



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Identification of the preparation** C9451Series

**Product use** Inkjet printing

**Version #** 02

**Revision date** 01-Mar-2011

**Company identification** Hewlett-Packard Company  
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## 2. Hazards Identification

**Emergency overview** Contact with skin and eyes may result in irritation. Ingestion may result in nausea, vomiting and diarrhea. May cause sensitization of susceptible persons.

### 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*  
Contact with skin may result in irritation.

#### Eye contact

*2-pyrrolidone*  
Contact with eyes may result in irritation.

*Alkyldiol*  
Contact with eyes may result in irritation.

#### Inhalation

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

*Alkyldiol*  
Inhalation may result in respiratory irritation.

#### Ingestion

*2-pyrrolidone*  
Ingestion may result in nausea, vomiting and diarrhea.

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

### 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

Carbon Black: Chronic inhalation studies performed with fine dust particles resulted in lung tumors in animals. The IARC classification was based upon these results. IARC also concluded "there is inadequate evidence in humans for the carcinogenicity of carbon black." Inhalation of fine dust particles is not expected to occur during normal conditions of use of this ink.

**Carcinogenicity**

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.

None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.

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**3. Composition / Information on Ingredients**

Components	CAS #	Percent
Water	7732-18-5	80 - 90
Alkyldiol	Proprietary	5 - 7.5
2-pyrrolidone	616-45-5	2.5 - 5
Diethylene glycol	111-46-6	2.5 - 5
Carbon black	1333-86-4	0 - 1
Triethanolamine	102-71-6	0 - 1

**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.

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**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. If irritation persists get medical attention.

**Inhalation**

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

**Ingestion**

If material is ingested, immediately contact a physician or poison control center.

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**5. Fire Fighting Measures****Flammable properties**

Combustion generates toxic fumes of fluorides; fluorine compounds;.

**Extinguishing media****Suitable extinguishing media**

CO<sub>2</sub>, water, dry chemical, or foam

**Unsuitable extinguishing media**

None known.

**Specific methods**

None established.

**Hazardous combustion products**

Refer to section 10.

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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.

**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. Remove and wash contaminated clothing before re-use.

**Storage**

Keep in a dry place. Keep away from excessive heat or cold. Store away from strong oxidizers.

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## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

#### ACGIH

Components	Type	Value
Carbon black (1333-86-4)	TWA	3.5000 mg/m <sup>3</sup>
Triethanolamine (102-71-6)	TWA	5.0000 mg/m <sup>3</sup>

#### U.S. - Tennessee

Components	Type	Value
Carbon black (1333-86-4)	TWA	3.5000 mg/m <sup>3</sup>

#### U.S. - WEEL

Components	Type	Value
Diethylene glycol (111-46-6)	TWA	10.0000 mg/m <sup>3</sup>

**Exposure guidelines** Exposure limits have not been established for this product.

**Engineering controls** Use in a well ventilated area.

### Personal protective equipment

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

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

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## 9. Physical & Chemical Properties

**Appearance** Not available.

**Color** Light Grey

**Odor** Not available.

**Odor threshold** Not available.

**Physical state** Liquid

**Form** Not available.

**pH** 9.4

**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 limits in air, upper, % by volume** Not available.

**Flammability limits in air, lower, % by volume** Not determined

**Vapor pressure** Not determined

**Vapor density** Not available.

**Specific gravity** 1

**Relative density** Not available.

**Solubility (water)** Soluble in water

**Auto-ignition temperature** Not determined

**Decomposition temperature** Not available.

**VOC** < 138 g/l

**Other information** VOC content (less water, less exempt compounds) = < 138 g/L (U.S. requirement, not for emissions)  
VOC data based on formulation (Organic compounds minus solids)

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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. hydrogen fluoride, fluorinated hydrocarbons
<b>Possibility of hazardous reactions</b>	Will not occur.

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## 11. Toxicological Information

<b>Carcinogenicity</b>	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.
<b>Serious eye damage/eye irritation</b>	Not available.
<b>Skin sensitization</b>	Not available.
<b>Further information</b>	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.

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## 12. Ecological Information

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

<b>Further information</b>	Not a dangerous good under United States DOT, IATA, ADR, IMDG, or RID.
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### DOT

Not regulated as dangerous goods.

### IATA

#### Basic shipping requirements:

<b>Proper shipping name</b>	Not Applicable
<b>Hazard class</b>	Not applicable
<b>UN number</b>	None
<b>Packing group</b>	N/A

#### Additional information:

<b>Packaging exceptions</b>	None
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### IMDG

Not regulated as dangerous goods.

### RID

Not regulated as dangerous goods.

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## 15. Regulatory Information

<b>US federal regulations</b>	US TSCA 12(b): Does not contain listed chemicals.
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### CERCLA (Superfund) reportable quantity

None

### Occupational Safety and Health Administration (OSHA)

<b>29 CFR 1910.1200 hazardous chemical</b>	Yes
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## Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - Yes  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** Yes

### State regulations

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

2-pyrrolidone (CAS 616-45-5) Listed.  
Diethylene glycol (CAS 111-46-6) Listed.

**Regulatory information** 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.

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## 16. Other Information

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

**HMIS® ratings** Health: 1  
Flammability: 2  
Physical hazard: 0

**NFPA ratings** Health: 1  
Flammability: 2  
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.

**Issue date** 01-Mar-2011

**This data sheet contains changes from the previous version in section(s):** Product and Company Identification: Product and Company Identification  
Hazards Identification: Carcinogenicity  
Composition / Information on Ingredients: Composition comments  
9. Physical & Chemical Properties: Color  
9. Physical & Chemical Properties: Other information  
11. Toxicological Information: Carcinogenicity  
11. Toxicological Information: Further information  
14. Transport Information: Further 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