

# Lithium-Ion Rechargeable Batteries for HP Products



## PURPOSE OF THIS DOCUMENT

Hewlett-Packard Company ("HP") is providing the information in this document voluntarily as a service to its customers. The products addressed in this document are generally viewed as "articles" that are exempt from requirements for Material Safety Data Sheets ("MSDSs") such as the Hazard Communication Standard of the U.S. Occupational Safety and Health Administration ("OSHA") and similar requirements in other countries. In particular, these products are manufactured according to a specific design, have an end-use dependent upon such design, and do not normally release more than trace amounts of hazardous chemicals.

## PRODUCT IDENTIFICATION

The products covered by this document are lithium-ion rechargeable batteries originally contained in HP-branded electronic products (*e.g.*, notebook computers, handheld devices, and printing devices) or otherwise provided by HP for use in or with such electronic products.

Such batteries may be produced by a number of manufacturers. Information about individual battery types can be found in documents provided by the manufacturers, which HP voluntarily makes available to the public at [www.hp.com/go/ecodata](http://www.hp.com/go/ecodata). The manufacturers have assured HP that they believe these documents are reliable as of the dates indicated in the documents. HP has not conducted an independent assessment of the information in the documents.

The information in this document is based on the documents provided by the manufacturers, and is intended to provide a generalized, composite view of the information in such documents for the convenience of HP's customers. The information in this document **is not intended to be, and should not be used as, a substitute for the information provided by the manufacturers. To the extent that a manufacturer's information differs from any information in this document, the manufacturer's information should govern.**

## HAZARDS IDENTIFICATION

Under routine handling and use, no known effects on eyes, skin, or inhalation. In the battery cell(s), chemical materials are stored in a sealed metal or metal laminated plastic case, designed to withstand temperatures and pressures encountered during normal handling and use. As a result, during normal handling and use, there is no significant physical danger of ignition, explosion, or exposure to materials of concern. However, if the battery is exposed to a fire, the battery may rupture violently, leading to the possible release of irritating gas.

## COMPOSITION

The composition of the lithium-ion batteries originally contained in HP-branded electronic products (or otherwise provided by HP for use in or with such products) may vary. The composition information below is intended to provide a generalized, composite view of the constituents of the relevant lithium-ion batteries. For information on the composition of individual battery types, please see the information provided by the individual battery manufacturers, which as noted above can be found at [www.hp.com/go/ecodata](http://www.hp.com/go/ecodata)

<b>Chemical</b>	<b>Cas No.</b>	<b>Percent (Max.)</b>
Graphite	7782-42-5	30
Lithium cobalt oxide	12190-79-3	50
Cobalt oxide	1307-96-6	50
Nickel oxide	1313-99-1	50
Manganese oxide	1313-13-9	50
Diethyl carbonate	105-58-8	15
Dimethyl carbonate	616-38-6	15
Ethyl methyl carbonate	623-53-0	15
Propylene carbonate	108-32-7	15
Ethylene carbonate	96-49-1	15
Polyvinylidene fluoride	24937-79-9	10
Hexafluoropropylene-vinylidene fluoride copolymer	9011-17-0	15
Lithium hexafluorophosphate	21324-40-3	5
Aluminum	7429-90-5	10
Copper	7440-50-8	15
Nickel	7440-02-0	15
Styrene butadiene rubber	9003-55-8	5
Iron	7439-89-6	25
Manganese	7439-96-5	15
Acetylene black (carbon black)	133-86-4	2

The constituents above are listed in one or all of the lithium-ion battery documents provided by the manufacturers, at concentrations up to the levels indicated in the last column of the table. Some of the manufacturer documents also list “transition metal oxides” (at concentrations up to 50%) and/or “organic solvent”/“organic electrolyte” (at concentrations up to 20%) as battery constituents. These generic categories are not included in the table above, because they may be intended to encompass some of the individual chemicals in the table (e.g., “transition metal oxides” may refer to the oxides of cobalt, nickel, and/or manganese). Similarly, some manufacturer documents list “plastic” (at concentrations up to 4%), but this is not listed in the table because the specific plastic(s) is (are) not identified by the manufacturers and the material seems unlikely to be of regulatory concern. One manufacturer lists “steel” (an alloy mostly of iron) as a component, but lists the CAS Number for iron. The information in the table above is based on the composition of the lithium-ion battery cells only, and does not reflect the constituents in other parts of a lithium-ion battery pack, such as the outer casing or printed circuit board.

## FIRST AID MEASURES

Intact batteries do not represent a danger to health. If outer casing is damaged and exposure to internal materials results, the following first-aid actions are recommended:

In response to inhalation: leave area immediately and seek medical attention.

In response to eye contact: rinse eyes with water for fifteen minutes and seek medical attention.

In response to skin contact, wash area thoroughly with soap and water and seek medical attention.

In response to ingestion, induce vomiting and seek medical attention.

## FIRE FIGHTING MEASURES

Use extinguishing media suitable for the materials that are burning. This may include: carbon dioxide gas, nitrogen gas, extinction powder, or dry sand. In some cases, water may be suitable but some battery components may form hydrofluoric acid in contact with water. When fighting fire, wear a self-contained breathing apparatus and protective suit. If possible, remove cells from firefighting area; if heated excessively, cells may rupture violently or vent irritating gas.

## ACCIDENTAL RELEASE MEASURES

Personal precautions: use personal protective clothing; avoid contact with skin, eyes, and clothing; avoid breathing fumes.

Environmental precautions: do not discharge into the drains/surface waters/groundwater; place spilled materials into appropriate container and dispose of properly.

## HANDLING AND STORAGE

### Advice on safe handling

Avoid short-circuiting the cell. Do not open or disassemble. Keep away from open flames, hot surfaces, and sources of ignition.

### Advice on storage

Store at room temperature at approximately 20%-60% of the normal battery capacity. Keep in appropriate packaging.

## EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment is not required for handling intact cells. In response to ruptured cells, use the following equipment: respirator with air cylinder and dust mask; protective gloves; goggles or protective glasses designed to protect against liquid splashes; working clothes with long sleeves and long pants.

## PHYSICAL AND CHEMICAL PROPERTIES

Form	Solid
Color	Various
Odor	Odorless
pH	n/a
Flash point	n/a
Vapor pressure	n/a
Density	n/a
Water solubility	Insoluble
Ignition temperature	n/a

## STABILITY AND REACTIVITY

Stability: stable under normal handling and use. If cell is ruptured, hazardous decomposition products may form.

HP Product Information Sheet:

Conditions to avoid: keep away from open flames, direct sunlight, and high humidity. Avoid contact of battery with water, strong oxidizers, and strong acids.

## TOXICOLOGICAL INFORMATION

Routine handling and use of this product does not result in significant exposure to substances of toxicological concern.

## ECOLOGICAL INFORMATION

To avoid improper exposure to environment, battery should be disposed of per the "Disposal Considerations" guidance below.

## DISPOSAL CONSIDERATIONS

Do not incinerate. Lithium-ion rechargeable batteries should be disposed of or recycled in accordance with any applicable national, state/provincial, and local requirements. HP encourages the environmentally sound recycling of these products. HP has joined the Call2Recycle™ recycling program of the Rechargeable Battery Recycling Corporation. In the U.S. and Canada, please call 1-800-8-BATTERY or go to [www.rbrc.org](http://www.rbrc.org) for information on recycling your used lithium ion batteries.

## TRANSPORTATION

Lithium-ion batteries are generally classified for purposes of transportation as UN 3480. However, the lithium-ion batteries originally contained in HP-branded electronic products (or otherwise provided by HP for use in or with such electronic products) are generally of a type that allows the batteries to be excepted from requirements for transport as Class 9 hazardous materials or dangerous goods under most national and international regulations. The batteries have a Watt-hour rating of no more than 20 Wh per cell or no more than 100 Wh per battery pack and contain "equivalent lithium" in amounts no more than 1.5 g per cell or 8.0 g per battery pack. In addition, the batteries are of a type that has been demonstrated to pass each applicable test (T.1 through T.8) under the UN Manual of Tests and Criteria (ST/SG/AC.10/11/Rev.4), Part III, Subsection 38.3.

To qualify for exception, the batteries may be subject to certain requirements relating to packaging, marking, shipping documentation, quantity limitations, and the like. For example, under the Dangerous Goods Regulations (55th Edition, 2014) of the International Air Transport Association ("IATA"), excepted lithium-ion batteries must be transported in accordance with the requirements of Section II of Packing Instruction 965. See also, e.g., Special Provision 188 of the International Maritime Dangerous Goods ("IMDG") Code (2012 Edition); 49 C.F.R. § 173.185(c); Special Provision 34 of the Canadian Transport of Dangerous Goods Regulations.

*Under IATA Special Provision A154 and Packing Instruction 965, recalled or damaged lithium batteries are generally prohibited from air transportation.*

## ISSUE DATE

This document was issued on November 2014.



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** C2P04Series  
**Other means of identification** Not available.  
**Recommended use** Inkjet printing  
**Recommended restrictions** None known.  
**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. Hazard(s) identification

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.

### Label elements

**Hazard symbol** None.  
**Signal word** None.  
**Hazard statement** Not available.  
**Precautionary statement**  
**Prevention** Not available.  
**Response** Not available.  
**Storage** Not available.  
**Disposal** Not available.

**Hazard(s) not otherwise classified (HNOC)** 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. This black ink is not classified according to EU Directive 1999/45/EC. 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.

**Supplemental information** None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Water		7732-18-5	70-80
1,5-pentanediol		111-29-5	<7.5
2-pyrrolidone		616-45-5	<7.5

Chemical name	Common name and synonyms	CAS number	%
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).

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

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. If symptoms persist, get medical attention.
<b>Skin contact</b>	Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.
<b>Eye contact</b>	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.
<b>Ingestion</b>	If ingestion of a large amount does occur, seek medical attention.
<b>Most important symptoms/effects, acute and delayed</b>	Not available.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	CO2, water, dry chemical, or foam
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	Not applicable.
<b>Special protective equipment and precautions for firefighters</b>	Not available.
<b>Specific methods</b>	None established.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Wear appropriate personal protective equipment.
<b>Methods and materials for containment and cleaning up</b>	Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps.
<b>Environmental precautions</b>	Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

#### 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid contact with skin, eyes and clothing.
<b>Conditions for safe storage, including any incompatibilities</b>	Keep out of the reach of children. Keep away from excessive heat or cold.

#### 8. Exposure controls/personal protection

##### Occupational exposure limits

##### 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

##### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.

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

Carbon black (CAS 1333-86-4)	TWA	0.1 mg/m <sup>3</sup>
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**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Exposure guidelines** Exposure limits have not been established for this product.

**Appropriate engineering controls** Use in a well ventilated area.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Not available.

**Skin protection**

**Hand protection** Not available.

**Other** Not available.

**Respiratory protection** Not available.

**Thermal hazards** Not available.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties****Appearance****Physical state** Not available.**Color** Black.**Odor** Not available.**Odor threshold** Not available.**pH** 7 - 8**Melting point/freezing point** Not available.**Initial boiling point and boiling range** Not determined**Flash point** > 200.0 °F (> 93.3 °C) Pensky-Martens Closed Cup**Evaporation rate** Not determined**Flammability (solid, gas)** Not available.**Upper/lower flammability or explosive limits****Flammability limit - lower (%)** Not determined**Flammability limit - upper (%)** Not available.**Explosive limit - lower (%)** Not available.**Explosive limit - upper (%)** Not available.**Vapor pressure** Not determined**Solubility(ies)****Solubility (water)** Soluble in water**Partition coefficient (n-octanol/water)** Not available.**Auto-ignition temperature** Not available.**Decomposition temperature** Not available.**Viscosity** >= 2 cp**Other information****Specific gravity** 1 - 1.2**Other information** For other VOC regulatory data/information see Section 15.**VOC (Weight %)** < 146 g/L

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## 10. Stability and reactivity

<b>Reactivity</b>	Not available.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	Will not occur.
<b>Conditions to avoid</b>	Not available.
<b>Incompatible materials</b>	Incompatible with strong bases and oxidizing agents.
<b>Hazardous decomposition products</b>	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

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## 11. Toxicological information

**Symptoms related to the physical, chemical and toxicological characteristics** Not available.

### Information on toxicological effects

**Acute toxicity** Based on available data, the classification criteria are not met.

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.

### Respiratory or skin sensitization

**Respiratory sensitization** Based on available data, the classification criteria are not met.

**Skin sensitization** Based on available data, the classification criteria are not met.

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

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

### IARC Monographs. Overall Evaluation of Carcinogenicity

Carbon black (CAS 1333-86-4)

2B Possibly carcinogenic to humans.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**Specific target organ toxicity - single exposure** Based on available data, the classification criteria are not met.

**Specific target organ toxicity - repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

**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.

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Guinea pig	6500 mg/kg
	Rat	6500 mg/kg
Carbon black (CAS 1333-86-4)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	> 8000 mg/kg

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## 12. Ecological information

**Aquatic toxicity** Not expected to be harmful to aquatic organisms.

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## Ecotoxicity

Product	Species	Test Results
C2P04Series (CAS Mixture)		
<b>Aquatic</b>		
<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)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia pulex</i> ) 13.21 mg/l, 48 hours

**Persistence and degradability** Not available.

**Bioaccumulative potential** Not available.

**Partition coefficient n-octanol / water (log Kow)**  
2-pyrrolidone -0.85

**Mobility in soil** Not available.

**Other adverse effects** Not available.

## 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.

### ADR

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.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

### 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

Not listed.

**SARA 311/312 Hazardous chemical** No

**Other federal regulations**

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations****US. Massachusetts RTK - Substance List**

2-pyrrolidone (CAS 616-45-5)

Carbon black (CAS 1333-86-4)

**US. New Jersey Worker and Community Right-to-Know Act**

Carbon black (CAS 1333-86-4)

**US. Pennsylvania Worker and Community Right-to-Know Law**

2-pyrrolidone (CAS 616-45-5)

Carbon black (CAS 1333-86-4)

**US. California Proposition 65****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

**Other information**

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)

**Regulatory information**

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.

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**16. Other information, including date of preparation or last revision**

**Issue date** 02-Oct-2014

**Revision date** 01-Apr-2015

**Version #** 04

**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.

**Manufacturer information**

Hewlett-Packard Company  
3000 Hanover Street  
Palo Alto, California 94304-1112 US  
Direct 1-650-857-5020

## Explanation of abbreviations

<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>CAS</b>	Chemical Abstracts Service
<b>CERCLA</b>	Comprehensive Environmental Response Compensation and Liability Act
<b>CFR</b>	Code of Federal Regulations
<b>COC</b>	Cleveland Open Cup
<b>DOT</b>	Department of Transportation
<b>EPCRA</b>	Emergency Planning and Community Right-to-Know Act (aka SARA)
<b>IARC</b>	International Agency for Research on Cancer
<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>NTP</b>	National Toxicology Program
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>REC</b>	Recommended
<b>REL</b>	Recommended Exposure Limit
<b>SARA</b>	Superfund Amendments and Reauthorization Act of 1986
<b>STEL</b>	Short-Term Exposure Limit
<b>TCLP</b>	Toxicity Characteristics Leaching Procedure
<b>TLV</b>	Threshold Limit Value
<b>TSCA</b>	Toxic Substances Control Act
<b>VOC</b>	Volatile Organic Compounds

C2P06Series[C][3]-SDS\_US-English-19.pdf

C2P06Series[M][3]-SDS\_US-English-19.pdf

C2P06Series[Y][3]-SDS\_US-English-19.pdf



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** C2P06Series[C][3]  
**Other means of identification** Not available.  
**Recommended use** Inkjet printing  
**Recommended restrictions** None known.  
**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. Hazard(s) identification

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.

### Label elements

**Hazard symbol** None.  
**Signal word** None.  
**Hazard statement** Not available.  
**Precautionary statement**  
**Prevention** Not available.  
**Response** Not available.  
**Storage** Not available.  
**Disposal** Not available.

**Hazard(s) not otherwise classified (HNOC)** 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

**Supplemental information** None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Water		7732-18-5	65-75
1,5-pentanediol		111-29-5	< 10
1-(2-hydroxyethyl)-2-pyrrolidone		3445-11-2	<7.5
Copper phthalocyanine direct dye salt		Proprietary	< 5
magnesium nitrate hexahydrate		13446-18-9	< 2.5

**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).

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#### 4. First-aid measures

**Inhalation** Remove to fresh air. If symptoms persist, get medical attention.

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

**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.

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

**Most important symptoms/effects, acute and delayed** Not available.

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#### 5. Fire-fighting measures

**Suitable extinguishing media** Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Unsuitable extinguishing media** None known.

**Specific hazards arising from the chemical** Not applicable.

**Special protective equipment and precautions for firefighters** Not available.

**Specific methods** None established.

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#### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Wear appropriate personal protective equipment.

**Methods and materials for containment and cleaning up** Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps.

**Environmental precautions** Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

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#### 7. Handling and storage

**Precautions for safe handling** Avoid contact with skin, eyes and clothing.

**Conditions for safe storage, including any incompatibilities** Keep out of the reach of children. Keep away from excessive heat or cold.

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#### 8. Exposure controls/personal protection

**Occupational exposure limits** No exposure limits noted for ingredient(s).

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Exposure guidelines** Exposure limits have not been established for this product.

**Appropriate engineering controls** Use in a well ventilated area.

##### Individual protection measures, such as personal protective equipment

**Eye/face protection** Not available.

##### Skin protection

**Hand protection** Not available.

**Other** Not available.

**Respiratory protection** Not available.

**Thermal hazards** Not available.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

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#### 9. Physical and chemical properties

##### Appearance

Material name: C2P06Series[C][3]

12123 Version #: 05 Revision date: 16-Apr-2015 Issue date: 30-Aug-2014

<b>Physical state</b>	Liquid.
<b>Color</b>	Cyan
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	8 - 8.4
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not determined
<b>Flash point</b>	> 200.0 °F (> 93.3 °C) Pensky-Martens Closed Cup
<b>Evaporation rate</b>	Not determined
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not determined
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Soluble in water
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	<= 2 cp
<b>Other information</b>	For other VOC regulatory data/information see Section 15.
<b>VOC (Weight %)</b>	< 156 g/L

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## 10. Stability and reactivity

<b>Reactivity</b>	Not available.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	Will not occur.
<b>Conditions to avoid</b>	Not available.
<b>Incompatible materials</b>	Incompatible with strong bases and oxidizing agents.
<b>Hazardous decomposition products</b>	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

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## 11. Toxicological information

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Not available.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	Based on available data, the classification criteria are not met.
<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met.
<b>Serious eye damage/eye irritation</b>	Based on available data, the classification criteria are not met.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Based on available data, the classification criteria are not met.
<b>Skin sensitization</b>	Based on available data, the classification criteria are not met.

<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - single exposure</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.
<b>Further information</b>	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.

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## 12. Ecological information

<b>Aquatic toxicity</b>	This product has not been tested for ecological effects.
<b>Persistence and degradability</b>	Not available.
<b>Bioaccumulative potential</b>	Not available.
<b>Mobility in soil</b>	Not available.
<b>Other adverse effects</b>	Not available.

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## 13. Disposal considerations

<b>Disposal instructions</b>	Do not dispose of together with general office waste. 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 <a href="http://www.hp.com/recycle">http://www.hp.com/recycle</a> .
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## 14. Transport information

<b>DOT</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>ADR</b>	Not regulated as dangerous goods.
<b>Further information</b>	Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.

---

## 15. Regulatory information

<b>US federal regulations</b>	US TSCA 12(b): Does not contain listed chemicals.
<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>	Not regulated.
<b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>	Not listed.
<b>SARA 304 Emergency release notification</b>	Not regulated.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	Not listed.
<b>Superfund Amendments and Reauthorization Act of 1986 (SARA)</b>	
<b>Hazard categories</b>	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312** No  
**Hazardous chemical****Other federal regulations****Safe Drinking Water Act (SDWA)** Not regulated.**US state regulations****US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

Not listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**

Not listed.

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

Not Listed.

**Other information** VOC content (less water, less exempt compounds) = < 574 g/L (U.S. requirement, not for emissions)  
VOC data based on formulation (Organic compounds minus solids)**Regulatory information** 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.

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**16. Other information, including date of preparation or last revision****Issue date** 30-Aug-2014**Revision date** 16-Apr-2015**Version #** 05**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.**Revision Information** Composition / Information on Ingredients**Manufacturer information** Hewlett-Packard Company  
3000 Hanover Street  
Palo Alto, California 94304-1112 US  
Direct 1-650-857-5020

## Explanation of abbreviations

<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>CAS</b>	Chemical Abstracts Service
<b>CERCLA</b>	Comprehensive Environmental Response Compensation and Liability Act
<b>CFR</b>	Code of Federal Regulations
<b>COC</b>	Cleveland Open Cup
<b>DOT</b>	Department of Transportation
<b>EPCRA</b>	Emergency Planning and Community Right-to-Know Act (aka SARA)
<b>IARC</b>	International Agency for Research on Cancer
<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>NTP</b>	National Toxicology Program
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>REC</b>	Recommended
<b>REL</b>	Recommended Exposure Limit
<b>SARA</b>	Superfund Amendments and Reauthorization Act of 1986
<b>STEL</b>	Short-Term Exposure Limit
<b>TCLP</b>	Toxicity Characteristics Leaching Procedure
<b>TLV</b>	Threshold Limit Value
<b>TSCA</b>	Toxic Substances Control Act
<b>VOC</b>	Volatile Organic Compounds



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** C2P06Series[M][3]  
**Other means of identification** Not available.  
**Recommended use** Inkjet printing  
**Recommended restrictions** None known.  
**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. Hazard(s) identification

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.

### Label elements

**Hazard symbol** None.  
**Signal word** None.  
**Hazard statement** Not available.  
**Precautionary statement**  
**Prevention** Not available.  
**Response** Not available.  
**Storage** Not available.  
**Disposal** Not available.

**Hazard(s) not otherwise classified (HNOC)** 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

**Supplemental information** None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Water		7732-18-5	65-75
1,5-pentanediol		111-29-5	< 10
2-pyrrolidone		616-45-5	< 7.5
Polycyclic sulfonic acid, TMA salt		Proprietary	< 7.5
magnesium nitrate hexahydrate		13446-18-9	< 2.5

**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).

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#### 4. First-aid measures

**Inhalation** Remove to fresh air. If symptoms persist, get medical attention.

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

**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.

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

**Most important symptoms/effects, acute and delayed** Not available.

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#### 5. Fire-fighting measures

**Suitable extinguishing media** Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Unsuitable extinguishing media** None known.

**Specific hazards arising from the chemical** Not applicable.

**Special protective equipment and precautions for firefighters** Not available.

**Specific methods** None established.

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#### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Wear appropriate personal protective equipment.

**Methods and materials for containment and cleaning up** Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps.

**Environmental precautions** Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

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#### 7. Handling and storage

**Precautions for safe handling** Avoid contact with skin, eyes and clothing.

**Conditions for safe storage, including any incompatibilities** Keep out of the reach of children. Keep away from excessive heat or cold.

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#### 8. Exposure controls/personal protection

**Occupational exposure limits** No exposure limits noted for ingredient(s).

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Exposure guidelines** Exposure limits have not been established for this product.

**Appropriate engineering controls** Use in a well ventilated area.

**Individual protection measures, such as personal protective equipment**

- Eye/face protection** Not available.
- Skin protection**
  - Hand protection** Not available.
  - Other** Not available.
- Respiratory protection** Not available.
- Thermal hazards** Not available.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

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#### 9. Physical and chemical properties

##### Appearance

Material name: C2P06Series[M][3]  
12125 Version #: 05 Revision date: 16-Apr-2015 Issue date: 30-Aug-2014

<b>Physical state</b>	Liquid.
<b>Color</b>	Magenta
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	8 - 8.4
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not determined
<b>Flash point</b>	> 200.0 °F (> 93.3 °C) Pensky-Martens Closed Cup
<b>Evaporation rate</b>	Not determined
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not determined
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Soluble in water
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	<= 2 cp
<b>Other information</b>	For other VOC regulatory data/information see Section 15.
<b>VOC (Weight %)</b>	< 156 g/L

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## 10. Stability and reactivity

<b>Reactivity</b>	Not available.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	Will not occur.
<b>Conditions to avoid</b>	Not available.
<b>Incompatible materials</b>	Incompatible with strong bases and oxidizing agents.
<b>Hazardous decomposition products</b>	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

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## 11. Toxicological information

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Not available.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	Based on available data, the classification criteria are not met.
<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met.
<b>Serious eye damage/eye irritation</b>	Based on available data, the classification criteria are not met.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Based on available data, the classification criteria are not met.
<b>Skin sensitization</b>	Based on available data, the classification criteria are not met.

<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - single exposure</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.
<b>Further information</b>	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.

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Guinea pig	6500 mg/kg
	Rat	6500 mg/kg

## 12. Ecological information

**Aquatic toxicity** This product has not been tested for ecological effects.

### Ecotoxicity

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
<b>Aquatic</b>		
Crustacea	EC50 Water flea ( <i>Daphnia pulex</i> )	13.21 mg/l, 48 hours

**Persistence and degradability** Not available.

**Bioaccumulative potential** Not available.

**Partition coefficient n-octanol / water (log Kow)**  
2-pyrrolidone -0.85

**Mobility in soil** Not available.

**Other adverse effects** Not available.

## 13. Disposal considerations

**Disposal instructions** Do not dispose of together with general office waste.  
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.

### ADR

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.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**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**

Not listed.

**SARA 311/312** No  
**Hazardous chemical**

**Other federal regulations**

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations****US. Massachusetts RTK - Substance List**

2-pyrrolidone (CAS 616-45-5)

**US. New Jersey Worker and Community Right-to-Know Act**

Not listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**

2-pyrrolidone (CAS 616-45-5)

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

Not Listed.

**Other information** VOC content (less water, less exempt compounds) = < 533 g/L (U.S. requirement, not for emissions)  
 VOC data based on formulation (Organic compounds minus solids)

**Regulatory information** 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.

**16. Other information, including date of preparation or last revision****Issue date** 30-Aug-2014**Revision date** 16-Apr-2015**Version #** 05

**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.

**Revision Information** Composition / Information on Ingredients

**Manufacturer information** Hewlett-Packard Company  
 3000 Hanover Street  
 Palo Alto, California 94304-1112 US  
 Direct 1-650-857-5020

## Explanation of abbreviations

<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>CAS</b>	Chemical Abstracts Service
<b>CERCLA</b>	Comprehensive Environmental Response Compensation and Liability Act
<b>CFR</b>	Code of Federal Regulations
<b>COC</b>	Cleveland Open Cup
<b>DOT</b>	Department of Transportation
<b>EPCRA</b>	Emergency Planning and Community Right-to-Know Act (aka SARA)
<b>IARC</b>	International Agency for Research on Cancer
<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>NTP</b>	National Toxicology Program
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>REC</b>	Recommended
<b>REL</b>	Recommended Exposure Limit
<b>SARA</b>	Superfund Amendments and Reauthorization Act of 1986
<b>STEL</b>	Short-Term Exposure Limit
<b>TCLP</b>	Toxicity Characteristics Leaching Procedure
<b>TLV</b>	Threshold Limit Value
<b>TSCA</b>	Toxic Substances Control Act
<b>VOC</b>	Volatile Organic Compounds



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** C2P06Series[Y][3]  
**Other means of identification** Not available.  
**Recommended use** Inkjet printing  
**Recommended restrictions** None known.  
**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. Hazard(s) identification

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.

### Label elements

**Hazard symbol** None.  
**Signal word** None.  
**Hazard statement** Not available.  
**Precautionary statement**  
**Prevention** Not available.  
**Response** Not available.  
**Storage** Not available.  
**Disposal** Not available.

**Hazard(s) not otherwise classified (HNOC)** 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

**Supplemental information** None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Water		7732-18-5	60-70
1,5-pentanediol		111-29-5	< 10
2-pyrrolidone		616-45-5	< 7.5
Substituted naphthalenesulfonate salt # 13		Proprietary	< 7.5
magnesium nitrate hexahydrate		13446-18-9	< 2.5

**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).

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#### 4. First-aid measures

**Inhalation** Remove to fresh air. If symptoms persist, get medical attention.

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

**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.

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

**Most important symptoms/effects, acute and delayed** Not available.

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#### 5. Fire-fighting measures

**Suitable extinguishing media** Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Unsuitable extinguishing media** None known.

**Specific hazards arising from the chemical** Not applicable.

**Special protective equipment and precautions for firefighters** Not available.

**Specific methods** None established.

---

#### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Wear appropriate personal protective equipment.

**Methods and materials for containment and cleaning up** Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps.

**Environmental precautions** Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

---

#### 7. Handling and storage

**Precautions for safe handling** Avoid contact with skin, eyes and clothing.

**Conditions for safe storage, including any incompatibilities** Keep out of the reach of children. Keep away from excessive heat or cold.

---

#### 8. Exposure controls/personal protection

**Occupational exposure limits** No exposure limits noted for ingredient(s).

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Exposure guidelines** Exposure limits have not been established for this product.

**Appropriate engineering controls** Use in a well ventilated area.

##### Individual protection measures, such as personal protective equipment

**Eye/face protection** Not available.

##### Skin protection

**Hand protection** Not available.

**Other** Not available.

**Respiratory protection** Not available.

**Thermal hazards** Not available.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

---

#### 9. Physical and chemical properties

##### Appearance

Material name: C2P06Series[Y][3]

12126 Version #: 05 Revision date: 16-Apr-2015 Issue date: 30-Aug-2014

<b>Physical state</b>	Liquid.
<b>Color</b>	Yellow
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	8 - 8.4
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not determined
<b>Flash point</b>	> 200.0 °F (> 93.3 °C) Pensky-Martens Closed Cup
<b>Evaporation rate</b>	Not determined
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not determined
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Soluble in water
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	<= 2 cp
<b>Other information</b>	For other VOC regulatory data/information see Section 15.
<b>VOC (Weight %)</b>	< 155 g/L

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## 10. Stability and reactivity

<b>Reactivity</b>	Not available.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	Will not occur.
<b>Conditions to avoid</b>	Not available.
<b>Incompatible materials</b>	Incompatible with strong bases and oxidizing agents.
<b>Hazardous decomposition products</b>	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

---

## 11. Toxicological information

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Not available.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	Based on available data, the classification criteria are not met.
<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met.
<b>Serious eye damage/eye irritation</b>	Based on available data, the classification criteria are not met.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Based on available data, the classification criteria are not met.
<b>Skin sensitization</b>	Based on available data, the classification criteria are not met.

<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - single exposure</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.
<b>Further information</b>	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.

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Guinea pig	6500 mg/kg
	Rat	6500 mg/kg

## 12. Ecological information

**Aquatic toxicity** This product has not been tested for ecological effects.

### Ecotoxicity

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
<b>Aquatic</b>		
Crustacea	EC50 Water flea ( <i>Daphnia pulex</i> )	13.21 mg/l, 48 hours

**Persistence and degradability** Not available.

**Bioaccumulative potential** Not available.

**Partition coefficient n-octanol / water (log Kow)**  
2-pyrrolidone -0.85

**Mobility in soil** Not available.

**Other adverse effects** Not available.

## 13. Disposal considerations

**Disposal instructions** Do not dispose of together with general office waste.  
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.

### ADR

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.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**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**

Not listed.

**SARA 311/312** No  
**Hazardous chemical**

**Other federal regulations**

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations****US. Massachusetts RTK - Substance List**

2-pyrrolidone (CAS 616-45-5)

**US. New Jersey Worker and Community Right-to-Know Act**

Not listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**

2-pyrrolidone (CAS 616-45-5)

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

Not Listed.

**Other information** VOC content (less water, less exempt compounds) = < 527 g/L (U.S. requirement, not for emissions)  
 VOC data based on formulation (Organic compounds minus solids)

**Regulatory information** 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.

**16. Other information, including date of preparation or last revision****Issue date** 30-Aug-2014**Revision date** 16-Apr-2015**Version #** 05

**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.

**Revision Information** Composition / Information on Ingredients

**Manufacturer information** Hewlett-Packard Company  
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## Explanation of abbreviations

<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>CAS</b>	Chemical Abstracts Service
<b>CERCLA</b>	Comprehensive Environmental Response Compensation and Liability Act
<b>CFR</b>	Code of Federal Regulations
<b>COC</b>	Cleveland Open Cup
<b>DOT</b>	Department of Transportation
<b>EPCRA</b>	Emergency Planning and Community Right-to-Know Act (aka SARA)
<b>IARC</b>	International Agency for Research on Cancer
<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>NTP</b>	National Toxicology Program
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>REC</b>	Recommended
<b>REL</b>	Recommended Exposure Limit
<b>SARA</b>	Superfund Amendments and Reauthorization Act of 1986
<b>STEL</b>	Short-Term Exposure Limit
<b>TCLP</b>	Toxicity Characteristics Leaching Procedure
<b>TLV</b>	Threshold Limit Value
<b>TSCA</b>	Toxic Substances Control Act
<b>VOC</b>	Volatile Organic Compounds