MATERIAL SAFETY DATA SHEET

1. Chemical Product and Company Identification

Material name	C9351 Series
Use of the preparation	Inkjet printing
Version #	05
Revision date	26-Mar-2008
CAS #	Mixture
Product use	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	Mar 26, 2008
MSDS number	146849

2. Hazards Identification

Emergency overview

Contact with skin and eyes may result in irritation.

Isopropyl Alcohol
Contact with skin and eyes may result in irritation. Inhalation may cause drowsiness or dizziness.

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.

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

Isopropyl Alcohol
Potential routes of exposure under normal use conditions are skin, eye contact and inhalation.

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 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

Isopropyl Alcohol
This product is classified for health and physicochemical effects according to EU Directive 1999/45/EC with R11, R36 and R67.

3. 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).

4. First Aid Measures

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

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.
Flammable properties	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.
Extinguishing media	
Suitable 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.
Protection of firefighters	
Specific hazards arising from the chemical	None known..
Special firefighting procedures	None established.

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.
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. 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 limits

ACGIH

Components	CAS #	TWA	STEL	Ceiling
Carbon black	1333-86-4	3.5 mg/m3	Not established	Not established
Isopropyl Alcohol	67-63-0	200 ppm	400 ppm	Not established

OSHA

Components	CAS #	TWA	STEL	Ceiling
Carbon black	1333-86-4	3.5 mg/m3	Not established	Not established
Isopropyl Alcohol	67-63-0	400 ppm	Not established	Not established

Exposure guidelines 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

U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

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

U.S. - 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.
Eye / face protection	Not required under intended use.
Skin protection	Protected gloves not required under intended use.
Respiratory protection	For use other than intended use (such as in the event of a large spill), goggles and respirators may be required.
General hygeine considerations	Handle in accordance with good industrial hygiene and safety practice. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Color	Black
Odor threshold	no appreciable odor
Physical state	Liquid.
pH	7.8 - 8.4
Melting point	Not available
Freezing point	Not available
Boiling point	> 200 °F (> 93.3 °C)
Flash point	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).
Evaporation rate	Not determined
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available
Flammability limits in air, lower, % by volume	Not available
Vapor pressure	Not determined
Vapor density	> 1 (air = 1.0)
Specific gravity	1 - 1.2 g/mL
Relative density	Not available
Solubility in water	Soluble in water
Partition coefficient (n-octanol/water)	Not determined
Auto-ignition temperature	Not available

Decomposition temperature	Not available
VOC	< 3 %
Viscosity	> 2 cp
Bulk density	1 - 1.2 gm/ml

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under recommended storage conditions. Stable under recommended storage conditions.
Incompatible materials	Incompatible with strong bases and oxidizing agents. Incompatible with strong acids and bases.
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.
Possibility of hazardous reactions	Will not occur. Will not occur.

11. Toxicological Information

Carcinogenicity

U.S. - 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.
Persistence and degradability	Not available
Partition coefficient	Not determined

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

Department of Transportation (DOT) Requirements

Not regulated as hazardous goods.

IATA

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

15. Regulatory Information

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

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Isopropyl Alcohol	67-63-0	1.0 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)

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
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	No

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.

State regulations

U.S. - California - Proposition 65 - Carcinogens List

Carbon black	1333-86-4	carcinogen, initial date 2/21/03 (airborne, unbound particles of respirable size)

U.S. - Pennsylvania - RTK (Right to Know) List

Isopropyl Alcohol	67-63-0	Environmental hazard

U.S. - Pennsylvania - RTK (Right to Know) List

Carbon black	1333-86-4	Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Carbon black	1333-86-4	sn 0342

U.S. - New Jersey - Right to Know Hazardous Substance List

Isopropyl Alcohol	67-63-0	sn 1076; sn 2381 (strong-acid process manufacture)

16. Other Information

HMIS® ratings Health: 1
Flammability: 2
Physical hazard: 0

NFPA ratings	Health: 1 Flammability: 2 Instability: 0
Issue date	Mar 26 2008 1:02PM
Revision	5
Replaces sheet dated	Dec 15 2007 4:19PM
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	3. Hazards Identification: Chronic health effects 3. Hazards Identification: Carcinogenicity 8. Exposure Controls/Personal Protection: Respiratory 15. Regulatory Information: Canadian regulations

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