1. Product and Company Identification

**Material name**: Q3328Series

**Version #**: 02

**Issue date**: 30-Jan-2013

**Revision date**: 24-Jan-2014

**Product use**: Inkjet printing

**CAS #**: Mixture

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

**Other hazards**: Carbon black is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans). Carbon black in this preparation, due to its bound form, does not present this carcinogenic risk. 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. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.

---

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; 10</td>
</tr>
<tr>
<td>1,5-pentanediol</td>
<td>111-29-5</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>Water</td>
<td>7732-18-5</td>
<td>&gt;70</td>
</tr>
<tr>
<td>Modified carbon black #6</td>
<td>Proprietary</td>
<td>&lt; 5</td>
</tr>
<tr>
<td>Substituted diol</td>
<td>Proprietary</td>
<td>&lt; 2.5</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).

Carbon black is present only in a bound form in this preparation.

---

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. Get medical attention if irritation develops or persists.

Inhalation: Remove 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.

Methods for cleaning up: Soak up with inert absorbent material.

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: Not available.

Form: Not available.

Color: Black.

Odor: Not available.

pH: 7.5 - 8.2

Vapor pressure: Not determined

Boiling point: Not determined

Melting point/Freezing point: Not available.

Solubility (water): Soluble in water

Specific gravity: Not available.

Flash point: Not available.

Viscosity: >= 2 cp

VOC: < 147 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>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>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Guinea pig</td>
<td>6500 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>6500 mg/kg</td>
</tr>
<tr>
<td><strong>Substituted diol (CAS Proprietary)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>&gt; 5.1 mg/l, 4 Hours</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>

**Carcinogenicity**
Carbon black is classified as a carcinogen by the IARC (possibly carcinogenic to humans, Group 2B) and by the State of California under Proposition 65. In their evaluations of carbon black, both organizations indicate that exposure to carbon black, per se, does not occur when it remains bound within a product matrix, specifically, rubber, ink, or paint.

**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

**Ecotoxicological data**

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3328Series (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fathead minnow (Pimephales promelas)</td>
</tr>
<tr>
<td><strong>Components</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia pulex)</td>
</tr>
</tbody>
</table>

**Ecotoxicity**
No data available.

**Persistence and degradability**
Not available.

**Bioaccumulation / Accumulation**

<table>
<thead>
<tr>
<th>Bioaccumulative potential</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octanol/water partition coefficient log Kow</td>
<td>2-pyrrolidone</td>
</tr>
</tbody>
</table>
13. Disposal Considerations

**Disposal instructions**
Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
Do not allow this material to drain into sewers/water supplies.
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**
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) = <709 g/L (U.S. requirement, not for emissions)
VOC data based on formulation (Organic compounds minus solids)

**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
30-Jan-2013

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

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