



# Material Safety Data Sheet

## 1.0 Product and Company Identification

**Identification of the preparation:** **51641 Series – No 41 Color**

**Use of the preparation:** Inkjet printing

**Company Identification:** Hewlett-Packard Company  
1000 NE Circle Boulevard  
Corvallis, Oregon 97330-4239  
United States

**Emergency telephone number** 1-800-457-4209 (USA and Canada)  
**Hewlett-Packard Health Effects Line:** 503-494-7199 (USA direct)  
Singapore: +001-800-332-13321  
208-323-2551 (USA direct)

**General information telephone number:**

**Local Contact Information**

**Ireland**  
Liffey Park Technology Campus  
Barnhall Road,  
Leixlip, Co. Kildare  
Phone: 01 6150000

**United Kingdom**  
Hewlett-Packard, Ltd.  
Cain Road, Amen Corner  
Bracknell, Berkshire, RG12 1HN  
Phone: 1344 36-0000

Hazard Rating	NFPA/HMIS
Health	1
Flammability	1
Instability/Reactivity	0
Special	none

## 2.0 Composition/Information on Hazardous Ingredients

This ink supply contains an aqueous ink formulation

For cyan ink formulation

Component/Substance	CAS Number	EU Number	% by Weight	EU classification
2-Pyrrolidone	616-45-5	210-843-1	<8	Xi; R36/37/38
Metal nitrate	confidential	confidential	<8	O; Xi; R8-36/37/38
1,5-Pentanediol	111-29-5	203-854-4	<10	not classified
Ethyl alkylidol	confidential	confidential	<10	not classified
Substituted phthalocyanine salt	confidential	confidential	<3	Xn; N; R22-48/22-51/53
Alkylidol ethoxylate	confidential	confidential	<3	Xi; R36/38



# Material Safety Data Sheet

Water	7732-18-5	231-791-2	> 50	not classified
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For magenta ink formulation

Component/Substance	CAS Number	EU Number	% by Weight	EU classification
2-Pyrrolidone	616-45-5	210-843-1	<8	Xi; R36/37/38
Metal nitrate	confidential	confidential	<8	O; Xi; R8-36/37/38
1,5-Pentanediol	111-29-5	203-854-4	<10	not classified
Ethyl alkyl diol	confidential	confidential	<10	not classified
Azonaphthalenesulfonate salt	confidential	confidential	<3	Xi; R41-43-52/53
Alkyl diol ethoxylate	confidential	confidential	<3	Xi; R36/38
Water	7732-18-5	231-791-2	> 50	not classified

For yellow ink formulation

Component/Substance	CAS Number	EU Number	% by Weight	EU classification
Ethyl alkyl diol	confidential	confidential	<10	not classified
Metal nitrate	confidential	confidential	<10	O; Xi; R8-36/37/38
2-Pyrrolidone	616-45-5	210-843-1	<6	Xi; R36/37/38
Diethylene glycol	111-46-6	203-872-2	<6	Xn; R22
Arylazopyrazolesulfonate salt	confidential	confidential	<5	T; R25- 48/22-52/53
Alkyl diol ethoxylate #1	confidential	confidential	<4	Xi; R38-41
Alkyl diol ethoxylate #2	confidential	confidential	<3	Xi; R36/38
Water	7732-18-5	231-791-2	> 50	not classified

## 3.0 Hazard Identification

The cyan ink is classified for environmental effects according to EU Directive 1999/45/EC with R52-53. The magenta and yellow inks are not classified according to EU Directive 1999/45/EC

### 3.1 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.



# Material Safety Data Sheet

## 3.2 Acute Health Hazards

Any potential hazards are presumed to be due to exposure to the components.

2-Pyrrolidone: Contact with eyes and skin may result in irritation. Inhalation may result in respiratory irritation. Ingestion may result in nausea, vomiting, and diarrhea.

Metal nitrate: Contact with eyes and skin may cause irritation. Inhalation may cause respiratory irritation.

Note: Nitrates and their derivatives can cause methemoglobinemia and result in respiratory depression. Primary indicators of prolonged exposure include shortness of breath, headaches, dizziness and cyanosis (bluish skin and lips).

1,5-Pentanediol: Contact with eyes and skin may cause irritation. Harmful if swallowed.

Ethyl alkylidol: Contact with eyes and skin may cause mild irritation.

Alkylidol ethoxylate: Contact with skin or eyes may cause irritation.

### Cyan Ink

Substituted phthalocyanine salt: Harmful if swallowed.

### Magenta Ink

Azonaphthalenesulfonate: Contact with eyes may cause serious damage. Contact with skin may cause an allergic reaction.

### Yellow Ink

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

Arylazopyrazolesulfonate salt: Toxic if swallowed.

Alkylidol ethoxylate #1: Contact with eyes may result in severe irritation and corneal injury. Contact with skin may result in severe irritation. Ingestion may cause irritation of mouth and throat, nausea, vomiting and diarrhea.

Alkylidol ethoxylate #2: Contact with eyes and skin may result in severe irritation. Ingestion may cause irritation of mouth and throat, nausea, vomiting, and diarrhea



# Material Safety Data Sheet

## 3.3 Chronic Health Hazards

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

Yellow ink  
Arylazopyrazolesulfonate: Prolonged ingestion exposure may cause serious damage to health

## 3.4 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.

## 4.0 First Aid Measures

Emergency telephone number  
Hewlett-Packard Health Effects  
Line:

1-800-457-4209 (USA and Canada)  
503-494-7199 (USA direct)  
Singapore: +001-800-332-13321

### Inhalation:

Remove to fresh air. If symptoms persist, consult a physician.

### Ingestion:

If stomach upset persists, consult a physician.

### Skin:

Wash affected areas thoroughly with soap and water. If irritation persists, consult a physician.

### Eyes:

Do not rub eyes. Immediately flush with large amounts of clean, lukewarm water (low pressure) for at least 15 minutes or until particles are removed. If irritation persists, consult a physician.

## 5.0 Fire Fighting Measures

Extinguishing media:

Water, dry chemical, carbon dioxide, foam

Unsuitable Extinguishing  
Media:

None known

Special Firefighting  
Procedures:

None known

Unusual fire and explosion  
hazards:

No special hazards known

Auto-ignition temperature:

Not determined

Flashpoint (method):

> 200° F, > 93.3° C (US EPA Method 1020)

Hazardous Combustion  
Products

Refer to section 10.



# Material Safety Data Sheet

## 6.0 Accidental release measures

**Spill or Leak Procedures:** Standard eye and skin protection is recommended.

**Environmental precautions:** Do not discharge into drains (See also Section 13, Disposal considerations)

## 7.0 Handling and Storage

**Storage Temperature:** 59° F to 95° F; 15° C to 35° C

**Handling and Storage precautions:** Keep out of the reach of children  
Keep away from extreme heat or cold.

**Shelf Life:** 1 year

**Special Sensitivity:** None

## 8.0 Exposure control/ personal protection

**8.1 Exposure Limit Values** Yellow Ink  
Diethylene glycol: Germany (TRGS 900) = 10 ppm;  
Austria, Sweden, Switzerland, TWA=10ppm;  
Ireland, UK TWA=23ppm; Denmark TWA=2.5ppm

**8.2 Exposure Controls** Standard eye and skin protection for laboratory chemical safety recommended. Use in well ventilated area.

## 9.0 Physical and chemical properties

**pH:** Cyan (Blue): 7.8 – 8.6  
Magenta (Red): 6.0 – 7.4  
Yellow: 6.0 – 6.6

**Boiling point:** Not Determined

**Flash point:** > 200° F, > 93.3° C

**Flammability:** US NFPA/HMIS Flammability rating = 1

**Explosive properties:** Not applicable

**Oxidizing properties:** Not applicable

**Vapor Pressure:** Not applicable

**Relative density:** Specific Gravity 1.0 to 1.2

**Solubility:** Soluble in water

**Partition coefficient:** Not determined

**Viscosity:** Not determined



# Material Safety Data Sheet

Vapor density: >1 (air = 1.0)  
Evaporation rate: Not applicable  
Other: Not applicable

## 10.0 Stability and reactivity

Stability: Stable under normal storage conditions  
Incompatibilities: Strong oxidizers  
Thermal decomposition products: Oxides of carbon/nitrogen/sulfur, water  
Hazardous polymerization: None

## 11.0 Toxicological information

Refer to Section 3 for potential health effects and Section 4 for first aid measures

### Magenta Ink

Eye irritation: Mild irritant in rabbit (OECD 405). Not classified as an eye irritant according to EU Directives 67/548/EEC and 1999/45/EC.

Skin sensitization: Non-sensitizer in guinea pig (OECD 406). Not classified as a skin sensitizer according to EU Directives 67/548/EEC and 1999/45/EC.

### Yellow Ink

Acute oral toxicity: LD50 > 2500 mg/kg in rat (OECD 423). Not classified for acute oral toxicity according to EU Directives 67/548/EEC and 1999/45/EC.

## 12.0 Ecological information

### Magenta Ink

96 Hour LC50	LC50 < 400mg/L	Fathead minnow
Static Acute Toxicity	Survival (100mg/L) = 23%	Trout
	Survival (10mg/L) = 100%	

### Cyan Ink

Static Acute Toxicity	Survival (100mg/L) = 100%	Trout
	Survival (10mg/L) = 100%	

### Yellow Ink

96 Hour LC50	LC50 < 400mg/L	Fathead minnow
Static Acute Toxicity	Survival (100mg/L) = 20%	Trout
	Survival (10mg/L) = 100%	



# Material Safety Data Sheet

## 13.0 Disposal considerations

Dispose in accordance with all applicable US Federal, state, local, and country laws.

## 14.0 Transportation information

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

<b>UN Number:</b>	Not applicable
<b>Class:</b>	Not applicable
<b>Proper Shipping Name:</b>	Not applicable
<b>Packing Group:</b>	Not applicable
<b>Marine Pollutant:</b>	Not listed
<b>Special Precautions:</b>	None noted

## 15.0 Regulatory information

<b>US EPA TSCA Inventory:</b>	All ingredients are listed or exempt
<b>US EPA TSCA 12(b):</b>	Does not contain listed chemicals.
<b>EU Notification:</b>	All ingredients are listed on EINECS and/or ELINCS or exempt.
<b>EU Hazard Label (1999/45/EC):</b>	May require a label according to EU directive 1999/45/EC.

## 16.0 Other information

<b>Date Prepared:</b>	July 12, 2002
<b>HP-DMS Document Control Number:</b>	09000de780229e0f-eng
<b>Revision Information:</b>	This document replaces all prior versions of the MSDS
<b>EU Risk (R) Phrase definitions:</b>	R8: Contact with combustible material may cause fire R22: Harmful if swallowed R25: Toxic if swallowed R38: Irritating to skin R41: Possible risks of irreversible effects R43: May cause sensitization by skin contact R36/38: Irritating to eyes and skin R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment R36/37/38: Irritating to eyes, respiratory system



# Material Safety Data Sheet

## Other Information

and skin.

This MSDS was prepared in compliance with EU Directive 91/155/EEC as amended by 2001/58/EC and USA OSHA Hazard Communications regulations (29CFR1910:1200).

**DISCLAIMER:** This Material Safety Data Sheet (MSDS) is provided without charge to customers of Hewlett-Packard. Data is the most current known to Hewlett-Packard at the time of preparation of this MSDS 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.