



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name 51645 Series
Version # 03
Issue date 08-Apr-2010
Revision date 21-Jun-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.
Other hazards Complete toxicity data are not available for this specific formulation

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.

Carbon black is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans). Carbon black in this preparation, due to its bound form, does not present this carcinogenic risk. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
2-pyrrolidone	616-45-5	<15
Carbon black	1333-86-4	<5
Isopropyl Alcohol	67-63-0	<2.5
Non-hazardous components	CAS #	Percent
Water	7732-18-5	<80

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).

Carbon black is present only in a bound form in this preparation.

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	None known.
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.
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

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.
Isopropyl alcohol (CAS 67-63-0)	STEL	400 ppm	
	TWA	200 ppm	

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

Components	Type	Value
Carbon black (CAS 1333-86-4)	PEL	3.5 mg/m3
Isopropyl alcohol (CAS 67-63-0)	PEL	980 mg/m3
		400 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Carbon black (CAS 1333-86-4)	TWA	0.1 mg/m3
Isopropyl alcohol (CAS 67-63-0)	STEL	1225 mg/m3
		500 ppm
	TWA	980 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards**Components****Type****Value**

400 ppm

US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A**Components****Type****Value**Carbon black (CAS
1333-86-4)

TWA

3.5 mg/m3

Isopropyl alcohol (CAS
67-63-0)

STEL

1225 mg/m3

TWA

500 ppm

980 mg/m3

400 ppm

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

Black.

Odor

Not available.

pH

7.8 - 8.4

Vapor pressure

Not determined

Boiling point

200 °F (93.33 °C)

Melting point/Freezing point

Not available.

Solubility (water)

Soluble in water

Specific gravity

1 - 1.2

Flash point

131.00 - 136.00 °F (55.00 - 57.78 °C); No ignition, sustained combustion or flashing detected using the Sustained Combustibility Test (method in US 49CFR173, Appendix H).

Viscosity

> 2 cp

VOC

< 116.6 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.

Possibility of hazardous reactions

Will not occur.

11. Toxicological Information**Toxicological data****Components****Species****Test Results**

2-pyrrolidone (CAS 616-45-5)

Acute*Oral*

LD50

Guinea pig

6500 mg/kg

Components	Species	Test Results
Carbon black (CAS 1333-86-4)	Rat	6500 mg/kg
Acute <i>Oral</i> LD50	Rat	> 8000 mg/kg
Isopropyl Alcohol (CAS 67-63-0)		
Acute <i>Dermal</i> LD50	Rabbit	12800 mg/kg
<i>Oral</i> LD50	Dog	4797 mg/kg
	Mouse	3600 mg/kg
	Rabbit	4.5 g/kg
		6410 mg/kg
		5.03 g/kg
	Rat	5045 mg/kg
<i>Other</i> LD50		4.7 g/kg
	Mouse	1509 mg/kg
	Rat	1099 mg/kg

Carcinogenicity

Carbon black is classified as a carcinogen by the IARC (possibly carcinogenic to humans, Group 2B) and by the State of California under Proposition 65. In their evaluations of carbon black, both organizations indicate that exposure to carbon black, per se, does not occur when it remains bound within a product matrix, specifically, rubber, ink, or paint.

ACGIH Carcinogens

2-PROPANOL (CAS 67-63-0)

A4 Not classifiable as a human carcinogen.

CARBON BLACK, INHALABLE FRACTION (CAS 1333-86-4)

A3 Confirmed animal carcinogen with unknown relevance to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Carbon black (CAS 1333-86-4)

2B Possibly carcinogenic to humans.

Serious eye damage/eye irritation

Not available.

Further information

Complete toxicity data are not available for this specific formulation. Refer to Section 2 for potential health effects and Section 4 for first aid measures.

12. Ecological Information

Aquatic toxicity

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

Ecotoxicological data

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
Isopropyl Alcohol (CAS 67-63-0)		
Aquatic Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)
		> 1400 mg/l, 96 hours

Persistence and degradability Not available.

Bioaccumulation / Accumulation

Bioaccumulative potential**Octanol/water partition coefficient log Kow**

2-pyrrolidone	-0.85
Isopropyl Alcohol	0.05

Partition coefficient

2-pyrrolidone	-0.85
Isopropyl Alcohol	0.05

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>.

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.

No ignition, sustained combustion, or flashing detected, using the Sustained Combustibility Test prescribed in the UN Manual of Tests and Criteria, Part III subsection 32.5.2. Refer to Dangerous Goods Regulations Section 3.3.1.3.

No ignition, sustained combustion or flashing detected using the sustained combustibility test (method in US CFR173, Appendix H).

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) = <592.5 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/NDL), Australia, Japan, Philippines, South Korea, New Zealand, and China.
State regulations	
US - California Proposition 65 - CRT: Listed date/Carcinogenic substance	
CARBON BLACK (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE [\leq 10 MICROMETERS]) (CAS 1333-86-4)	Listed: February 21, 2003 Carcinogenic.
US - New Jersey RTK - Substances: Listed substance	
Carbon black (CAS 1333-86-4)	Listed.
Isopropyl Alcohol (CAS 67-63-0)	Listed.
US. Massachusetts RTK - Substance List	
2-pyrrolidone (CAS 616-45-5)	
Carbon black (CAS 1333-86-4)	
Isopropyl Alcohol (CAS 67-63-0)	
US. Pennsylvania RTK - Hazardous Substances	
2-pyrrolidone (CAS 616-45-5)	Listed.
Carbon black (CAS 1333-86-4)	Listed.
Isopropyl Alcohol (CAS 67-63-0)	Listed.
US. Rhode Island RTK	
Carbon black (CAS 1333-86-4)	
Isopropyl Alcohol (CAS 67-63-0)	

16. Other Information

HMIS® ratings	Health: 1 Flammability: 2 Physical hazard: 0
NFPA ratings	Health: 1 Flammability: 2 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	08-Apr-2010
This data sheet contains changes from the previous version in section(s):	Product and Company Identification: Product Uses Physical & Chemical Properties: Multiple Properties Regulatory Information: Risk Phrases - Labeling GHS: Classification
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