



Material Safety Data Sheet

1. Product and Company Identification

Material name 51644C
Use of the preparation Inkjet printing
Version # 04
Revision date 16-May-2009
CAS # Mixture
Product use Inkjet printing
Company identification Hewlett-Packard Company
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Date prepared May 16, 2009

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 # 2
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.
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 # 2
Contact with eyes may result in irritation.

Inhalation

2-pyrrolidone
Inhalation may result in respiratory irritation.
Metal nitrate # 2
Inhalation may result in respiratory irritation.



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Ingestion

2-pyrrolidone

Ingestion may result in nausea, vomiting and diarrhea.

Alkyldiol ethoxylate

Ingestion may cause irritation of mouth, throat, nausea, vomiting and diarrhea.

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

Chronic health effects

Substituted phthalocyanine 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
Water	7732-18-5	< 70
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	< 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).	

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

Hazardous combustion products

Refer to section 10.

Flammable properties

None known.

Extinguishing media

Suitable extinguishing media

Dry chemical, CO₂, water spray or regular foam.

Unsuitable extinguishing media

None known.

Unusual fire and explosion hazard

None known.



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Special firefighting procedures None established.

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.
Methods for containment 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.
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.

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

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

9. Physical & Chemical Properties

Color Cyan
Odor threshold Not available.
Physical state Liquid.
pH 7.8 - 8.6
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 Not available.
Flammability limits in air, upper, % by volume Not available.
Flammability limits in air, lower, % by volume Not determined
Vapor pressure Not determined
Vapor density > 1 (air = 1.0)
Specific gravity 1 - 1.2
Relative density Not available.
Solubility (water) Soluble in water
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature Not available.



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Decomposition temperature	Not available.
VOC	< 3 %
Viscosity	> 2 cp

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under recommended storage conditions.
Incompatible materials	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.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological information	Complete toxicity data are not available for this specific formulation
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12. Ecological Information

Aquatic toxicity	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%
Persistence and degradability	Not available.

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

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

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

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Metal nitrate # 2 (Proprietary) 1.0 % N511

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Metal nitrate # 2 (Proprietary) N511 Listed.

CERCLA (Superfund) reportable quantity

None



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Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

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.

State regulations

US - New Jersey Community RTK (EHS Survey): Listed substance

Metal nitrate # 2 (Proprietary) Substance no. 3722

US - New Jersey Community RTK (EHS Survey): Reportable threshold

Metal nitrate # 2 (Proprietary) 500 LBS

US - Pennsylvania RTK - Hazardous Substances: Listed substance

2-pyrrolidone (616-45-5) Listed.

Metal nitrate # 2 (Proprietary) Listed.

16. Other Information

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

NFPA ratings Health: 1
Flammability: 1
Instability: 0

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Revision 4

Replaces sheet dated May 15 2009 5:48AM

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

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.



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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