



MATERIAL SAFETY DATA SHEET

1. Chemical product and company identification

A. Product name C9447 Series

B. Recommended use and Limitations on use

Recommended use Inkjet printing

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2. Hazards identification

A. Hazard category/Classification

Physical hazards Not classified.
Health hazards Not classified.
Environmental hazards Not classified.

B. Warning label items including precautionary statement

- **Pictogram** None.
- **Signal word** None.
- **Hazard statement** None.
- **Precautionary statement**
 - Prevention** None
 - Response** None
 - Storage** None
 - Disposal** None

C. Other hazards not included in the hazard category criteria (e.g. dust explosion hazard) Not available.

Other hazards 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.

3. Composition/information on ingredients

Chemical identity	Common and alternative names	CAS number	ID number	Content in percent (%)
Water		7732-18-5	KE-35400	80-90
2-pyrrolidone		616-45-5	KE-29978	<5
Alkyldiol		Proprietary	Proprietary	<5

Composition comments This ink supply contains an aqueous ink formulation.

4. First aid measures

- A. In case of 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.
- B. In case of skin contact** Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
- C. In case of inhalation** Move to fresh air. If symptoms persist, get medical attention.
- D. In case of swallowing** If ingestion of a large amount does occur, seek medical attention.
- E. Note to physician** Not available.

5. Fire-fighting measures

A. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media Dry chemical, CO₂, water spray or regular foam.

Unsuitable extinguishing media None known.

B. Specific hazards arising from the chemical (example: hazardous combustion products) Not available.

C. Specific methods of fire-fighting Not available.

C. Specific methods of fire-fighting Not available.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency measures Wear appropriate personal protective equipment.

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

C. 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.

7. Handling and storage

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

B. 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

A. Exposure limit values, biological limit values, etc

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.

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

C. Personal protective equipment

• **Respiratory protection** Not available.

• **Eye protection** Not available.

• **Hand protection** Not available.

• **Body protection** Not available.

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

Recommended monitoring procedures

Additional exposure data Exposure limits have not been established for this product.

9. Physical and chemical properties

A. Appearance Clear liquid

Physical state Not available.

Color Clear.

B. Odor Not available.

C. Odor threshold	Not available.
D. pH	9.2
E. Melting point/freezing point	Not available.
F. Boiling point, initial boiling point, and boiling range	Not determined
G. Flash point	> 230.0 °F (> 110.0 °C) Setaflash Closed Cup
H. Evaporation rate	Not determined
I. Flammability (solid, gas)	Not available.
J. Upper/lower limit on flammability or explosive limits	
Flammability limit - lower (%)	Not determined
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
K. Vapor pressure	Not determined
L. Solubility	
Solubility (water)	Soluble in water
M. Vapor density	>= 1 (air=1.0)
N. Specific gravity	Not available.
O. n-octanol/water partition coefficient	Not available.
P. Auto-ignition temperature	Not determined
Q. Decomposition temperature	Not available.
R. Viscosity	Not available.
S. Molecular weight	Not available.
Other data	
Oxidizing properties	Not determined
VOC (Weight %)	< 108 g/l

10. Stability and reactivity

A. Stability and hazardous reaction potential

Stability	Stable under recommended storage conditions.
Hazardous reaction potential	Will not occur.

B. Conditions to avoid (e.g. static discharge, shock or vibration, etc) Not available.

C. Incompatible materials Incompatible with strong bases and oxidizing agents.

D. Hazardous decomposition products Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. Toxicological information

A. Information on likely routes of exposure

- **Respiratory organs** Not available.
- **Mouth** Not available.
- **Eyes** Not available.
- **Skin** Not available.

B. Information on health hazards

- **Acute toxicity (list all possible routes of exposure)** Based on available data, the classification criteria are not met.
- **Corrosivity or irritation to the skin** 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 sensitization** Based on available data, the classification criteria are not met.
- **Skin sensitization** Based on available data, the classification criteria are not met.
- **Carcinogenic properties /Carcinogenicity** Based on available data, the classification criteria are not met.
- **Mutagenic properties /Mutagenicity** Based on available data, the classification criteria are not met.
- **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.

Components	Species	Test Results
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2-pyrrolidone (CAS 616-45-5)

Acute

Oral

LD50

Guinea pig

6500 mg/kg

Rat

6500 mg/kg

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

A. Ecotoxicity

Product	Species	Test Results
C9447 Series (CAS Mixture)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) > 750 mg/l, 96 hours

Components	Species	Test Results
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2-pyrrolidone (CAS 616-45-5)

Aquatic

Crustacea

EC50

Water flea (*Daphnia pulex*)

13.21 mg/l, 48 hours

Hazardous to the aquatic environment, acute hazard Not available.

Hazardous to the aquatic environment, long-term hazard Not available.

B. Persistence/degradability Not available.

C. Bioaccumulative potential

Bioaccumulative potential

Octanol/water partition coefficient log Kow

2-pyrrolidone

-0.85

D. Mobility in soil Not available.

E. Other adverse effects Not available.

13. Disposal considerations

- A. Method of disposal** 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.
Ensure collection and disposal with an appropriately licensed waste contractor.
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>.
- B. Disposal considerations (including disposal of contaminated containers or packaging)** Not available.
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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.
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15. Regulatory information

- A. Restrictions under the Industrial Safety and Health Law**
- Harmful Substances Prohibited from Manufacturing**
Not regulated.
 - Harmful Substances Requiring Permission for Manufacture or Use**
Not regulated.
 - Controlled Hazardous Substances**
Not regulated.
 - Harmful Substances Requiring Special Medical Examination**
Not regulated.
 - Workplace Environmental Monitoring Harmful Materials**
Not regulated.
 - Occupational Exposure Limit**
Not regulated.
- B. Restrictions under the Toxic Chemicals Control Law**
- Accidental Release Prevention Substances**
Not regulated.
 - Banned Toxic Chemicals**
Not regulated.
 - Observational Chemicals**
Not regulated.
 - Restricted Chemical Substances**
Not regulated.
 - Toxic Chemicals**
Not regulated.
- C. Restrictions under the Dangerous Substance Safety Management Act**
- D. Restrictions under the Wastes Control Act**
- Halogenated Materials in Waste Organic Solvents**
Not regulated.
 - Hazardous Substances**
Not regulated.

E. Restrictions under other foreign or domestic laws

Clean Air Conservation Act

Air Pollutants

Not regulated.

Specific Air Pollutants

Not regulated.

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

A. Source of information Not available.

B. Issue date 12-Mar-2015

Revision date 09-Sep-2015

C. Number of revisions and date of most recent revision 09-Sep-2015 (02 revision)

D. Other Not available.

Disclaimer This Safety Data Sheet document is provided without charge to customers of HP. Data is the most current known to HP 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.

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

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Explanation of abbreviations

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