MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification of the preparation	**C4890A**
Use of the preparation	Inkjet printing
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
Revision date	12-13-2004
MSDS number	18632

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component/substance	CAS number	% by weight
Water	7732-18-5	< 80
2-pyrrolidone	616-45-5	< 10
Carbon black	1333-86-4	< 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).

3. 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

2-pyrrolidone
Contact with skin may result in irritation.

Eye contact

2-pyrrolidone
Contact with eyes may result in irritation.

Inhalation

2-pyrrolidone
Inhalation may result in respiratory irritation.

Ingestion

2-pyrrolidone

Ingestion may result in nausea, vomiting and diarrhea.

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 Carbon Black: Chronic inhalation studies performed with fine dust particles resulted in lung tumors in animals. The IARC classification was based upon these results. IARC also concluded “there is inadequate evidence in humans for the carcinogenicity of carbon black.” Inhalation of fine dust particles is not expected to occur during normal conditions of use of this ink.

Carcinogenicity Carbon black has been classified by IARC as a Group 2B (possible human carcinogen). None of the other ingredients have been classified as carcinogens according to EU, IARC, MAK, NTP or OSHA.

4. FIRST AID MEASURES

First aid procedures

Eye 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 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 > 93.3 °C (> 200 °F); Pensky-Martens Closed Cup

Hazardous combustion products Refer to section 10.

Extinguishing media Dry chemical, CO_2, 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.

Procedures if material is released or spilled	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 limit values Exposure limits have not been established for this product.

ACGIH - Occupational Exposure Limits - TWAs

Carbon black	1333-86-4	3.5 mg/m3 TWA

OSHA - Final PELs - Time Weighted Averages (TWAs)

Carbon black	1333-86-4	3.5 mg/m3 TWA

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.

Exposure guidelines Use in a well ventilated area.

9. PHYSICAL & CHEMICAL PROPERTIES

pH	7.8 - 8.8
Vapor pressure	Not determined
Boiling point	Not determined
Solubility	Soluble in water
Specific gravity	1 - 1.2
VOC content	< 3 %
Flash point	> 93.3 °C (> 200 °F)
Viscosity	> 2 cp
Vapor density	> 1 (air = 1.0)
Evaporation rate	Not determined
Flammability	Not determined
Oxidizing properties	Not determined
Color	Black

10. CHEMICAL STABILITY & REACTIVITY INFORMATION

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

11. TOXICOLOGICAL INFORMATION

This ink formulation has not been tested for toxicological effects.
Refer to Section 3 for potential health effects and Section 4 for first aid measures.

Symptoms and target organs

NIOSH - Pocket Guide - Target Organs

Carbon black	1333-86-4	respiratory system, eyes

12. ECOLOGICAL INFORMATION

Aquatic toxicity LC50/96h/Fathead minnows => 750 mg/L

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

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

IATA

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

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.

US federal regulations US TSCA 12(b): Contains tetrahydrofuran (CASRN 109-99-9), subject to export notification requirements.

HMIS ratings	Health	1
	Flammability Classification	1
	Reactivity	0
NFPA ratings	Health	1
	Flammability Classification	1
	Reactivity	0

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 302 Extremely Hazardous Substance	No
Section 311 Hazardous Chemical	No
Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

16. OTHER INFORMATION

Other information	This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).
Issue date	12-13-2004
Revision	2
Replaces sheet dated	11-14-2004
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

Chemical Product and Company Identification: Alternate Trade Names - SKU Numbers
Composition / Information on Ingredients: Ingredient Extensions
Physical & Chemical Properties: Material Properties

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