SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture: CH554Series[C][2]

Registration number: -

Synonyms: None.

Issue date: 25-May-2016

Version number: 02

Revision date: 22-May-2018

Supersedes date: 25-May-2016

1.2. Relevant identified uses of the substance or mixture and uses advised against

- Identified uses: Inkjet printing

- Uses advised against: None known.

1.3. Details of the supplier of the safety data sheet

Company identification: HP Inc. UK Limited

Cain Road, Amen Corner

Amen Corner

Bracknell, Berkshire RG12 1HN

United Kingdom

Telephone

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

1.4 Emergency telephone number

1-760-710-0048

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

- Contains: 1-(2-hydroxyethyl)-2-pyrrolidone, 2-pyrrolidone, Cyan dye, Water

- Hazard pictograms: None.

- Signal word: None.

- Hazard statements: The mixture does not meet the criteria for classification.

Precautionary statements

- Prevention: Not available.

- Response: Not available.

- Storage: Not available.

- Disposal: Not available.

Supplemental label information

Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.

2.3. 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.
SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>%</th>
<th>CAS-No. / EC No.</th>
<th>REACH Registration No.</th>
<th>Index No.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>70-80</td>
<td>7732-18-5</td>
<td>231-791-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classification:</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-(2-hydroxyethyl)-2-pyrrolidone</td>
<td>&lt;10</td>
<td>3445-11-2</td>
<td>01-2119977089-21-XXXX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classification:</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td>&lt;5</td>
<td>616-45-5</td>
<td>01-2119475471-37-XXXX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classification:</td>
<td>Eye Irrit. 2;H319</td>
<td>210-483-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyan dye</td>
<td>&lt;5</td>
<td>Proprietary</td>
<td>01-0000017445-69-XXXX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classification:</td>
<td>Eye Dam. 1;H318</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Composition comments: This ink supply contains an aqueous ink formulation.

SECTION 4: First aid measures

4.1. Description of first aid measures

- **Inhalation**: Move to fresh air. If symptoms persist, get medical attention.
- **Skin contact**: Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.
- **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.

4.2. Most important symptoms and effects, both acute and delayed: Not available.

4.3. Indication of any immediate medical attention and special treatment needed: Not available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media: CO2, water, dry chemical, or foam
- Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture: Not available.

5.3. Advice for firefighters

- Special protective equipment for firefighters: Not available.
- Special fire fighting procedures: Not available.

Specific methods: None established.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- **For non-emergency personnel**: Wear appropriate personal protective equipment.
- **For emergency responders**: Not available.
6.2. Environmental precautions
Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

6.3. Methods and material 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.

6.4. Reference to other sections
Not available.

SECTION 7: Handling and storage

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

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

7.3. Specific end use(s)
Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Occupational exposure limits
No exposure limits noted for ingredient(s).

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

Recommended monitoring procedures
Not available.

Derived no effect levels (DNELs)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Route</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td>Consumers</td>
<td>Dermal</td>
<td>6 mg/kg bw/d</td>
<td>Systemic long term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dermal</td>
<td>167 mg/kg bw/d</td>
<td>Systemic acute short term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inhalation</td>
<td>17.1 mg/m3</td>
<td>Systemic long term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oral</td>
<td>5.2 mg/kg bw/d</td>
<td>Systemic long term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oral</td>
<td>33.3 mg/kg bw/d</td>
<td>Systemic acute short term</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Dermal</td>
<td>277 mg/kg bw/d</td>
<td>Systemic acute short term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dermal</td>
<td>10 mg/kg bw/d</td>
<td>Systemic long term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inhalation</td>
<td>57.8 mg/m3</td>
<td>Systemic long term</td>
</tr>
</tbody>
</table>

Predicted no effect concentrations (PNECs)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Route</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td>Not applicable</td>
<td>Freshwater</td>
<td>0.5 mg/l</td>
<td>Releases</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intermittent</td>
<td>0.5 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine water</td>
<td>0.05 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sediment</td>
<td>0.4205 mg/kg</td>
<td>Freshwater</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil</td>
<td>0.0612 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>STP</td>
<td>10 mg/l</td>
<td>Sewage Treatment Plant</td>
</tr>
</tbody>
</table>

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

8.2. Exposure controls
Use in a well ventilated area.

Individual protection measures, such as personal protective equipment

General information
Use personal protective equipment to minimize exposure to skin and eye.

Eye/face protection
Not available.

Skin protection
- Hand protection
Not available.
- Other
Not available.

Respiratory protection
Not available.

Thermal hazards
Not available.

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

Environmental exposure controls
Not available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Material name: CH554Series[C][2]
Version #: 02   Revision date: 22-May-2018   Issue date: 25-May-2016
Color | Cyan  
--- | ---  
Odor | Not available.  
Odor threshold | Not available.  
P H | 7.1 - 7.7  
Initial boiling point and boiling range | Not determined  
Flash point | > 230.0 °F (> 110.0 °C) Setaflash Closed Tester  
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.  
Vapor pressure | Not determined  
Vapor density | >= 1 (air = 1.0)  
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  
Explosive properties | Not available.  
Oxidizing properties | Not determined  
9.2. Other information |  
VOC | < 242 g/L  

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

General information | Not available.  
Information on likely routes of exposure |  
Inhalation | Under normal conditions of intended use, this material is not expected to be an inhalation hazard.  
Skin contact | Contact with skin may result in mild irritation.  
Eye contact | Contact with eyes may result in mild irritation.  
Ingestion | Health injuries are not known or expected under normal use.  
Symptoms | Not available.  

11.1. Information on toxicological effects |  
Acute toxicity | Based on available data, the classification criteria are not met.  
Components | Species | Test Results  
2-pyrrolidone (CAS 616-45-5) |  
Acute | |  
Oral | Rat | > 5000 mg/kg  
LD50 | |  
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.  
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.

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

**Carcinogenicity** 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.

**Mixture versus substance information** Not available.

**Other 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.

---

**SECTION 12: Ecological information**

12.1. **Toxicity**

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

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH554Series[C][2]</td>
<td>Species</td>
<td>Test Results</td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong> Fish</td>
<td>LC50</td>
<td>Fathead minnow (Pimephales promelas) &gt; 750 mg/l, 96 hours</td>
</tr>
<tr>
<td><strong>Components</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td>Species</td>
<td>Test Results</td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Crustacea</strong></td>
<td>EC50</td>
<td>Water flea (Daphnia pulex) 13.21 mg/l, 48 hours</td>
</tr>
</tbody>
</table>

12.2. **Persistence and degradability** Not available.

12.3. **Bioaccumulative potential** Not available.

**Partition coefficient**

| n-octanol/water (log Kow) | 2-pyrrolidone | -0.85 |

**Bioconcentration factor (BCF)** Not available.

12.4. **Mobility in soil** Not available.

12.5. **Results of PBT and vPvB assessment** Not a PBT or vPvB substance or mixture.

12.6. **Other adverse effects** Not available.

---

**SECTION 13: Disposal considerations**

13.1. **Waste treatment methods**

**Residual waste** Not available.

**Contaminated packaging** Not available.

**EU waste code** Not available.

**Disposal methods/information** 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.

---

**SECTION 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.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations
- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I  
  Not listed.
- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II  
  Not listed.
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended  
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended  
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended  
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended  
  Not listed.
- Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry  
  Not listed.
- Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA  
  Not listed.

Authorizations
- Regulation (EC) No. 143/2011 Annex XIV Substances Subject to Authorization  
  Not listed.

Restrictions on use
- Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended  
  Not listed.
- Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work  
  Not regulated.

Other EU regulations
- Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended  
  Not listed.

Other regulations
- All chemical substances in this HP product have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

Other information
- This Safety Data Sheet complies with the requirements of Regulation (EU) 2015/830. Classification according to Regulation (EC) No 1272/2008 as amended.


National regulations
- Not available.

15.2. Chemical safety assessment
- See attached SUMI or GEIS document, if applicable.
SECTION 16: Other information

References


Information on evaluation method leading to the classification of mixture
The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any H-statements not written out in full under Sections 2 to 15
H318 Causes serious eye damage.
H319 Causes serious eye irritation.

Revision information
None.

Training information
Follow training instructions when handling this material.

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
Safe Use of Mixture Information (SUMI)

Water Based Ink: WB01 *English*

Disclaimer
This SUMI is a generic document for communicating conditions of safe use of a product in response to the REACH obligation. This document relates only to conditions of safe use and is not specific to a product. By adding this SUMI to a specific product SDS, the importer/formulator declares that the mixture can safely be used following the instructions below. Following occupational health legislation, the employer of workers remains responsible for communicating relevant use information to employees. When developing workplace instructions for employees, SUMI Sheets should always be considered in combination with the SDS and the label of the product. Derived No Effect Levels (DNEL) and Predicted No Effect Concentration (PNEC) values of substances derived from the Chemical Safety Assessment (CSA) will be given in section 8 of the SDS.

The REACH registration number(s), where applicable, completes an extended product SDS.

Operational conditions

<table>
<thead>
<tr>
<th>Maximum duration</th>
<th>Frequency of exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 8 hours per day</td>
<td>&lt; 240 days per year</td>
</tr>
</tbody>
</table>

Process conditions
Covers use at ambient temperatures.
Adequate ventilation should be provide for the areas where printing is performed. ANSI/ASHRAE Standard 62.1-2013 provides guidelines to ensure acceptable air quality in the workspace.
Avoid direct contact.
Regular cleaning of equipment and work area.
Supervision in place to check that Risk Management Measures are in place are being correctly used and Operational Conditions followed.

Risk management measures

Conditions and measures related to Personal Protection Equipment, hygiene and health evaluation
Wear safety glasses with side shields (or goggles), if splashing is possible.
Wear appropriate chemical resistant gloves: see section 8 of the SDS.
Wear appropriate chemical resistant clothing.
In case of inadequate ventilation wear respiratory protection.
Eye wash fountain and emergency showers are recommended.
Avoid breathing mist/vapours.
Avoid contact with skin, eyes and clothing.
Training of workers in relation to proper use and maintenance of all Personal protection equipment (PPE) must be ensured.

Good practice advice
Use personal protective equipment as required.
Wash hands before breaks and after work.
Keep good industrial hygiene and safety practice.
Use only with adequate ventilation.
Do no eat, drink or smoke when using this product.
Wash contaminated clothing before reuse.
Store at room temperature.

Environmental measures
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 appropriately licenced waste contractor.

Use descriptors
IS-Use at industrial sites
PW-Widespread use by professional workers
SU7-Printing and reproduction media
PC18-Inks and Toners
PROC1-Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2-Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3- Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC8a-Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b-Transfer of substance or mixture (charging and discharging) at dedicated facilities
ERC5-Use at industrial site leading to inclusion into/onto article
ERC8c-Widespread use leading to inclusion into/onto article (indoor)

Additional information on product composition
In section 2 of the SDS as well as on the label, the classification of the mixture is provided.
Most of the water based inks are "not classified".
The classification of the mixture is based on the individual ingredients and their concentration within the mixture.
All ingredients contributing to the classification are stated in Section 3 of the SDS.
Relevant limit values of ingredients on which the exposure assessment is based, are listed in section 8 of the SDS.
The product may contain sensitizing ingredients that may cause allergic reaction to certain people.
Section 2 of the SDS states these ingredients where applicable.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Trade name or designation of the mixture: CH554Series[M][2]
Registration number: -
Synonyms: None.
Issue date: 25-May-2016
Version number: 04
Revision date: 24-May-2018
Supersedes date: 22-May-2018

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Inkjet printing
Uses advised against: None known.

1.3. Details of the supplier of the safety data sheet
Company identification: HP Inc. UK Limited
Cain Road, Amen Corner
Amen Corner
Bracknell, Berkshire RG12 1HN
United Kingdom

Telephone:
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
1.4 Emergency telephone number: 1-760-710-0048

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 as amended:
This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

2.2. Label elements
Label according to Regulation (EC) No. 1272/2008 as amended
Contains: 1-(2-hydroxyethyl)-2-pyrrolidone, 2-pyrrolidone, Water
Hazard pictograms: None.
Signal word: None.
Hazard statements: The mixture does not meet the criteria for classification.
Precautionary statements
Prevention: Not available.
Response: Not available.
Storage: Not available.
Disposal: Not available.
Supplemental label information: Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.
2.3. 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. None of the ingredients have been classified as carcinogens according to EU, IARC, MAK, NTP, OSHA or ACGIH.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>%</th>
<th>CAS-No. / EC No.</th>
<th>REACH Registration No.</th>
<th>Index No.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>70-85</td>
<td>7732-18-5 231-791-2</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>1-(2-hydroxyethyl)-2-pyrrolidone</td>
<td>&lt; 10</td>
<td>3445-11-2 222-359-4</td>
<td>01-2119977089-21-XXXX</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td>&lt; 7.5</td>
<td>616-45-5 210-483-1</td>
<td>01-2119475471-37-XXXX</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Classification:
Water - Eye Irrit. 2; H319

Composition comments
This ink supply contains an aqueous ink formulation.

SECTION 4: First aid measures

4.1. Description of first aid measures
Inhalation
Move to fresh air. If symptoms persist, get medical attention.

Skin contact
Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.

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.

4.2. Most important symptoms and effects, both acute and delayed
Not available.

4.3. Indication of any immediate medical attention and special treatment needed
Not available.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
CO2, water, dry chemical, or foam

Unsuitable extinguishing media
None known.

5.2. Special hazards arising from the substance or mixture
Refer to section 10.

5.3. Advice for firefighters
Special protective equipment for firefighters
Not available.

Special fire fighting procedures
Not available.

Specific methods
None established.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
Wear appropriate personal protective equipment.

For emergency responders
Not available.
6.2. Environmental precautions
Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

6.3. Methods and material 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.

6.4. Reference to other sections
Not available.

SECTION 7: Handling and storage

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

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

7.3. Specific end use(s)
Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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

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

Recommended monitoring procedures
Not available.

Derived no effect levels (DNELs)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Route</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td>Consumers</td>
<td>Dermal</td>
<td>6 mg/kg bw/d</td>
<td>Systemic long term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dermal</td>
<td>167 mg/kg bw/d</td>
<td>Systemic acute short term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inhalation</td>
<td>17.1 mg/m3</td>
<td>Systemic long term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oral</td>
<td>5.2 mg/kg bw/d</td>
<td>Systemic long term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oral</td>
<td>33.3 mg/kg bw/d</td>
<td>Systemic acute short term</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Dermal</td>
<td>277 mg/kg bw/d</td>
<td>Systemic acute short term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oral</td>
<td>10 mg/kg bw/d</td>
<td>Systemic long term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inhalation</td>
<td>57.8 mg/m3</td>
<td>Systemic long term</td>
</tr>
</tbody>
</table>

Predicted no effect concentrations (PNECs)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Route</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td>Not applicable</td>
<td>Freshwater</td>
<td>0.5 mg/l</td>
<td>Releases</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intermittent</td>
<td>0.5 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine water</td>
<td>0.05 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sediment</td>
<td>0.4205 mg/kg</td>
<td>Freshwater</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil</td>
<td>0.0612 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>STP</td>
<td>10 mg/l</td>
<td>Sewage Treatment Plant</td>
</tr>
</tbody>
</table>

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

8.2. Exposure controls
Use in a well ventilated area.

Individual protection measures, such as personal protective equipment

General information
Use personal protective equipment to minimize exposure to skin and eye.

Eye/face protection
Not available.

Skin protection

- Hand protection
Not available.

- Other
Not available.

Respiratory protection
Not available.

Thermal hazards
Not available.

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

Environmental exposure controls
Not available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state
Not available.

Form
Not available.
Color: Magenta
Odor: Not available.
Odor threshold: Not available.
pH: 7 - 7.6
Initial boiling point and boiling range: Not determined
Flash point: > 230.0 °F (> 110.0 °C) Setaflash Closed Tester
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.
Vapor pressure: Not determined
Vapor density: >= 1 (air = 1.0)
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
Explosive properties: Not determined
Oxidizing properties: Not available.
9.2. Other information:
  Specific gravity: 1 - 1.2
  VOC: 191 g/L EPA Method 24

SECTION 10: Stability and reactivity
10.1. Reactivity: Not available.
10.2. Chemical stability: Stable under recommended storage conditions.
10.3. Possibility of hazardous reactions: Will not occur.
10.4. Conditions to avoid: Not available.
10.5. Incompatible materials: Incompatible with strong bases and oxidizing agents.
10.6. Hazardous decomposition products:
Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

SECTION 11: Toxicological information
General information: Not available.
Information on likely routes of exposure:
  Inhalation: Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
  Skin contact: Contact with skin may result in mild irritation.
  Eye contact: Contact with eyes may result in mild irritation.
  Ingestion: Health injuries are not known or expected under normal use.
Symptoms: Not available.
11.1. Information on toxicological effects:
Acute toxicity: Based on available data, the classification criteria are not met.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>
Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation
Respiratory sensitization
Skin sensitization
Germ cell mutagenicity
Carcinogenicity
Reproductive toxicity
Specific target organ toxicity - single exposure
Specific target organ toxicity - repeated exposure
Aspiration hazard
Mixture versus substance information
Other 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.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH554Series[M][2]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fathead minnow (Pimephales promelas)</td>
<td>&gt; 750 mg/l, 96 hours</td>
<td></td>
</tr>
</tbody>
</table>

Components

<table>
<thead>
<tr>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water flea (Daphnia pulex)</td>
<td>13.21 mg/l, 48 hours</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

Not available.

12.3. Bioaccumulative potential

Not available.

12.4. Mobility in soil

Not available.

12.5. Results of PBT and vPvB assessment

Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste
Contaminated packaging
EU waste code
Disposal methods/information

Not available.

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.

SECTION 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.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations
- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I
  Not listed.
- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II
  Not listed.
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
  Not listed.
- Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended
  Not listed.
- Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry
  Not listed.
- Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA
  Not listed.

Authorizations
- Regulation (EC) No. 143/2011 Annex XIV Substances Subject to Authorization
  Not listed.

Restrictions on use
- Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
  Not listed.
- Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work
  Not regulated.

Other EU regulations
- Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended
  Not listed.

Other regulations
All chemical substances in this HP product have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NSDL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

Other information
This Safety Data Sheet complies with the requirements of Regulation (EU) 2015/830. Classification according to Regulation (EC) No 1272/2008 as amended.


National regulations
Not available.

15.2. Chemical safety assessment
See attached SUMI or GEIS document, if applicable.
**SECTION 16: Other information**

**References**


**Information on evaluation method leading to the classification of mixture**

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

**Full text of any H-statements not written out in full under Sections 2 to 15**

H319 Causes serious eye irritation.

**Revision information**

None.

**Training information**

Follow training instructions when handling this material.

**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**

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

Water Based Ink: WB01 *English*

Disclaimer
This SUMI is a generic document for communicating conditions of safe use of a product in response to the REACH obligation. This document relates only to conditions of safe use and is not specific to a product. By adding this SUMI to a specific product SDS, the importer/formulator declares that the mixture can safely be used following the instructions below. Following occupational health legislation, the employer of workers remains responsible for communicating relevant use information to employees. When developing workplace instructions for employees, SUMI Sheets should always be considered in combination with the SDS and the label of the product. Derived No Effect Levels (DNEL) and Predicted No Effect Concentration (PNEC) values of substances derived from the Chemical Safety Assessment (CSA) will be given in section 8 of the SDS.
The REACH registration number(s), where applicable, completes an extended product SDS.

Operational conditions
- **Maximum duration**: Up to 8 hours per day
- **Frequency of exposure**: < 240 days per year
- **Process conditions**: Covers use at ambient temperatures. Adequate ventilation should be provide for the areas where printing is performed. ANSI/ASHRAE Standard 62.1-2013 provides guidelines to ensure acceptable air quality in the workspace. Avoid direct contact. Regular cleaning of equipment and work area. Supervision in place to check that Risk Management Measures are in place and are being correctly used and Operational Conditions followed.

Risk management measures
- **Conditions and measures related to Personal Protection Equipment, hygiene and health evaluation**: Wear safety glasses with side shields (or goggles), if splashing is possible. Wear appropriate chemical resistant gloves: see section 8 of the SDS. Wear appropriate chemical resistant clothing. In case of inadequate ventilation wear respiratory protection. Eye wash fountain and emergency showers are recommended. Avoid breathing mist vapours. Avoid contact with skin, eyes and clothing. Training of workers in relation to proper use and maintenance of all Personal protection equipment (PPE) must be ensured.

Good practice advice
- Use personal protective equipment as required.
- Wash hands before breaks and after work.
- Keep good industrial hygiene and safety practice.
- Use only with adequate ventilation.
- Do not eat, drink or smoke when using this product.
- Wash contaminated clothing before reuse.
- Store at room temperature.

Environmental measures
- 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 appropriately licenced waste contractor.

Use descriptors
- IS-Use at industrial sites
- PW-Widespread use by professional workers
- SU7-Printing and reproduction media
- PC18-Inks and Toners
- PROC1-Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
- PROC2-Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
- PROC3-Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
- PROC8a-Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
- PROC8b-Transfer of substance or mixture (charging and discharging) at dedicated facilities
- ERC5-Use at industrial site leading to inclusion into/onto article
- ERC8c-Widespread use on/onto article (outdoor)

Additional information on product composition
In section 2 of the SDS as well as on the label, the classification of the mixture is provided. Most of the water based inks are “not classified”. The classification of the mixture is based on the individual ingredients and their concentration within the mixture. All ingredients contributing to the classification are stated in Section 3 of the SDS. Relevant limit values of ingredients on which the exposure assessment is based, are listed in section 8 of the SDS. The product may contain sensitizing ingredients that may cause allergic reaction to certain people. Section 2 of the SDS states these ingredients where applicable.