



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name C4838Series
Version # 03
Issue date 06-Dec-2012
Revision date 04-Oct-2013
Product use Inkjet printing
CAS # Mixture
Company identification Hewlett-Packard Company
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2. Hazards Identification

Emergency overview Contact with skin and eyes may result in irritation.

Causes skin irritation.

Other hazards 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.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
1,5-pentanediol	111-29-5	<15
2-pyrrolidone	616-45-5	<7.5
Non-hazardous components	CAS #	Percent
Water	7732-18-5	<70
Alkyldicarboxylic acid	Proprietary	<5
Substituted naphthalenesulfonate salt # 7	Proprietary	<5
Tetraethylene glycol	112-60-7	<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

General advice No information

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

Flammable properties None known.
Extinguishing media
Suitable extinguishing media For small (incipient) fires, use media such as foam, sand, dry chemical, or carbon dioxide. For large fires use very large (flooding) quantities of water and/or foam, applied as a mist or spray.
Unsuitable extinguishing media None known.
Fire fighting equipment/instructions Not available.
Specific methods None established.
Hazardous combustion products Refer to section 10.

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 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.
Engineering controls Use in a well ventilated area.
Personal protective equipment
General Use personal protective equipment to minimize exposure to skin and eye.
General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance Not available.
Physical state Liquid.
Form Not available.
Color Not available.
Odor Not available.
pH 3.8 - 4.2
Vapor pressure Not determined
Boiling point Not determined
Melting point/Freezing point Not available.
Solubility (water) Soluble in water
Specific gravity Not available.
Flash point Not available.
Viscosity ≥ 2 cp
VOC Not available
Other information For other VOC regulatory data/information see Section 15.

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	No information available
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 data

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Acute		
<i>Oral</i>		
LD50	Guinea pig	6500 mg/kg
	Rat	6500 mg/kg
Alkyldicarboxylic acid (CAS Proprietary)		
Acute		
<i>Oral</i>		
LD50	Rat	2260 mg/kg
Tetraethylene glycol (CAS 112-60-7)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	22570 mg/kg
<i>Oral</i>		
LD50	Rat	32700 mg/kg
		29 g/kg
Carcinogenicity	No data available.	
Serious eye damage/eye irritation	Not available.	
Further information	This ink formulation has not been tested for toxicological effects. Refer to Section 2 for potential health effects and Section 4 for first aid measures.	

12. Ecological Information

Aquatic toxicity	Static acute toxicity (trout), survival (100 mg/L) = 100% Static acute toxicity (trout), survival (10 mg/L) = 100%
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Ecotoxicological data

Product	Species	Test Results
C4838Series (CAS Mixture)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) < 400 mg/l, 96 hours
Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Crustacea	EC50	Water flea (<i>Daphnia pulex</i>) 13.21 mg/l, 48 hours
Alkyldicarboxylic acid (CAS Proprietary)		
Fish	LC50	Fish 101, 96 Hours
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) 350 - 400 mg/l, 48 hours

Ecotoxicity No data available.

Persistence and degradability Not available.

Bioaccumulation / Accumulation

Bioaccumulative potential

Octanol/water partition coefficient log Kow

2-pyrrolidone	-0.85
Alkyldicarboxylic acid	-0.59

Partition coefficient

2-pyrrolidone	-0.85
Alkyldicarboxylic acid	-0.59

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. Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

Further information

Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.

15. Regulatory Information

US federal regulations

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

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

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

SARA 302 Extremely hazardous substance

No

SARA 311/312

No

Hazardous chemical

Other 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.

State regulations**US. Massachusetts RTK - Substance List**

2-pyrrolidone (CAS 616-45-5)

US. Pennsylvania RTK - Hazardous Substances

2-pyrrolidone (CAS 616-45-5)

Listed.

US. Rhode Island RTK

Not regulated.

16. Other Information**HMIS® ratings**

Health: 1
Flammability: 0
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 0
Instability: 0

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.

Other information

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

Issue date

06-Dec-2012

This data sheet contains changes from the previous version in section(s):

Ecological Information: Ecotoxicity
12. Ecological Information: Aquatic toxicity

Manufacturer information

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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