1. Identification

Product identifier: Q3281Series[C][3]

Other means of identification: Not available.

Recommended use: Inkjet printing

Recommended restrictions: None known.

Company identification: HP
1501 Page Mill Road
Palo Alto, CA 94304-1112
United States
Telephone 650-857-5020

HP health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-760-710-0048

HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomer.inquiries@hp.com

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Not classified.

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements:

Hazard symbol: None.

Signal word: None.

Hazard statement: Not available.

Precautionary statement:

Prevention: Not available.

Response: Not available.

Storage: Not available.

Disposal: Not available.

Hazard(s) not otherwise classified (HNOC): 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.

Supplemental information: This product is not classified as hazardous according to OSHA CFR 1910.1200 (HazCom 2012).

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td></td>
<td>7732-18-5</td>
<td>65-75</td>
</tr>
<tr>
<td>1,5-pentanediol</td>
<td></td>
<td>111-29-5</td>
<td>&lt;10</td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td></td>
<td>616-45-5</td>
<td>&lt; 7.5</td>
</tr>
<tr>
<td>Magnesium nitrate hexahydrate</td>
<td></td>
<td>10377-60-3</td>
<td>&lt; 7.5</td>
</tr>
<tr>
<td>Ammonium nitrate</td>
<td></td>
<td>6484-52-2</td>
<td>&lt;2.5</td>
</tr>
<tr>
<td>Chemical name</td>
<td>Common name and synonyms</td>
<td>CAS number</td>
<td>% Proprietary</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------</td>
<td>------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Cyan colorant</td>
<td>This ink supply contains an aqueous ink formulation. This product has been evaluated using criteria specified in 29 CFR 1910.1200 (Hazard Communication Standard).</td>
<td>Proprietary</td>
<td>&lt; 2.5</td>
</tr>
</tbody>
</table>

### 4. 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. Get medical attention if irritation develops or persists.

**Eye contact**
Do not rub eyes. Immediately flush with large amounts of clean, warm water (low pressure) for at least 15 minutes or until particles are removed. If irritation persists get medical attention.

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

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

### 5. Fire-fighting measures

**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.

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

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

**Specific methods**
None established.

### 6. Accidental release measures

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

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

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

### 7. Handling and storage

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

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

### 8. Exposure controls/personal protection

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

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

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

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

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

- **Eye/face protection**
  Not available.

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

- **Respiratory protection**
  Not available.

- **Thermal hazards**
  Not available.
### General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

### 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Cyan</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>6.2 - 6.8</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>$\geq 200.0 , ^\circ F (\geq 93.3 , ^\circ C)$ Pensky-Martens Closed Cup</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>$\geq 2 , \text{cp}$</td>
</tr>
<tr>
<td>Other information</td>
<td></td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1 - 1.2</td>
</tr>
<tr>
<td>Other information</td>
<td>For other VOC regulatory data/information see Section 15.</td>
</tr>
<tr>
<td>VOC (Weight %)</td>
<td>$&lt; 338 , \text{g/l}$</td>
</tr>
</tbody>
</table>

### 10. Stability and reactivity

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

### 11. Toxicological information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms related to the physical, chemical and toxicological  characteristics</td>
<td>Not available.</td>
</tr>
<tr>
<td>Information on toxicological effects</td>
<td></td>
</tr>
<tr>
<td>Acute toxicity</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
</tbody>
</table>
Skin corrosion/irritation  
Based on available data, the classification criteria are not met.

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

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

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

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

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

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

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

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

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

Further information  
Complete toxicity data are not available for this specific formulation. Refer to Section 2 for potential health effects and Section 4 for first aid measures.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>Oral</td>
<td>LD50</td>
</tr>
<tr>
<td>Ammonium nitrate (CAS 6484-52-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>Inhalation</td>
<td>LC50</td>
</tr>
</tbody>
</table>

12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyan ink (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td>Acute</td>
<td>Fish</td>
</tr>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td>Crustacea</td>
<td>EC50</td>
</tr>
<tr>
<td>Ammonium nitrate (CAS 6484-52-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td>Crustacea</td>
<td>EC50</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fish</td>
</tr>
<tr>
<td>Cyan colorant (CAS Proprietary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td>Crustacea</td>
<td>EC50</td>
</tr>
</tbody>
</table>

Persistence and degradability  
Not available.

Bioaccumulative potential  
No data available on bioaccumulation.

Partition coefficient n-octanol / water (log Kow)  
2-pyrrolidone -0.85
Mobility in soil: Not available.
Other adverse effects: Not available.

13. Disposal considerations

Disposal instructions: Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. HP’s Planet Partners (trademark) supplies recycling program enables simple, convenient recycling of HP original inkjet and LaserJet supplies. For more information and to determine if this service is available in your location, please visit http://www.hp.com/recycle.

14. Transport information

DOT: Not regulated as dangerous goods.
IATA: Not regulated as dangerous goods.
IMDG: Not regulated as dangerous goods.
ADR: Not regulated as dangerous goods.

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

15. Regulatory information

US federal regulations: US TSCA 12(b): Does not contain listed chemicals.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.
SARA 304 Emergency release notification
Not regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No
SARA 302 Extremely hazardous substance
Not listed.
SARA 311/312 Hazardous chemical
No

Other federal regulations
Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations
US. Massachusetts RTK - Substance List
2-pyrrolidone (CAS 616-45-5)
Ammonium nitrate (CAS 6484-52-2)
US. New Jersey Worker and Community Right-to-Know Act
Ammonium nitrate (CAS 6484-52-2)
US. Pennsylvania Worker and Community Right-to-Know Law
2-pyrrolidone (CAS 616-45-5)
Ammonium nitrate (CAS 6484-52-2)
US. Rhode Island RTK
Not regulated.
US. California Proposition 65
Not Listed.

Other information
VOC content (less water, less exempt compounds) = <1120 g/L (U.S. requirement, not for emissions)
VOC data based on formulation (Organic compounds minus solids)

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

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

Issue date 20-Jun-2015
Revision date 16-Oct-2015
Version # 02

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.

Manufacturer information
HP
1501 Page Mill Road
Palo Alto, CA 94304-1112 US
Direct 1-650-857-5020

Explanation of abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</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>
1. Identification

Product identifier: Q3281Series[M][3]

Other means of identification: Not available.

Recommended use: Inkjet printing

Recommended restrictions: None known.

Company identification: HP
1501 Page Mill Road
Palo Alto, CA 94304-1112
United States
Telephone 650-857-5020

HP health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-760-710-0048

HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomer.inquiries@hp.com

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Not classified.

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements
Hazard symbol: None.
Signal word: None.
Hazard statement: Not available.

Precautionary statement
Prevention: Not available.
Response: Not available.
Storage: Not available.
Disposal: Not available.

Hazard(s) not otherwise classified (HNOC): Potential routes of overexposure to this product are skin and eye contact. Inhalation of vapor and ingestion are not expected to be significant routes of exposure for this product under normal use conditions. Complete toxicity data are not available for this specific formulation.

Supplemental information: This product is not classified as hazardous according to OSHA CFR 1910.1200 (HazCom 2012).

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td></td>
<td>7732-18-5</td>
<td>65-75</td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td></td>
<td>616-45-5</td>
<td>&lt; 7.5</td>
</tr>
<tr>
<td>Magnesium nitrate hexahydrate</td>
<td></td>
<td>10377-60-3</td>
<td>&lt; 7.5</td>
</tr>
<tr>
<td>Substituted naphthalenesulfonate salt #8</td>
<td>Proprietary</td>
<td></td>
<td>&lt; 5</td>
</tr>
<tr>
<td>Ammonium nitrate</td>
<td></td>
<td>6484-52-2</td>
<td>&lt; 2.5</td>
</tr>
</tbody>
</table>
Composition comments
This ink supply contains an aqueous ink formulation. This product has been evaluated using criteria specified in 29 CFR 1910.1200 (Hazard Communication Standard).

4. 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.

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

5. Fire-fighting measures

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.

Specific hazards arising from the chemical
Not applicable.

Special protective equipment and precautions for firefighters
Not available.

Specific methods
None established.

6. Accidental release measures

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

Methods and materials for containment and cleaning up
Not available.

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

7. Handling and storage

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

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

8. Exposure controls/personal protection

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

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

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

Appropriate engineering controls
Use in a well ventilated area.

Individual protection measures, such as personal protective equipment

Eye/face protection
Not available.

Skin protection
Hand protection
Not available.
Other
Not available.
Respiratory protection
Not available.
Thermal hazards
Not available.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.
9. Physical and chemical properties

**Appearance**
Not available.

**Physical state**
Liquid.

**Color**
Magenta

**Odor**
Not available.

**Odor threshold**
Not available.

**pH**
6.2 - 6.8

**Melting point/freezing point**
Not available.

**Initial boiling point and boiling range**
Not determined

**Flash point**
>= 200.0 °F (>= 93.3 °C) Pensky-Martens Closed Cup

**Evaporation rate**
Not determined

**Flammability (solid, gas)**
Not available.

**Upper/lower flammability or explosive limits**

| Flammability limit - lower (%) | Not determined |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%)    | Not available. |
| Explosive limit - upper (%)    | Not available. |

**Vapor pressure**
Not determined

**Solubility(ies)**

<table>
<thead>
<tr>
<th>Solubility (water)</th>
<th>Soluble in water</th>
</tr>
</thead>
</table>

**Partition coefficient (n-octanol/water)**
Not available.

**Auto-ignition temperature**
Not available.

**Decomposition temperature**
Not available.

**Viscosity**
>= 2 cp

**Other information**

<table>
<thead>
<tr>
<th>Specific gravity</th>
<th>1 - 1.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC (Weight %)</td>
<td>&lt; 349 g/l</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

**Reactivity**
Not available.

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
Will not occur.

**Conditions to avoid**
Not available.

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

**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

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

**Information on toxicological effects**

| Acute toxicity                           | Based on available data, the classification criteria are not met. |
| Skin corrosion/irritation               | Based on available data, the classification criteria are not met. |
| Serious eye damage/eye irritation       | Based on available data, the classification criteria are not met. |
Respiratory or skin sensitization
- 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
- Based on available data, the classification criteria are not met.

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

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

Further information
- Complete toxicity data are not available for this specific formulation
- Refer to Section 2 for potential health effects and Section 4 for first aid measures.

### Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>Guinea pig</td>
<td>6500 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>6500 mg/kg</td>
</tr>
<tr>
<td>Ammonium nitrate (CAS 6484-52-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>Rat</td>
<td>&gt; 88.8 mg/l, 4 Hours</td>
</tr>
</tbody>
</table>

### 12. Ecological information

#### Ecotoxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magenta ink (CAS Mixture)</td>
<td>Fish</td>
<td>LC50 &lt; 400 mg/l, 96 hours</td>
</tr>
<tr>
<td>Aquatic</td>
<td>Fathead minnow (Pimephales promelas)</td>
<td>&lt; 400 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td>Crustacea</td>
<td>EC50 13.21 mg/l, 48 hours</td>
</tr>
<tr>
<td>Ammonium nitrate (CAS 6484-52-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td>Crustacea</td>
<td>EC50 100, 48 Hours</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50 100, 96 Hours</td>
<td></td>
</tr>
</tbody>
</table>

Persistence and degradability
- Not available.

Bioaccumulative potential
- No data available on bioaccumulation.

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

Mobility in soil
- Not available.

Other adverse effects
- Not available.
13. Disposal considerations

Disposal instructions
Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. HP's Planet Partners (trademark) supplies recycling program enables simple, convenient recycling of HP original inkjet and LaserJet supplies. For more information and to determine if this service is available in your location, please visit http://www.hp.com/recycle.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

ADR
Not regulated as dangerous goods.

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

15. Regulatory information

US federal regulations
US TSCA 12(b): Does not contain listed chemicals.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.
SARA 304 Emergency release notification
Not regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312
Hazardous chemical
No

Other federal regulations
Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations
US. Massachusetts RTK - Substance List
2-pyrrolidone (CAS 616-45-5)
Ammonium nitrate (CAS 6484-52-2)

US. New Jersey Worker and Community Right-to-Know Act
Ammonium nitrate (CAS 6484-52-2)

US. Pennsylvania Worker and Community Right-to-Know Law
2-pyrrolidone (CAS 616-45-5)
Ammonium nitrate (CAS 6484-52-2)

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
Not Listed.
Other information

VOC content (less water, less exempt compounds) = <1110 g/L (U.S. requirement, not for emissions)
VOC data based on formulation (Organic compounds minus solids)

Regulatory information

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

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

Issue date 20-Jun-2015
Revision date 16-Oct-2015
Version # 02

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.

Manufacturer information

HP
1501 Page Mill Road
Palo Alto, CA 94304-1112 US
Direct 1-650-857-5020

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
1. Identification

Product identifier: Q3281Series[Y][3]

Other means of identification: Not available.

Recommended use: Not available.

Recommended restrictions: None known.

Company identification: HP

1501 Page Mill Road
Palo Alto, CA 94304-1112
United States
Telephone 650-857-5020

HP health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-760-710-0048

HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomer.inquiries@hp.com

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Not classified.

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements:

- Hazard symbol: None.
- Signal word: None.
- Hazard statement: Not available.

Precautionary statement:

- Prevention: Not available.
- Response: Not available.
- Storage: Not available.
- Disposal: Not available.

Hazard(s) not otherwise classified (HNOC):
Potential routes of overexposure to this product are skin and eye contact. Inhalation of vapor and ingestion are not expected to be significant routes of exposure for this product under normal use conditions. Complete toxicity data are not available for this specific formulation.

Supplemental information:
This product is not classified as hazardous according to OSHA CFR 1910.1200 (HazCom 2012).

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>65-75</td>
<td></td>
</tr>
<tr>
<td>1,5-pentanediol</td>
<td>111-29-5</td>
<td>&lt;10</td>
<td></td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td>616-45-5</td>
<td>&lt; 7.5</td>
<td></td>
</tr>
<tr>
<td>Magnesium nitrate hexahydrate</td>
<td>10377-60-3</td>
<td>&lt; 7.5</td>
<td></td>
</tr>
<tr>
<td>naphthalenesulfonate salt #12</td>
<td>Proprietary</td>
<td>&lt; 5</td>
<td></td>
</tr>
<tr>
<td>Ammonium nitrate</td>
<td>6484-52-2</td>
<td>&lt; 2.5</td>
<td></td>
</tr>
<tr>
<td>Arylazopyrazolesulfonate salt #3</td>
<td>Proprietary</td>
<td>&lt; 2.5</td>
<td></td>
</tr>
</tbody>
</table>
### Composition comments
This ink supply contains an aqueous ink formulation.
This product has been evaluated using criteria specified in 29 CFR 1910.1200 (Hazard Communication Standard).

### 4. First-aid measures

<table>
<thead>
<tr>
<th>Condition</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Move to fresh air. If symptoms persist, get medical attention.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Wash affected areas thoroughly with mild soap and water. If irritation persists, get medical attention.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>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.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>If ingestion of a large amount does occur, seek medical attention.</td>
</tr>
</tbody>
</table>

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

### 5. Fire-fighting measures

| 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. |
| Specific hazards arising from the chemical | Not applicable. |
| Special protective equipment and precautions for firefighters | Not available. |
| Specific methods | None established. |

### 6. Accidental release measures

| Personal precautions, protective equipment and emergency procedures | Wear appropriate personal protective equipment. |
| Methods and materials for containment and cleaning up | Not available. |
| Environmental precautions | Do not let product enter drains. Do not flush into surface water or sanitary sewer system. |

### 7. Handling and storage

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

### 8. Exposure controls/personal protection

| Occupational exposure limits | No exposure limits noted for ingredient(s). |
| Biological limit values | No biological exposure limits noted for the ingredient(s). |
| Exposure guidelines | Exposure limits have not been established for this product. |
| Appropriate engineering controls | Use in a well ventilated area. |

| Individual protection measures, such as personal protective equipment | Not available. |
| Eye/face protection | Not available. |
| Skin protection | Not available. |
| Hand protection | Not available. |
| Other | Not available. |
| Respiratory protection | Not available. |
| Thermal hazards | Not available. |
| General hygiene considerations | Handle in accordance with good industrial hygiene and safety practice. |
### 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Not available</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>6.2 - 6.8</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;= 200.0 °F (&gt;= 93.3 °C) Pensky-Martens Closed Cup</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive limit - upper (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not determined</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>&gt;= 2 cp</td>
</tr>
<tr>
<td>Other information</td>
<td></td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1 - 1.2</td>
</tr>
<tr>
<td>VOC (Weight %)</td>
<td>&lt; 340 g/l</td>
</tr>
</tbody>
</table>

### 10. Stability and reactivity

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

### 11. Toxicological information

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

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

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

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

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

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

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

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

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

Further information
Complete toxicity data are not available for this specific formulation.
Refer to Section 2 for potential health effects and Section 4 for first aid measures.

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

Acute
Oral
LD50
Guinea pig 6500 mg/kg
Rat 6500 mg/kg

Ammonium nitrate (CAS 6484-52-2)

Acute
Inhalation
LC50
Rat > 88.8 mg/l, 4 Hours
Oral
LD50
Rat 2217 mg/kg

12. Ecological information

Ecotoxicity

Product | Species | Test Results |
--- | --- | --- |
Yellow ink (CAS Mixture)

Aquatic
Acute
Fish LC50 Fathead minnow (Pimephales promelas) < 400 mg/l, 96 hours

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

Aquatic
Crustacea EC50 Water flea (Daphnia pulex) 13.21 mg/l, 48 hours

Ammonium nitrate (CAS 6484-52-2)

Aquatic
Crustacea EC50 Daphnia 100, 48 Hours
Fish LC50 Fish 100, 96 Hours

Arylazopyrazolesulfonate salt # 3 (CAS Proprietary)

Aquatic
Fish LC50 Fathead minnow (Pimephales promelas) > 180 mg/l, 96 hours

Persistence and degradability
Not available.

Bioaccumulative potential
No data available on bioaccumulation.

Partition coefficient n-octanol / water (log Kow)

-0.85

Mobility in soil
Not available.

Other adverse effects
Not available.
13. Disposal considerations

Disposal instructions
Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. HP’s Planet Partners (trademark) supplies recycling program enables simple, convenient recycling of HP original inkjet and LaserJet supplies. For more information and to determine if this service is available in your location, please visit http://www.hp.com/recycle.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

ADR
Not regulated as dangerous goods.

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

15. Regulatory information

US federal regulations
US TSCA 12(b): Does not contain listed chemicals.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312
Hazardous chemical
No

Other federal regulations

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

US. Massachusetts RTK - Substance List
2-pyrrolidone (CAS 616-45-5)
Ammonium nitrate (CAS 6484-52-2)

US. New Jersey Worker and Community Right-to-Know Act
Ammonium nitrate (CAS 6484-52-2)

US. Pennsylvania Worker and Community Right-to-Know Law
2-pyrrolidone (CAS 616-45-5)
Ammonium nitrate (CAS 6484-52-2)

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
Not Listed.
VOC content (less water, less exempt compounds) = <1061 g/L (U.S. requirement, not for emissions)
VOC data based on formulation (Organic compounds minus solids)

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

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

Issue date 20-Jun-2015
Revision date 16-Oct-2015
Version # 02

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Direct 1-650-857-5020

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NIOSH National Institute for Occupational Safety and Health
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OSHA Occupational Safety and Health Administration
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TLV Threshold Limit Value
TSCA Toxic Substances Control Act
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