



# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

|  |   |
|--|---|
| <b>Identification of the substance/preparation</b> | Q2357A  |
| <b>Use of the preparation</b>                      | Inkjet printing   |
| <b>Revision Date</b>                               | 26-Jun-2008   |
| <b>CAS #</b>                                       | Mixture   |
| <b>Company identification</b>                      | Hewlett-Packard, Ltd.<br>Cain Road, Amen Corner<br>Bracknell, Berkshire, RG12 1HN |
| <b>Emergency telephone number</b>                  |   |
| <b>Poison Information Center</b>                   | 0207771 5307  |
| <b>Hewlett-Packard health effects line</b>         |   |
| <b>(Toll-free within the US)</b>                   | 1-800-457-4209  |
| <b>(Direct)</b>                                    | 1-503-494-7199  |
| <b>General information telephone number</b>        |   |
|  | 1 344 36-0000   |
| <b>(Toll-free within the US)</b>                   | 1-800-474-6836  |
| <b>(Direct)</b>                                    | 1-208-323-2551  |
| <b>Email</b>                                       | hpcustomerinquiries@hp.com  |

## 2. HAZARDS IDENTIFICATION

**Acute health effects** Any potential hazards are presumed to be due to exposure to the components.

### Skin contact

*2-pyrrolidone*  
Contact with skin may result in irritation.  
*Alkyldiol ethoxylate*  
Contact with skin may result in severe irritation.  
*Tetraethylene glycol*  
Contact with skin may result in irritation.

### Eye contact

*2-pyrrolidone*  
Contact with eyes may result in irritation.  
*Alkyldiol ethoxylate*  
Contact can cause moderate to severe irritation and possible injury to the eyes.  
*Tetraethylene glycol*  
Contact with eyes may cause irritation.

### Inhalation

*2-pyrrolidone*  
Inhalation may result in respiratory irritation.  
*Tetraethylene glycol*  
Inhalation may result in respiratory irritation.

### Ingestion

*2-pyrrolidone*  
Ingestion may result in nausea, vomiting and diarrhea.  
*Alkyldiol ethoxylate*  
Ingestion may cause irritation of mouth, throat, nausea, vomiting and diarrhea.



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## Potential health effects

### Routes of exposure

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.

### Chronic health effects

None known.

### Carcinogenicity

None of the components present in this formulation at concentrations equal to or greater than 0.1% are listed by EU, MAK, IARC, NTP or OSHA.

### Physical hazards

Not classified as a physical hazard.

### Health hazards

Not classified as a health hazard.

### Environmental hazards

Not classified as an environmental hazard.

### Other information

This product is not classified according to EU Directive 1999/45/EC.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component/substance  | CAS number  | % by weight | EU number   | EU classification                    |
|----------------------|-------------|-------------|-------------|--------------------------------------|
| Water                | 7732-18-5   | > 80        | 231-791-2   |                                      |
| Tetraethylene glycol | 112-60-7    | < 5         | 203-989-9   | R36/37/38                            |
| 2-pyrrolidone        | 616-45-5    | < 5         | 210-483-1   | R36/38                               |
| Alkyldiol ethoxylate | Proprietary | < 2.5       | Proprietary | Xi, Xn, N, R21/22, 38, 41, 51, 51/53 |

### Composition comments

This ink supply contains an aqueous ink formulation.

This product has been evaluated using criteria specified in the EU Directives 67/548/EEC and 1999/45/EC, as amended.

For the full text of the R phrases mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### Inhalation

Remove to fresh air. If symptoms persist, get medical attention.

### Skin contact

Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.

### 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.

### Ingestion

If ingestion of a large amount does occur, seek medical attention.

## 5. FIRE-FIGHTING MEASURES

### Flash point and method

> 93.3 °C (> 200 °F); Pensky-Martens Closed Cup

### Suitable extinguishing media

Dry chemical, CO<sub>2</sub>, water spray or regular foam.

### Extinguishing media which must not be used for safety reasons

None known.

### Unusual fire & explosion hazards

None known.

### Hazardous combustion products

Refer to section 10.

### Specific methods

None established.



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## 6. ACCIDENTAL RELEASE MEASURES

|                                  |   |
|----------------------------------|---|
| <b>Personal precautions</b>      | Wear appropriate personal protective equipment.   |
| <b>Environmental precautions</b> | Do not let product enter drains. Do not flush into surface water or sanitary sewer system.  |
| <b>Containment procedures</b>    | Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps. |
| <b>Methods for cleaning up</b>   | Soak up with inert absorbent material.  |

## 7. HANDLING AND STORAGE

|                 |   |
|-----------------|---|
| <b>Handling</b> | Avoid contact with skin, eyes and clothing.                               |
| <b>Storage</b>  | Keep out of the reach of children. Keep away from excessive heat or cold. |

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure limits

#### Germany

| Components           | CAS #    | TWA                    | MAK             | Ceiling         |
|----------------------|----------|------------------------|-----------------|-----------------|
| Tetraethylene glycol | 112-60-7 | 1000 mg/m <sup>3</sup> | Not established | Not established |

#### Netherlands

| Components           | CAS #    | TWA (MAC)              | STEL            | Ceiling         |
|----------------------|----------|------------------------|-----------------|-----------------|
| Tetraethylene glycol | 112-60-7 | 1000 mg/m <sup>3</sup> | Not established | Not established |

#### Switzerland

| Components           | CAS #    | TWA                    | STEL            |
|----------------------|----------|------------------------|-----------------|
| Tetraethylene glycol | 112-60-7 | 1000 mg/m <sup>3</sup> | Not established |

**Additional exposure data** Exposure limits have not been established for this product.

### Personal protective equipment

#### General

Use personal protective equipment to minimize exposure to skin and eye.

### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|   |   |
|---|---|
| <b>Appearance</b>                                     | Not available                                   |
| <b>Physical state</b>                                 | Liquid.   |
| <b>Form</b>   | Not available                                   |
| <b>Colour</b>   | Red   |
| <b>Odour</b>  | Not available                                   |
| <b>Odour threshold</b>                                | Not available                                   |
| <b>pH</b>   | 7.7 - 8.5                                       |
| <b>Boiling point</b>                                  | Not determined                                  |
| <b>Flash point</b>                                    | > 93.3 °C (> 200 °F); Pensky-Martens Closed Cup |
| <b>Flammability</b>                                   | Not available.                                  |
| <b>Flammability limits in air, upper, % by volume</b> | Not available                                   |



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|   |                  |
|---|------------------|
| <b>Flammability limits in air, lower, % by volume</b> | Not determined   |
| <b>Vapour pressure</b>                                | Not determined   |
| <b>Relative density</b>                               | Not available    |
| <b>Solubility in water</b>                            | Soluble in water |
| <b>Partition coefficient (n-octanol/water)</b>        | Not available    |
| <b>Viscosity</b>                                      | > 2 cp           |
| <b>Vapour density</b>                                 | > 1 (Air = 1.0)  |
| <b>Evaporation rate</b>                               | Not determined   |
| <b>Melting point</b>                                  | Not available    |
| <b>Freezing point</b>                                 | Not available    |
| <b>Auto-ignition temperature</b>                      | Not available    |
| <b>Specific gravity</b>                               | 1 - 1.2          |
| <b>VOC</b>  | < 3 %            |

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## 10. STABILITY AND REACTIVITY

|   |   |
|---|---|
| <b>Stability</b>                        | Stable under recommended storage conditions.  |
| <b>Materials to avoid</b>               | Not available   |
| <b>Hazardous decomposition products</b> | Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. |
| <b>Hazardous polymerisation</b>         | Will not occur.   |

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## 11. TOXICOLOGICAL INFORMATION

### Component analysis - LD50

Toxicology Data - Selected LD50s and LC50s

Water

7732-18-5

Oral LD50 Rat: >90 mL/kg

### Further information

This ink formulation has not been tested for toxicological effects. Refer to Section 3 for potential health effects and Section 4 for first aid measures.

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## 12. ECOLOGICAL INFORMATION

|                         |                                      |
|-------------------------|--------------------------------------|
| <b>Aquatic toxicity</b> | LC50/96h/Fathead minnows => 750 mg/L |
|-------------------------|--------------------------------------|

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## 13. DISPOSAL CONSIDERATIONS

|  |  |
|--|--|
| <b>Disposal instructions</b>                 | Dispose of in compliance with federal, state, and local regulations. |
| <b>Waste from residues / unused products</b> | Not available  |
| <b>Contaminated packaging</b>                | Not available  |

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## 14. TRANSPORT INFORMATION

### ADR

Not regulated as hazardous goods.

### IMDG

Not regulated as hazardous goods.



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## IATA

|                             |                |
|-----------------------------|----------------|
| <b>Proper shipping name</b> | not applicable |
| <b>Hazard class</b>         | not applicable |
| <b>UN number</b>            | None.          |
| <b>Packing group</b>        | N/A            |
| <b>Packaging exceptions</b> | None.          |

**General** Not a regulated article under United States DOT, IATA, ADR, IMDG, or RID.

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## 15. REGULATORY INFORMATION

|                                  |  |
|----------------------------------|--|
| <b>International regulations</b> | All chemical substances in this HP product have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China. |
| <b>Labelling</b>                 |  |
| <b>Contains</b>                  | 2-pyrrolidone, Alkyldiol ethoxylate, Tetraethylene glycol, Water   |
| <b>EC Label</b>                  | This product does not require a label according to EU Directive 1999/45/EC.  |

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## 16. OTHER INFORMATION

|                                   |   |
|-----------------------------------|---|
| <b>Manufacturer information</b>   | Hewlett-Packard Company<br>1000 NE Circle Boulevard<br>Corvallis, OR 97330-4239 US  |
| <b>List of relevant R phrases</b> | R21/22 Harmful in contact with skin and if swallowed.<br>R38 Irritating to skin.<br>R41 Risk of serious damage to eyes.<br>R51 Toxic to aquatic organisms.<br>R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  |
| <b>Other information</b>          | This MSDS was prepared in compliance with EU Directive 91/155/EEC as amended by 2001/58/EC.   |
| <b>Disclaimer</b>                 | 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. |
| <b>Issue date</b>                 | 26-Jun-2008   |
| <b>Revised sections</b>           | 3. Hazards identification: Other information  |



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## Explanation of abbreviations

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