



invent

MATERIAL SAFETY DATA SHEET

1. Chemical Product and Company Identification

Material name 51649 Series
Use of the preparation Inkjet printing
Version # 04
Revision date 19-Mar-2008
CAS # Mixture
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

Date prepared Mar 18, 2008

MSDS number 264182

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 # 1

Contact with skin may result in irritation.

Metal nitrate # 2

Contact with skin may result in irritation.

Substituted naphthalenesulfonate salt #10

May cause sensitization by skin contact.

Substituted triphenylmethane salt #1

Contact with skin may result in irritation.



invent

MATERIAL SAFETY DATA SHEET

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 # 1

Contact with eyes may result in irritation.

Metal nitrate # 2

Contact with eyes may result in irritation.

Substituted naphthalenesulfonate salt #10

Risk of serious damage to eyes.

Substituted triphenylmethane salt #1

Contact with eyes may result in irritation.

Inhalation

2-pyrrolidone

Inhalation may result in respiratory irritation.

Metal nitrate # 1

Inhalation may result in respiratory irritation.

Metal nitrate # 2

Inhalation may result in respiratory irritation.

Ingestion

2-pyrrolidone

Ingestion may result in nausea, vomiting and diarrhea.

Alkyldiol ethoxylate

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

arylazopyrazolesulfonate salt # 1

Toxic if swallowed.

Diethylene glycol

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

Metal nitrate # 1

Contains nitrate salts, may cause methemoglobinemia.

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



invent

MATERIAL SAFETY DATA SHEET

Chronic health effects

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

Yellow ink:
Arylazopyrazolesulfonate 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
Cyan ink		
Water		
1,5-pentanediol	7732-18-5	> 60
2-pyrrolidone	111-29-5	< 10
Ethyl alkyldiol	616-45-5	< 7.5
Metal nitrate # 2	Proprietary	< 7.5
Substituted phthalocyanine salt # 2	Proprietary	< 7.5
Alkyldiol ethoxylate	Proprietary	< 5
Substituted triphenylmethane salt #1	Proprietary	< 5
	Proprietary	< 2.5
Magenta ink		
Water		
1,5-pentanediol	7732-18-5	> 60
2-pyrrolidone	111-29-5	< 10
Ethyl alkyldiol	616-45-5	< 7.5
Metal nitrate # 2	Proprietary	< 7.5
Substituted naphthalenesulfonate salt #10	Proprietary	< 7.5
Alkyldiol ethoxylate	Proprietary	< 5
	Proprietary	< 5
Yellow ink		
Water		
Ethyl alkyldiol	7732-18-5	> 70
Metal nitrate # 1	Proprietary	< 10
2-pyrrolidone	Proprietary	< 7.5
Diethylene glycol	616-45-5	< 5
arylazopyrazolesulfonate salt # 1	111-46-6	< 5
Alkyldiol ethoxylate	Proprietary	< 5
	Proprietary	< 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

Material name 51649 SERIES

Creation date Jul 07, 2003

Version number 4

MSDS US

3 / 8



invent

MATERIAL SAFETY DATA SHEET

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.
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, magenta, yellow
Odor threshold	Not available
Physical state	Liquid.
pH	6.1 - 8.4
Melting point	Not available
Freezing point	Not available

Material name 51649 SERIES

Creation date Jul 07, 2003

Version number 4

MSDS US

4 / 8



invent

MATERIAL SAFETY DATA SHEET

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 in water	Soluble in water
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
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

Oral toxicity

Magenta ink

Not classified for acute oral toxicity according to EU Directive 67/548/EEC and 1999/45/EC.

Yellow ink

LD50/oral/rat >2500 mg/kg (OECD 423)

Not classified for acute oral toxicity according to EU Directive 67/548/EEC and 1999/45/EC.

Eye irritation

Magenta ink

Mild irritant in rabbit (OECD 405)

Sensitization

Magenta ink

Non-sensitizer in guinea pig (OECD 406) (OECD 406)



invent

MATERIAL SAFETY DATA SHEET

2. Ecological Information

Aquatic toxicity

Cyan ink

LC50/96h/Fathead minnows =< 400 mg/L
Static acute toxicity (trout), survival (100 mg/L) = 67%
Static acute toxicity (trout), survival (10 mg/L) = 100%

Magenta ink

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%

Yellow ink

LC50/96h/Fathead minnows =< 400 mg/L
Static acute toxicity (trout), survival (100 mg/L) = 23%
Static acute toxicity (trout), survival (10 mg/L) = 93%

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>.

14. Transportation Information

Department of Transportation (DOT) Requirements

Not regulated as hazardous goods.

ATA

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

15. Regulatory Information

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

CERCLA (Superfund) reportable quantity

None

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



invent

MATERIAL SAFETY DATA SHEET

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.

State regulations

U.S. - Pennsylvania - RTK (Right to Know) List		
Metal nitrate # 2	Proprietary	Present
U.S. - New Jersey - Right to Know Hazardous Substance List		
Metal nitrate # 2	Proprietary	sn 1143

16. Other Information

HMIS® ratings

Health: 1
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 1
Instability: 0

Issue date

Mar 18 2008 5:28PM

Revision

4

Replaces sheet dated

Mar 13 2008 7:22PM

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.

MSDS sections updated

8. Exposure Controls/Personal Protection: Respiratory



invent

MATERIAL SAFETY DATA SHEET

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