



MATERIAL SAFETY DATA SHEET

1. Chemical product and company identification

Important information	*** This Safety Data Sheet is only authorised for use by HP for HP Original products. Any unauthorised use of this Safety Data Sheet is strictly prohibited and may result in legal action being taken by HP. ***
A. Product name	C9448Series
Other means of identification	Not available.
B. Recommended use and Limitations on use	
Recommended use	Inkjet printing
C. Supplier information	
	HP Korea House 23-6 Yoido-dong Youngdeungpo-gu Seoul 150-742, Korea
Telephone	(02) 2199-0114
HP Inc. health effects line	
(Toll-free within the US)	1-800-457-4209
(Direct)	1-760-710-0048
HP Inc. 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

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	None.
C. Other hazards not included in the hazard category criteria (e.g. dust explosion hazard)	Complete toxicity data are not available for this specific formulation. Potential routes of overexposure to this product are skin and eye contact. Inhalation of vapor and ingestion are not expected to be significant routes of exposure for this product under normal use conditions. Carbon black is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans). Carbon black in this preparation, due to its bound form, does not present this carcinogenic risk. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.
Supplemental information	2-pyrrolidone: Specific Concentration Limits, Reproductive toxicity Category 1B, fertility or the unborn child 3%. Mixture classification threshold based on data related to developmental toxicity in animals. No adverse effects on sexual function or damage to fertility have been observed in an animal study. See Section 11.

3. Composition/information on ingredients

Chemical identity	Common and alternative names	CAS number	ID number	Content in percent (%)
Water		7732-18-5	KE-35400	70-80
2-pyrrolidone		616-45-5	KE-29978	<3.0

Composition comments

This ink supply contains an aqueous ink formulation.

Carbon black is present only in a bound form in this preparation. 2-pyrrolidone: Specific Concentration Limit 3%. Mixture classification threshold based on data related to developmental toxicity in animals. No adverse effects on sexual function or damage to fertility have been observed in an animal study. See Section 11.

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. If irritation persists get medical attention.
- 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** CO₂, water, dry chemical, or 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.
- Specific methods** None established.

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** Use personal protective equipment to minimize exposure to skin and eye.
- Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

- A. Appearance**
- Physical state** Liquid.

Form	Not available.
Color	Black.
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) Pensky-Martens 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)
N. Specific gravity	1 - 1.1
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	< 240 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. hydrogen fluoride, fluorinated hydrocarbons

11. Toxicological information

A. Information on likely routes of exposure

- **Respiratory organs** Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
- **Skin** Contact with skin may result in mild irritation.
- **Eyes** Contact with eyes may result in mild irritation.
- **Mouth** Ingestion is not a likely route of exposure.

B. Information on health hazards

- **Acute toxicity (list all possible routes of exposure)** Based on available data, the classification criteria are not met.

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg
• Corrosivity or irritation to the skin	Based on available data, the classification criteria are not met. Non irritant in rabbit (OECD 404)	
• Serious eye damage/eye irritation	Based on available data, the classification criteria are not met. Not classified as an irritant according to, OECD 405.	
• 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. 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. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.	
• 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. 2-pyrrolidone: This component showed developmental effects only at high doses that were toxic to pregnant test animals (OECD Testing Guideline 414: Prenatal Developmental Toxicity Study). Uptake by people of small doses is not expected to cause developmental toxicity. This component has not caused adverse effects on sexual function or damage to fertility in an animal study (OECD Testing Guideline 443: Extended One-Generation Reproductive Toxicity Study).	
• 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.	

12. Ecological information

A. Ecotoxicity

Product	Species	Test Results
C9448Series		
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

Aquatic toxicity Not expected to be harmful to aquatic organisms.

B. Persistence/degradability Not available.

C. 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 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 .
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B. Disposal considerations (including disposal of contaminated containers or packaging) Not available.

14. Transport information

DOT

UN number Not available.
UN proper shipping name Not Regulated
Transport hazard class(es)
Class Not available.
Subsidiary risk -
Packing group Not available.
Environmental hazards
Marine pollutant No
Special precautions for user Not available.

IATA

UN number Not available.
UN proper shipping name Not Regulated
Transport hazard class(es)
Class Not available.
Subsidiary risk -
Packing group Not available.
Environmental hazards No
Special precautions for user Not available.

IMDG

UN number Not available.
UN proper shipping name Not Regulated
Transport hazard class(es)
Class Not available.
Subsidiary risk -
Packing group Not available.
Transport hazard class(es)
Marine pollutant No
EmS Not available.
Special precautions for user Not available.

ADR

UN number Not available.
UN proper shipping name Not Regulated
Transport hazard class(es)
Class Not available.
Subsidiary risk -
Hazard No. (ADR) Not available.
Tunnel restriction code Not available.
Packing group Not available.
Environmental hazards No
Special precautions for user Not available.

Further information Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC code: Not applicable.

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 Chemicals Control Law (Previously Toxic Chemicals Control Law)

Accidental Release Prevention Substances

Not regulated.

Act on the Registration and Evaluation of Chemicals

Banned Toxic Chemicals

Not regulated.

Designated Existing Chemicals Subject to Registration (PEC) (MoE No. 2015-92)

Not listed.

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.

Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides (Rules on PIC, MoE No. 2014-252, Dec. 31, 2014; Standards for Pesticides, RDA No. 2014-26), as amended

Not listed.

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

28-Jan-2020

C. Number of revisions and date of most recent revision

12-Feb-2021 (05 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 safety data sheet is meant to convey information about HP inks (toners) provided in HP Original ink (toner) supplies. If our Safety Data Sheet has been provided to you with a refilled, remanufactured, compatible or other non-HP Original supply please be aware that the information contained herein was not meant to convey information about such products and there could be considerable differences from information in this document and the safety information for the product you purchased. Please contact the seller of the refilled, remanufactured or compatible supplies for applicable information, including information on personal protective equipment, exposure risks and safe handling guidance. HP does not accept refilled, remanufactured or compatible supplies in our recycling programs.

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