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MATERIAL SAFETY DATA SHEET

1. Chemical Product and Company Identification

Identification of the preparation 51645 Series
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
Date prepared Jun 12, 2007
MSDS number 146834

2. Composition / Information on Ingredients

Component/substance	CAS number	% by weight
Water	7732-18-5	> 70
2-pyrrolidone	616-45-5	< 15
Carbon black	1333-86-4	< 5
Isopropyl Alcohol	67-63-0	< 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.
Isopropyl Alcohol
 Contact with eyes may result in severe irritation.

Inhalation

2-pyrrolidone
 Inhalation may result in respiratory irritation.
Isopropyl Alcohol
 Inhalation may cause drowsiness or dizziness.



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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.

Chronic health effects

Complete toxicity data are not available for this specific formulation

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 is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans).

None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.

Other information

4. First Aid Measures

First aid procedures

Skin

Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention. Wash affected areas thoroughly with mild soap and water and Get medical attention if irritation develops or persists.

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. 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.

Inhalation

Move to fresh air. If symptoms persist, get medical attention. Move to fresh air, If symptoms persist, get medical attention.

Ingestion

If ingestion of a large amount does occur, seek medical attention. If ingestion of a large amount does occur, seek medical attention.

5. Fire Fighting Measures

Flash point and method

131 - 136 °F (55 - 57.8 °C); Pensky-Martens Closed Cup; No ignition, sustained combustion or flashing detected using the Sustained Combustibility Test (method in US 49CFR173, Appendix H).

Hazardous combustion products

Refer to section 10. Carbon monoxide and carbon dioxide.

Extinguishing media

CO2, water, dry chemical, or foam Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing media

None known. None known.

Unusual fire and explosion hazard

None known. Flammable Liquid and Will burn if involved in a fire and Vaporizes easily at normal temperatures and Vapors may travel to a source of ignition and flash back.

Special firefighting procedures

None established.



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6. Accidental Release Measures

Personal precautions

Wear appropriate personal protective equipment. Wear appropriate personal protective equipment and Ensure adequate ventilation and Remove all sources of ignition.

Environmental precautions

Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Do not let product enter drains and 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. Soak up with inert absorbent material, Clean remainder with a damp cloth or vacuum cleaner, 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. Keep away from heat and sources of ignition and Avoid contact with skin and eyes Use this product with adequate ventilation.

Storage

Keep out of the reach of children. Keep away from excessive heat or cold. Keep away from excessive heat, sparks, and open flames.

8. Exposure Controls/Personal Protection

Exposure limit values

Exposure limits have not been established for this product.

ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWA)
Isopropyl Alcohol 67-63-0 200 ppm TWA

ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWA)
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

OSHA - Final PELs - Time Weighted Averages (TWAs)
Isopropyl Alcohol 67-63-0 400 ppm TWA; 980 mg/m3 TWA

Personal protective equipment

General

Use personal protective equipment to minimize exposure to skin and eye. Use personal protective equipment to minimize exposure to skin and eye.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Handle in accordance with good industrial hygiene and safety practice.

Exposure guidelines

Use in a well ventilated area. Use in a well ventilated area.

9. Physical & Chemical Properties

pH	7.8 - 8.4
Vapor pressure	Not determined
Boiling point	> 200 °F (> 93.3 °C)
Solubility	Soluble in water
Specific gravity	1 - 1.2 g/mL
VOC content	< 3 %
Flash point	131 - 136 °F (55 - 57.8 °C)
Viscosity	> 2 cp
Vapor density	> 1 (air = 1.0)
Evaporation rate	Not determined
Oxidizing properties	Not determined No information available.



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Color Black

10. Chemical Stability & Reactivity Information

Stability Stable under recommended storage conditions. Stable under recommended storage conditions.

Hazardous polymerization Will not occur. 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. Carbon monoxide and carbon dioxide.

Incompatibility Incompatible with strong bases and oxidizing agents. Incompatible with strong acids and bases.

11. Toxicological Information

Complete toxicity data are not available for this specific formulation. Refer to Section 3 for potential health effects and Section 4 for first aid measures. Complete toxicity data are not available for this specific formulation Refer to Section 3 for potential health effects and Section 4 for first aid measures.

Carcinogenicity

OSHA - Hazard Communication Carcinogens		
Carbon black	1333-86-4	Present

Symptoms and target organs

NIOSH - Pocket Guide - Target Organs		
Isopropyl Alcohol	67-63-0	eyes, skin, respiratory system
NIOSH - Pocket Guide - Target Organs		
Carbon black	1333-86-4	respiratory system, eyes (lymphatic cancer in presence of PAHs)

12. ECOLOGICAL INFORMATION

Aquatic toxicity LC50/96h/Fathead minnows =>750 mg/L LC50/96h/Fathead minnows =9460 mg/L.
 EC50/48h/daphnia =13299 mg/L.
 EC50/72h/algae => 1000 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>. Dispose of in compliance with federal, state, and local regulations.

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



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5. 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. 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:	2
Physical hazard:	0

NFPA ratings

Health:	1
Flammability:	2
Instability:	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

Jun 12 2007 6:56AM

Revision

5

Replaces sheet dated

Jan 26 2007 10:57PM

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: Ingredients
 3. Hazards Identification: Chronic health effects
 3. Hazards Identification: Carcinogenicity
 15. Regulatory Information: Canadian regulations



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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