



SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Identification of the substance/preparation C4811A
Use of the preparation Inkjet printing
Revision date 02-14-2009
CAS # Mixture
Company identification Hewlett-Packard, Ltd.
Cain Road, Amen Corner
Bracknell, Berkshire, RG12 1HN
Telephone 1 344 36-0000

Hewlett-Packard health effects line
(Toll-free within the US) 1-800-457-4209
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Poison Information Center 0207771 5307

2. HAZARDS IDENTIFICATION

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.
- Alkyldicarboxylic acid*
Contact with skin may result in irritation.
- Substituted phthalocyanine salt #3*
Contact with skin may result in irritation.
- Tetraethylene glycol*
Contact with skin may result in irritation.

Eye contact

- 1,5-pentanediol*
Contact with eyes may result in irritation.
- 2-pyrrolidone*
Contact with eyes may result in irritation.
- Alkyldicarboxylic acid*
Contact can cause moderate to severe irritation and possible injury to the eyes.
- Substituted phthalocyanine salt #3*
Contact with eyes may result in irritation.
- Tetraethylene glycol*
Contact with eyes may cause irritation.

Inhalation

- 2-pyrrolidone*
Inhalation may result in respiratory irritation.
- Alkyldicarboxylic acid*
Inhalation may result in respiratory irritation.
- Substituted phthalocyanine salt #3*
Inhalation may result in respiratory irritation.
- Tetraethylene glycol*
Inhalation may result in respiratory irritation.



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Ingestion	<i>2-pyrrolidone</i> Ingestion may result in nausea, vomiting and diarrhea. <i>Alkyldicarboxylic acid</i> Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
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	None known.
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.
Physical hazards	Not classified as a physical hazard.
Health hazards	Not classified as a health hazard.
Environmental hazards	Not classified as an environmental hazard.
Other information	This cyan ink is not classified according to EU Directive 1999/45/EC.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component/substance	CAS number	% by weight	EU number	EU classification
Water	7732-18-5	< 80	231-791-2	
1,5-pentanediol	111-29-5	< 20	203-854-4	
2-pyrrolidone	616-45-5	< 10	210-483-1	Xi, R36/38
Alkyldicarboxylic acid	Proprietary	< 10	Proprietary	R36/37/38
Tetraethylene glycol	112-60-7	< 10	203-989-9	Xi, R36/37/38
Substituted phthalocyanine salt #3	Proprietary	< 2.5	Proprietary	

Composition comments

This ink supply contains an aqueous ink formulation.
This product has been evaluated using criteria specified in the EU Directives 67/548/EEC and 1999/45/EC, as amended.
For the full text of the R phrases mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

Inhalation	Remove to fresh air. If symptoms persist, get medical attention.
Skin contact	Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
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.
Ingestion	If ingestion of a large amount does occur, seek medical attention.

5. FIRE-FIGHTING MEASURES

Flash point and method	> 93.3 °C (> 200 °F); Pinsky-Martens Closed Cup
Suitable extinguishing media	Dry chemical, CO ₂ , water spray or regular foam.
Extinguishing media which must not be used for safety reasons	None known.
Unusual fire & explosion hazards	None known.
Hazardous combustion products	Refer to section 10.
Specific methods	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.
Containment procedures	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.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

Denmark

Components	Type	Value
Tetraethylene glycol (112-60-7)	TLV	1000 mg/m ³

Germany

Components	Type	Value	Form
Tetraethylene glycol (112-60-7)	AGW	1000 mg/m ³	Inhalable fraction.
	TWA	1000 mg/m ³	

Netherlands

Components	Type	Value
Tetraethylene glycol (112-60-7)	Ceiling	1000 mg/m ³
	TWA (MAC)	1000 mg/m ³

Switzerland

Components	Type	Value
Tetraethylene glycol (112-60-7)	TWA	1000 ppm
		1000 mg/m ³

Additional exposure data Exposure limits have not been established for this product.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Not available.
Physical state	Liquid.
Form	Not available.
Color	Cyan
Odor	Not available.
Odour threshold	Not available.
pH	3.8 - 4.2
Boiling point	Not determined
Flash point	> 93.3 °C (> 200 °F); Pensky-Martens Closed Cup



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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
Relative density	Not available.
Solubility (water)	Soluble in water
Partition coefficient (n-octanol/water)	Not available.
Viscosity	> 2 cp
Vapor density	> 1 (air = 1.0)
Evaporation rate	Not determined
Melting point	Not available.
Freezing point	Not available.
Auto-ignition temperature	Not available.
Specific gravity	1 - 1.2
VOC	< 3 %

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

Further information	This ink formulation has not been tested for toxicological effects. Refer to Section 3 for potential health effects and Section 4 for first aide measures.
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12. ECOLOGICAL INFORMATION

Aquatic toxicity	LC50/96h/Fathead minnows =461 mg/L Static acute toxicity (trout), survival (100 mg/L) = 100% Static acute toxicity (trout), survival (10 mg/L) = 100%
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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. TRANSPORT INFORMATION

ADR

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.



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IATA

Proper shipping name	Not applicable
Hazard class	Not applicable
UN number	None
Packing group	N/A
Packaging exceptions	None
Packaging non bulk	None
Labels required	None

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

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/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China. 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.
Labeling	
Contains	1,5-pentandiol, Alkyldicarboxylic acid, Substituted phthalocyanine salt #3, Tetraethylene glycol, Water
EC Label	This product does not require a label according to EU Directive 1999/45/EC.

16. OTHER INFORMATION

Manufacturer information	Hewlett-Packard Company 1000 NE Circle Boulevard Corvallis, OR 97330-4239 US (Direct) 1-503-494-7199 (Toll-free within the US) 1-800-457-4209
List of relevant R phrases	R36/37/38 Irritating to eyes, respiratory system and skin. R36/38 Irritating to eyes and skin.
Other information	This MSDS was prepared in compliance with EU Directive 91/155/EEC as amended by 2001/58/EC.
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	02-14-2009



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Explanation of abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986
STEL	Short-term exposure limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds