



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name C9403Series
Version # 03
Issue date 30-Oct-2012
Revision date 01-Oct-2013
Product use Inkjet printing
Synonym(s) Matte Black Ink
Company identification Hewlett-Packard Company
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United States
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2. Hazards Identification

Emergency overview Contact with skin and eyes may result in irritation. Ingestion may result in nausea, vomiting and diarrhea.
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
2-pyrrolidone	616-45-5	< 15
1,5-pentanediol	111-29-5	< 2.5
Non-hazardous components	CAS #	Percent
Water	7732-18-5	> 70
Ethyl alkyldiol	Proprietary	< 2.5
Sodium Hydroxide	1310-73-2	<0.1

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. If irritation persists get medical attention.
Inhalation Move 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	Combustion generates toxic fumes of fluorides/fluorine compounds.
Extinguishing media	
Suitable extinguishing media	CO2, water, dry chemical, or foam
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.
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. Store away from strong oxidizers.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sodium Hydroxide (CAS 1310-73-2)	PEL	2 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A

Components	Type	Value
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

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	Not available.
Form	Not available.
Color	Black.

Odor	Not available.
pH	9.2
Vapor pressure	Not determined
Boiling point	Not determined
Melting point/Freezing point	Not available.
Solubility (water)	Soluble in water
Specific gravity	1 - 1.1
Flash point	> 200.00 °F (> 93.33 °C) Pensky-Martens Closed Cup
VOC	< 240 g/l
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. hydrogen fluoride, fluorinated 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
Sodium Hydroxide (CAS 1310-73-2)		
Acute		
<i>Other</i>		
LD50	Mouse	40 mg/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

Ecotoxicological data

Product	Species	Test Results
C9403Series		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) > 750 mg/l, 96 hours
Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia pulex</i>) 13.21 mg/l, 48 hours
Ethyl alkyldiol (CAS Proprietary)		
Crustacea	EC50	Daphnia 102, 48 Hours
Fish	LC50	Fish 1000, 96 Hours

Components	Species		Test Results
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	10330 - 16360 mg/l, 48 hours
Fish	LC50	Bleak (Alburnus alburnus)	> 10000 mg/l, 96 hours
Sodium Hydroxide (CAS 1310-73-2)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	34.59 - 47.13 mg/l, 48 hours
Fish	LC50	Western mosquitofish (Gambusia affinis)	125 mg/l, 96 hours
Ecotoxicity	No data available.		
Persistence and degradability	Not available.		
Bioaccumulation / Accumulation			
Bioaccumulative potential			
Octanol/water partition coefficient log Kow			
2-pyrrolidone		-0.85	
Partition coefficient			
2-pyrrolidone		-0.85	

13. Disposal Considerations

Disposal instructions	Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental 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

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 Hazardous chemical	No
Other information	Exposure Limits (See Section 8): Executive regulation of Minister of Labour and Social Policy dated Nov. 29, 2002 concerning the highest exposure limits and volume of factors harmful for health and environment at work (Official Journal of Laws no 217/2002 item 1833 with further amendments). VOC content (less water, less exempt compounds) = < 958 g/L (U.S. requirement, not for emissions) VOC data based on formulation (Organic compounds minus solids)
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.
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: 1 Physical hazard: 0
NFPA ratings	Health: 1 Flammability: 1 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	30-Oct-2012
This data sheet contains changes from the previous version in section(s):	Ecological Information: Ecotoxicity 12. Ecological Information: Aquatic toxicity
Manufacturer information	Hewlett-Packard Company 3000 Hanover Street Palo Alto, California 94304-1112 US (Direct) 1-503-494-7199 (Toll-free within the US) 1-800-457-4209

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