



# MATERIAL SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Identification of the preparation**                    **51645 Series**  
**Use of the preparation**                Inkjet printing  
**Selectability number**                 45  
**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  
**(Direct)**                                    1-503-494-7199

**General information telephone number**  
**HP Customer Care Line**            1-800-474-6836  
**(Toll-free)**                                1-800-474-6836  
**(Direct)**                                    1-208-323-2551

**Revision date**                         12-12-2004  
**MSDS number**                         15653

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

Component/substance	CAS number	% by weight
Water	7732-18-5	< 80
2-pyrrolidone	616-45-5	< 15
Carbon black	1333-86-4	< 5
Isopropyl Alcohol	67-63-0	< 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).

## 3. 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.

**Eye contact**

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

*Isopropyl Alcohol*  
Contact with eyes may result in irritation.



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## Inhalation

### *2-pyrrolidone*

Inhalation may result in respiratory irritation.

### *Isopropyl Alcohol*

Inhalation may cause drowsiness or dizziness.

## Ingestion

### *2-pyrrolidone*

Ingestion may result in nausea, vomiting and diarrhea.

## 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 has been classified by IARC as a Group 2B (possible human carcinogen)

None of the other ingredients have been classified as carcinogens according to EU, IARC, MAK, NTP or OSHA.

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## 4. FIRST AID MEASURES

### First aid procedures

#### Eye

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

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

#### Inhalation

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

#### Ingestion

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

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## 5. FIRE FIGHTING MEASURES

### Flash point and method

55.0 - 57.8 °C (131 - 136 °F); Pensky-Martens Closed Cup; No ignition, sustained combustion or flashing detected using the Sustained Combustibility Test (method in US 49CFR173, Appendix H).

### Hazardous combustion products

Refer to section 10.

### Extinguishing media

Dry chemical, CO2, water spray or regular foam.

### Unsuitable extinguishing media

None known.



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**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.

**Procedures if material is released or spilled** 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 limit values** Exposure limits have not been established for this product.

ACGIH - Occupational Exposure Limits - TWAs

Isopropyl Alcohol 67-63-0 400 ppm TWA

ACGIH - Occupational Exposure Limits - TWAs

Carbon black 1333-86-4 3.5 mg/m<sup>3</sup> TWA

OSHA - Final PELs - Time Weighted Averages (TWAs)

Isopropyl Alcohol 67-63-0 400 ppm TWA; 980 mg/m<sup>3</sup> TWA

OSHA - Final PELs - Time Weighted Averages (TWAs)

Carbon black 1333-86-4 3.5 mg/m<sup>3</sup> TWA

### 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.

**Exposure guidelines** Use in a well ventilated area.

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## 9. PHYSICAL & CHEMICAL PROPERTIES

**pH** 7.8 - 8.4

**Vapor pressure** Not determined

**Boiling point** > 93.3 °C (> 200 °F)

**Solubility** Soluble in water

**Specific gravity** 1 - 1.2 g/mL

**VOC content** < 3 %

**Flash point** 55.0 - 57.8 °C (131 - 136 °F)

**Viscosity** > 2 cp

**Vapor density** > 1 (air = 1.0)

**Evaporation rate** Not determined



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**Oxidizing properties** Not determined  
**Color** Black

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## 10. CHEMICAL STABILITY & REACTIVITY INFORMATION

**Stability** Stable under recommended storage conditions.  
**Hazardous polymerization** Will not occur.  
**Hazardous decomposition products** Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.  
**Incompatibility** Incompatible with strong bases and oxidizing agents.

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## 11. TOXICOLOGICAL INFORMATION

Complete toxicity data are not available for this specific formulation.  
Refer to Section 3 for potential health effects and Section 4 for first aid measures.

### Symptoms and target organs

NIOSH - Pocket Guide - Target Organs

Isopropyl Alcohol 67-63-0 eyes, skin, respiratory system

NIOSH - Pocket Guide - Target Organs

Carbon black 1333-86-4 respiratory system, eyes

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## 12. ECOLOGICAL INFORMATION

**Aquatic toxicity** LC50/96h/Fathead minnows =>750 mg/L

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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

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

### IATA

**Proper shipping name** Not applicable

**Hazard class** Not applicable

**Packaging exceptions** None

**Identification number (UN)** None

**Packing group** N/A

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## 15. REGULATORY INFORMATION

**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/NDL), Australia, Japan, Philippines, South Korea, New Zealand, and China.



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<b>US federal regulations</b>	US TSCA 12(b): Contains tetrahydrofuran (CASRN 109-99-9), subject to export notification requirements.	
<b>HMIS ratings</b>	Health	1
	Flammability Classification	2
	Reactivity	0
<b>NFPA ratings</b>	Health	1
	Flammability Classification	2
	Reactivity	0
<b>Superfund Amendments and Reauthorization Act of 1986 (SARA)</b>		
<b>Section 302 Extremely Hazardous Substance</b>	No	
<b>Section 311 Hazardous Chemical</b>	No	
<b>Hazard categories</b>	Immediate Hazard - No	
	Delayed Hazard - No	
	Fire Hazard - No	
	Pressure Hazard - No	
	Reactivity Hazard - No	

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## 16. OTHER INFORMATION

<b>Other information</b>	This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).
<b>Issue date</b>	12-12-2004
<b>Revision</b>	2
<b>Replaces sheet dated</b>	10-06-2004
<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.

### MSDS Sections Updated

- 15. Regulatory Information: US federal regulations
- 3. Hazards Identification: Chronic health effects
- Chemical Product and Company Identification: Alternate Trade Names - SKU Numbers
- Composition / Information on Ingredients: Ingredient Extensions
- Fire Fighting Measures: Fire & Explosion Properties
- Physical & Chemical Properties: Material Properties
- Regulatory Information: US Ratings
- Toxicological Information: Toxicological Data
- Transportation Information: Material Transportation 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