



# Material Safety Data Sheet

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## 1. Product and Company Identification

**Material name** 51644Y  
**Use of the preparation** Inkjet printing  
**Version #** 03  
**Revision date** 18-May-2009  
**CAS #** Mixture  
**Product use** Inkjet printing  
**Company identification** Hewlett-Packard Company  
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**Date prepared** May 17, 2009

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## 2. Hazards Identification

**Emergency overview** Contact with skin and eyes may result in irritation.

**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.  
*Ethyl alkyldiol*  
Contact with skin may result in mild irritation.  
*Metal nitrate # 1*  
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.  
*Ethyl alkyldiol*  
Contact with eyes may result in mild irritation.  
*Metal nitrate # 1*  
Contact with eyes may result in irritation.

**Inhalation**

*2-pyrrolidone*  
Inhalation may result in respiratory irritation.  
*Metal nitrate # 1*  
Inhalation may result in respiratory irritation.



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## Ingestion

### *2-pyrrolidone*

Ingestion may result in nausea, vomiting and diarrhea.

### *Alkyldiol ethoxylate*

Ingestion may cause irritation of mouth, throat, nausea, vomiting and diarrhea.

### *arylazopyrazolesulfonate salt # 1*

Toxic if swallowed.

### *Diethylene glycol*

Harmful if swallowed. May cause kidney and liver damage. May depress the central nervous system.

### *Metal nitrate # 1*

Contains nitrate salts, may cause methemoglobinemia.

## 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

Arylazopyrazolesulfonate salt: Prolonged ingestion exposure may cause serious damage to health.

### 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.

## 3. Composition / Information on Ingredients

| Component/substance               | CAS number  | % by weight |
|-----------------------------------|-------------|-------------|
| Water                             | 7732-18-5   | < 80        |
| Ethyl alkyldiol                   | Proprietary | < 10        |
| Metal nitrate # 1                 | Proprietary | < 7.5       |
| 2-pyrrolidone                     | 616-45-5    | < 5         |
| arylazopyrazolesulfonate salt # 1 | Proprietary | < 5         |
| Diethylene glycol                 | 111-46-6    | < 5         |
| Alkyldiol ethoxylate              | Proprietary | < 2.5       |

### 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).

## 4. First Aid Measures

### 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

### Flash point and method

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

### Hazardous combustion products

Refer to section 10.

### Flammable properties

None known.

### Extinguishing media

#### Suitable extinguishing media

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



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|                                   |                   |
|-----------------------------------|-------------------|
| Unsuitable extinguishing media    | None known.       |
| Unusual fire and explosion hazard | None known.       |
| Special firefighting procedures   | None established. |

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## 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 containment   | 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.  |
| 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. |

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## 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. |

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## 8. Exposure Controls / Personal Protection

|                                |   |
|--------------------------------|---|
| Exposure guidelines            | Exposure limits have not been established for this product.   |
| Personal protective equipment  |   |
| General                        | Use personal protective equipment to minimize exposure to skin and eye.   |
| Eye / face protection          | Not required under intended use.  |
| Skin protection                | Protected gloves not required under intended use.   |
| Respiratory protection         | For use other than intended use (such as in the event of a large spill), goggles and respirators may be required. |
| General hygiene considerations | Handle in accordance with good industrial hygiene and safety practice.  |

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## 9. Physical & Chemical Properties

|  |   |
|--|---|
| Color  | Yellow  |
| Odor threshold                                 | Not available.                                  |
| Physical state                                 | Liquid.   |
| pH   | 6 - 6.6   |
| Melting point                                  | Not available.                                  |
| Freezing point                                 | Not available.                                  |
| Boiling point                                  | Not determined                                  |
| Flash point                                    | > 200 °F (> 93.3 °C); Pensky-Martens Closed Cup |
| Evaporation rate                               | Not determined                                  |
| Flammability                                   | Not available.                                  |
| Flammability limits in air, upper, % by volume | Not available.                                  |
| Flammability limits in air, lower, % by volume | Not determined                                  |
| Vapor pressure                                 | Not determined                                  |
| Vapor density                                  | > 1 (air = 1.0)                                 |
| Specific gravity                               | 1 - 1.2   |
| Relative density                               | Not available.                                  |



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|  |                  |
|--|------------------|
| <b>Solubility (water)</b>                      | Soluble in water |
| <b>Partition coefficient (n-octanol/water)</b> | Not available.   |
| <b>Auto-ignition temperature</b>               | Not available.   |
| <b>Decomposition temperature</b>               | Not available.   |
| <b>VOC</b>                                     | < 3 %            |
| <b>Viscosity</b>                               | > 2 cp           |

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## 10. Chemical Stability & Reactivity Information

|   |   |
|---|---|
| <b>Chemical stability</b>                 | Stable under recommended storage conditions.  |
| <b>Incompatible materials</b>             | Incompatible with strong bases and oxidizing agents.  |
| <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>Possibility of hazardous reactions</b> | Will not occur.   |

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## 11. Toxicological Information

|                                  |   |
|----------------------------------|---|
| <b>Toxicological information</b> | Complete toxicity data are not available for this specific formulation  |
| <b>Oral toxicity</b>             | LD50/oral/rat >2500 mg/kg (OECD 423)<br><br>Not classified for acute oral toxicity according to EU Directive 67/548/EEC and 1999/45/EC. |

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## 12. Ecological Information

|                                      |   |
|--------------------------------------|---|
| <b>Aquatic toxicity</b>              | Static acute toxicity (trout), survival (100 mg/L) = 100%<br>Static acute toxicity (trout), survival (10 mg/L) = 100% |
| <b>Persistence and degradability</b> | Not available.  |

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## 13. Disposal Considerations

|                              |   |
|------------------------------|---|
| <b>Disposal instructions</b> | Dispose of in compliance with federal, state, and local regulations.<br>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 <a href="http://www.hp.com/recycle">http://www.hp.com/recycle</a> . |
|------------------------------|---|

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## 14. Transport Information

### 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           |
| <b>Packaging non bulk</b>   | None           |
| <b>Labels required</b>      | None           |

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

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## 15. Regulatory Information

**US federal regulations** US TSCA 12(b): Does not contain listed chemicals.

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration**

Metal nitrate # 1 (Proprietary) 1.0 % N511

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance**

Metal nitrate # 1 (Proprietary) N511 Listed.



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**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

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** No

**International regulations**

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.

**State regulations****US - New Jersey Community RTK (EHS Survey): Listed substance**

Metal nitrate # 1 (Proprietary) Substance no. 3722

**US - New Jersey Community RTK (EHS Survey): Reportable threshold**

Metal nitrate # 1 (Proprietary) 500 LBS

**US - Pennsylvania RTK - Hazardous Substances: Listed substance**

2-pyrrolidone (616-45-5) Listed.

Diethylene glycol (111-46-6) Listed.

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**16. Other Information**

**HMIS® ratings**  
Health: 1  
Flammability: 1  
Physical hazard: 0

**NFPA ratings**  
Health: 1  
Flammability: 1  
Instability: 0

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**Revision** 3

**Replaces sheet dated** May 12 2009 4:06PM

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

**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.

**MSDS sections updated**  
Hazards Identification: Routes of exposure  
8. Exposure Controls / Personal Protection: Respiratory protection



# Material Safety Data Sheet

## 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  |