



# MATERIAL SAFETY DATA SHEET

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## 1. Chemical Product and Company Identification

**Material name** 51649 Series  
**Use of the preparation** Inkjet printing  
**Version #** 04  
**Revision date** 19-Mar-2008  
**CAS #** Mixture  
**Manufacturer information** Hewlett-Packard Company  
1000 NE Circle Boulevard  
Corvallis, OR 97330-4239 US

**Hewlett-Packard health effects line**  
**(Toll-free within the US)** 1-800-457-4209  
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**Date prepared** Mar 18, 2008  
**MSDS number** 264182

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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

*1,5-pentanediol*  
Contact with skin may result in irritation.

*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.

*Metal nitrate # 2*  
Contact with skin may result in irritation.

*Substituted naphthalenesulfonate salt #10*  
May cause sensitization by skin contact.

*Substituted triphenylmethane salt #1*  
Contact with skin may result in irritation.



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## Eye contact

### *1,5-pentanediol*

Contact with eyes may result in irritation.

### *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.

### *Metal nitrate # 2*

Contact with eyes may result in irritation.

### *Substituted naphthalenesulfonate salt #10*

Risk of serious damage to eyes.

### *Substituted triphenylmethane salt #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.

### *Metal nitrate # 2*

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.

### *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.

### *Metal nitrate # 2*

Contains nitrate salts, may cause methemoglobinemia.

### *Substituted phthalocyanine salt # 2*

Harmful if swallowed.

## 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



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## Chronic health effects

Cyan ink:  
Substituted phthalocyanine salt: Prolonged ingestion exposure may cause serious damage to health.

Yellow ink:  
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
<b>Cyan ink</b>		
Water	7732-18-5	> 60
1,5-pentanediol	111-29-5	< 10
2-pyrrolidone	616-45-5	< 7.5
Ethyl alkyldiol	Proprietary	< 7.5
Metal nitrate # 2	Proprietary	< 7.5
Substituted phthalocyanine salt # 2	Proprietary	< 5
Alkyldiol ethoxylate	Proprietary	< 5
Substituted triphenylmethane salt #1	Proprietary	< 2.5
<b>Magenta ink</b>		
Water	7732-18-5	> 60
1,5-pentanediol	111-29-5	< 10
2-pyrrolidone	616-45-5	< 7.5
Ethyl alkyldiol	Proprietary	< 7.5
Metal nitrate # 2	Proprietary	< 7.5
Substituted naphthalenesulfonate salt #10	Proprietary	< 5
Alkyldiol ethoxylate	Proprietary	< 5
<b>Yellow ink</b>		
Water	7732-18-5	> 70
Ethyl alkyldiol	Proprietary	< 10
Metal nitrate # 1	Proprietary	< 7.5
2-pyrrolidone	616-45-5	< 5
Diethylene glycol	111-46-6	< 5
arylazopyrazolesulfonate salt # 1	Proprietary	< 5
Alkyldiol ethoxylate	Proprietary	< 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



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<b>Hazardous combustion products</b>	Refer to section 10.
<b>Flammable properties</b>	None known.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Dry chemical, CO <sub>2</sub> , water spray or regular foam.
<b>Unsuitable extinguishing media</b>	None known.
<b>Unusual fire and explosion hazard</b>	None known.
<b>Special firefighting procedures</b>	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>Methods for containment</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.
<b>Other information</b>	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

<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.

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## 8. Exposure Controls/Personal Protection

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

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## 9. Physical & Chemical Properties

<b>Color</b>	Cyan, magenta, yellow
<b>Odor threshold</b>	Not available
<b>Physical state</b>	Liquid.
<b>pH</b>	6.1 - 8.4
<b>Melting point</b>	Not available
<b>Freezing point</b>	Not available



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<b>Boiling point</b>	Not determined
<b>Flash point</b>	> 200 °F (> 93.3 °C); Pensky-Martens Closed Cup
<b>Evaporation rate</b>	Not determined
<b>Flammability</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available
<b>Flammability limits in air, lower, % by volume</b>	Not determined
<b>Vapor pressure</b>	Not determined
<b>Vapor density</b>	> 1 (air = 1.0)
<b>Specific gravity</b>	1 - 1.2
<b>Relative density</b>	Not available
<b>Solubility in 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>Oral toxicity</b>	<i>Magenta ink</i> Not classified for acute oral toxicity according to EU Directive 67/548/EEC and 1999/45/EC. <i>Yellow ink</i> LD50/oral/rat >2500 mg/kg (OECD 423) Not classified for acute oral toxicity according to EU Directive 67/548/EEC and 1999/45/EC.
<b>Eye irritation</b>	<i>Magenta ink</i> Mild irritant in rabbit (OECD 405)
<b>Sensitization</b>	<i>Magenta ink</i> Non-sensitizer in guinea pig (OECD 406) (OECD 406)



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## 12. Ecological Information

### Aquatic toxicity

#### *Cyan ink*

LC50/96h/Fathead minnows =< 400 mg/L  
Static acute toxicity (trout), survival (100 mg/L) = 67%  
Static acute toxicity (trout), survival (10 mg/L) = 100%

#### *Magenta ink*

LC50/96h/Fathead minnows =< 400 mg/L  
Static acute toxicity (trout), survival (100 mg/L) = 100%  
Static acute toxicity (trout), survival (10 mg/L) = 100%

#### *Yellow ink*

LC50/96h/Fathead minnows =< 400 mg/L  
Static acute toxicity (trout), survival (100 mg/L) = 23%  
Static acute toxicity (trout), survival (10 mg/L) = 93%

**Persistence and degradability** Not available

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## 13. Disposal Considerations

### Disposal instructions

Dispose of in compliance with federal, state, and local regulations.  
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>.

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## 14. Transportation Information

### Department of Transportation (DOT) Requirements

Not regulated as hazardous goods.

### 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

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## 15. Regulatory Information

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

### CERCLA (Superfund) reportable quantity

None

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

<b>Hazard categories</b>	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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<b>Section 302 extremely hazardous substance</b>	No
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<b>Section 311 hazardous chemical</b>	No
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**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**

U.S. - Pennsylvania - RTK (Right to Know) List  
Metal nitrate # 2                      Proprietary                      Present

U.S. - New Jersey - Right to Know Hazardous Substance List  
Metal nitrate # 2                      Proprietary                      sn 1143

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## 16. Other Information

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

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

**Issue date**                              Mar 18 2008 5:28PM

**Revision**                                4

**Replaces sheet dated**                Mar 13 2008 7:22PM

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**MSDS sections updated**                8. Exposure Controls/Personal Protection: Respiratory



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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