

Q3326Series[C][3]-MSDS_KOREA-English-46.pdf

Q3326Series[M][3]-MSDS_KOREA-English-45.pdf

Q3326Series[Y][3]-MSDS_KOREA-English-47.pdf



MATERIAL SAFETY DATA SHEET

1. Chemical product and company identification

A. Product name Q3326Series[C][3]
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) 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

Chemical identity	Common and alternative names	CAS number	ID number	Content in percent (%)
Water		7732-18-5	KE-35400	65-75
1,5-pentanediol		111-29-5	KE-27985	<10
2-pyrrolidone		616-45-5	KE-29978	< 7.5
Cyan colorant		Proprietary	Proprietary	< 5
Magnesium nitrate hexahydrate		10377-60-3	KE-22725	< 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. 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 For small (incipient) fires, use media such as foam, sand, dry chemical, or carbon dioxide.
For large fires use very large (flooding) quantities of water and/or foam, applied as a mist or spray.

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** Not available.

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 Cyan

B. Odor Not available.

C. Odor threshold Not available.

D. pH 6.2 - 6.8

E. Melting point/freezing point Not available.

F. Boiling point, initial boiling point, and boiling range Not determined

G. Flash point > 200.0 °F (> 93.3 °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 = 1.0)

N. Specific gravity Not available.

O. n-octanol/water partition coefficient Not available.

P. Auto-ignition temperature Not available.

Q. Decomposition temperature Not available.

R. Viscosity ≥ 2 cp

S. Molecular weight Not available.

Other data

Oxidizing properties Not determined

VOC < 221 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 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 Health injuries are not known or expected under normal use.

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)		
<u>Acute</u>		
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, Rabbit Enucleated Eye Test.
- 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.

12. Ecological information

A. Ecotoxicity

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Aquatic		
Crustacea	EC50 Water flea (Daphnia pulex)	13.21 mg/l, 48 hours
Aquatic toxicity	LC50/96h/rainbow trout => 100 mg/l EC50/48h/daphnia => 100mg/l, OECD 202 EC50/72h/algae => 100 mg/l, OECD 201	
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 .
B. Disposal considerations (including disposal of contaminated containers or packaging)	Not available.

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

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.

Observational 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.

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.

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

15-Sep-2015

C. Number of revisions and date of most recent revision

16-Oct-2018 (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 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.

Revision information

Toxicological information: • Corrosivity or irritation to the skin
Toxicological information: Skin contact
Regulatory information: Regulatory information
Other information: Disclaimer

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



MATERIAL SAFETY DATA SHEET

1. Chemical product and company identification

A. Product name Q3326Series[M][3]
B. Recommended use and Limitations on use
Recommended use Inkjet printing
C. Supplier information
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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) 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

Chemical identity	Common and alternative names	CAS number	ID number	Content in percent (%)
Water		7732-18-5	KE-35400	65-75
1,5-pentanediol		111-29-5	KE-27985	<10
2-pyrrolidone		616-45-5	KE-29978	< 7.5
Magenta colorant		Proprietary	Proprietary	< 5
Magnesium nitrate hexahydrate		10377-60-3	KE-22725	< 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	Remove 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, CO ₂ , 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.

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 None established.

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.

9. Physical and chemical properties

A. Appearance

Physical state	Liquid.
Form	Not available.
Color	Magenta

B. Odor Not available.

C. Odor threshold Not available.

D. pH 6.2 - 6.8

E. Melting point/freezing point Not available.

F. Boiling point, initial boiling point, and boiling range Not determined

G. Flash point > 200.0 °F (> 93.3 °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 = 1.0)

N. Specific gravity Not available.

O. n-octanol/water partition coefficient Not available.

P. Auto-ignition temperature Not available.

Q. Decomposition temperature Not available.

R. Viscosity ≥ 2 cp

S. Molecular weight Not available.

Other data

Oxidizing properties Not determined

VOC < 221 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 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 Health injuries are not known or expected under normal use.

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)		
<u>Acute</u>		
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.
• 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.

12. Ecological information

A. Ecotoxicity

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Aquatic		
Crustacea	EC50 Water flea (Daphnia pulex)	13.21 mg/l, 48 hours
Aquatic toxicity	LC50/96h/rainbow trout => 100 mg/l EC50/48h/daphnia => 100mg/l , OECD 202 EC50/72h/algae => 100 mg/l, OECD 201	
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 .
B. Disposal considerations (including disposal of contaminated containers or packaging)	Not available.

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

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.

Observational 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.

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.

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

15-Sep-2015

C. Number of revisions and date of most recent revision

16-Oct-2018 (02 revision)

D. Other

Not available.

Disclaimer

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 Other information: Disclaimer

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



MATERIAL SAFETY DATA SHEET

1. Chemical product and company identification

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B. Recommended use and Limitations on use
Recommended use Inkjet printing
C. Supplier information
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Line
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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) 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

Chemical identity	Common and alternative names	CAS number	ID number	Content in percent (%)
Water		7732-18-5	KE-35400	65-75
1,5-pentanediol		111-29-5	KE-27985	<10
2-pyrrolidone		616-45-5	KE-29978	< 7.5
Yellow colorant		Proprietary	Proprietary	< 7.5
Magnesium nitrate hexahydrate		10377-60-3	KE-22725	< 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	Remove 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, CO ₂ , 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.

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 None established.

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.

9. Physical and chemical properties

A. Appearance

Physical state	Liquid.
Form	Not available.
Color	Yellow

B. Odor Not available.

C. Odor threshold Not available.

D. pH 6.2 - 6.8

E. Melting point/freezing point Not available.

F. Boiling point, initial boiling point, and boiling range Not determined

G. Flash point > 200.0 °F (> 93.3 °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 = 1.0)

N. Specific gravity Not available.

O. n-octanol/water partition coefficient Not available.

P. Auto-ignition temperature Not available.

Q. Decomposition temperature Not available.

R. Viscosity ≥ 2 cp

S. Molecular weight Not available.

Other data

Oxidizing properties Not determined

VOC < 221 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 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 Health injuries are not known or expected under normal use.

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)		
<u>Acute</u>		
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.
- **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.

12. Ecological information

A. Ecotoxicity

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Aquatic		
Crustacea	EC50 Water flea (Daphnia pulex)	13.21 mg/l, 48 hours
Aquatic toxicity	LC50/96h/rainbow trout => 100 mg/l EC50/48h/daphnia => 100mg/l , OECD 202 EC50/72h/algae => 100 mg/l , OECD 201	
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>.
- B. Disposal considerations (including disposal of contaminated containers or packaging)** Not available.

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

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.

Observational 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.

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.

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

15-Sep-2015

C. Number of revisions and date of most recent revision

16-Oct-2018 (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 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.

Revision information

Toxicological information: • Corrosivity or irritation to the skin
Toxicological information: Skin contact
Regulatory information: Regulatory information
Other information: Disclaimer

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