notification requirements.
US TSCA 4(a): Contains Benzophenone, subject of a test rule at 40 CFR Section 799.5115.
TSCA Section 5(a)(2) Significant New Use Rules: This product contains 2,4-diethyl-9h-thioxanthen-9-one which is subject to a Significant New Use Rule at 40 CFR Section 721.9664.
TSCA 8(a) PAIR: 4-Methoxyphenol; heptane
SARA 302/304/311/312 hazardous chemicals: Benzophenone: tridecyl acrylate

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)
benzophenone (CAS 119-61-9) 0.1 % One-Time Export Notification only.

CERCLA (Superfund) reportable quantity
None
Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - Yes
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) = < 95 g/L (U.S. requirement, not for emissions) US EPA Method 24

Other regulations
The components of this product are reported in the following inventories: USA, European Union, Canada, New Zealand, Japan, Philippines, China, Australia, Korea.

State regulations
US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

US. Massachusetts RTK - Substance List
Not regulated.

US. Pennsylvania RTK - Hazardous Substances
Not regulated.

US. Rhode Island RTK
Not regulated.

16. Other Information

HMIS® ratings
Health: 2
Flammability: 1
Physical hazard: 2

NFPA ratings
Health: 2
Flammability: 1
Instability: 2

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
03-Jan-2013

This data sheet contains changes from the previous version in section(s):
Composition / Information on Ingredients: Ingredients

Manufacturer information
Hewlett-Packard Company
3000 Hanover Street
Palo Alto, California  94304-1112 US
Product Information 1-800-925-0563
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</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>