



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name CN021 Series
Version # 02
Issue date 23-Oct-2012
Revision date 19-Dec-2013
Product use Inkjet printing
CAS # Mixture
Company identification Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304-1185
United States
Telephone 650-857-5020

Hewlett-Packard health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-760-710-0048
HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomer.inquiries@hp.com

2. Hazards Identification

Emergency overview Contact with skin and eyes may result in irritation.
Other hazards 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. 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. 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
1,5-pentanediol	111-29-5	<7.5
2-pyrrolidone	616-45-5	<7.5
Carbon black	1333-86-4	<5
Non-hazardous components	CAS #	Percent
Water	7732-18-5	>75

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/m ³	Inhalable fraction.

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/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Carbon black (CAS 1333-86-4)	TWA	0.1 mg/m ³

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

Components	Type	Value
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m ³

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	7 - 8
Vapor pressure	Not determined
Boiling point	Not determined
Melting point/Freezing point	Not available.
Solubility (water)	Soluble in water
Specific gravity	1 - 1.2
Flash point	> 200.00 °F (> 93.33 °C) Pensky-Martens Closed Cup
Viscosity	>= 2 cp
VOC	< 179 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		
<i>Oral</i>		
LD50	Guinea pig	6500 mg/kg
	Rat	6500 mg/kg
Carbon black (CAS 1333-86-4)		
Acute		
<i>Oral</i>		
LD50	Rat	> 8000 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		
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	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
CN021 Series (CAS Mixture)			
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

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>.

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) = < 781 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 - California Proposition 65 - CRT: Listed date/Carcinogenic substance

CARBON BLACK (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE [≤ 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.

US. Massachusetts RTK - Substance List

2-pyrrolidone (CAS 616-45-5)
Carbon black (CAS 1333-86-4)

US. Pennsylvania RTK - Hazardous Substances

2-pyrrolidone (CAS 616-45-5) Listed.
Carbon black (CAS 1333-86-4) Listed.

US. Rhode Island RTK

Carbon black (CAS 1333-86-4)

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	23-Oct-2012

This data sheet contains changes from the previous version in section(s):

1. Product and Company Identification: Alternate Trade Names
Hazards Identification: Other hazards
Composition / Information on Ingredients: Disclosure Overrides
9. Physical & Chemical Properties: Other information
Ecological Information: Ecotoxicity
12. Ecological Information: Aquatic toxicity
15. Regulatory Information: Other information
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