1. Identification

Product identifier: Q2321Series

Other means of identification: None.

Recommended use: Inkjet printing

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information:
HP Inc.
1501 Page Mill Road
Palo Alto, CA 94304-1112
United States

Telephone: 650-857-1501

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. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Reproductive toxicity (fertility, the unborn child) Category 1B

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements

Signal word: Danger

Hazard statement: May damage fertility or the unborn child.

Precautionary statement:

Prevention: Wear protective gloves/protective clothing/eye protection. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

Response: IF exposed or concerned: Get medical advice/attention.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

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.

Carbon black is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans). Carbon black in this preparation, due to its bound form, does not present this carcinogenic risk.
### Supplemental information
2-pyrrolidone: OSHA Hazard Communication Standard cut-off value, Reproductive toxicity Category 1B, fertility or the unborn child 3%. Mixture classification threshold based on data related to developmental toxicity in animals. No adverse effects on sexual function or damage to fertility have been observed in an animal study. See Section 11.

### 3. Composition/information on ingredients

#### 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>80-90</td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td></td>
<td>616-45-5</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Aliphatic diol</td>
<td></td>
<td>Proprietary</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Modified carbon black*</td>
<td></td>
<td>Proprietary*</td>
<td>&lt;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). Carbon black is present only in a bound form in this preparation.

2-pyrrolidone: OSHA Hazard Communication Standard cut-off value 3%. Mixture classification threshold based on data related to developmental toxicity in animals. No adverse effects on sexual function or damage to fertility have been observed in an animal study. See Section 11.

*Proprietary

### 4. First-aid measures

**Inhalation**
Remove 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**
Dry chemical, CO2, water spray or regular foam.

**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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aliphatic diol</td>
<td>TWA</td>
<td>10 mg/m3</td>
</tr>
</tbody>
</table>

**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**
    Use personal protective equipment to minimize exposure to skin and eye.

- **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**

- **Physical state**
  Liquid.

- **Form**
  Not available.

- **Color**
  Black.

- **Odor**
  Not available.

- **Odor threshold**
  Not available.

- **pH**
  9 - 9.4

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

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

- **Flash point**
  > 230.0 °F (> 110.0 °C) Pensky-Martens Closed Cup

- **Evaporation rate**
  Not determined

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

**Upper/lower flammability or explosive limits**

- **Flammability limit - lower (%)**
  Not available.

- **Flammability limit - upper (%)**
  Not available.

- **Explosive limit - lower (%)**
  Not available.

- **Explosive limit - upper (%)**
  Not available.

- **Vapor pressure**
  Not available.

- **Vapor density**
  Not available.

- **Solubility(ies)**
  Soluble in water

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

- **Auto-ignition temperature**
  Not available.

- **Decomposition temperature**
  Not available.

- **Viscosity**
  Not available.

- **Other information**
  For other VOC regulatory data/information see Section 15.

- **Oxidizing properties**
  Not determined

- **Percent volatile**
  4 % estimated
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

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 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.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2321Series</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Components**

2-pyrrolidone (CAS 616-45-5)

<table>
<thead>
<tr>
<th>Acute</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td>&gt; 5000 mg/kg</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. Carbon black is classified as a carcinogen by the IARC (possibly carcinogenic to humans, Group 2B) and by the State of California under Proposition 65. In their evaluations of carbon black, both organizations indicate that exposure to carbon black, per se, does not occur when it remains bound within a product matrix, specifically, rubber, ink, or paint. Carbon black is present only in a bound form in this preparation. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity**
Not listed.

Not listed.

**US. National Toxicology Program (NTP) Report on Carcinogens**
Not listed.
Reproductive toxicity
May damage fertility or the unborn child.

2-pyrrolidone: This component showed developmental effects only at high doses that were toxic to pregnant test animals (OECD Testing Guideline 414: Prenatal Developmental Toxicity Study). Uptake by people of small doses is not expected to cause developmental toxicity. This component has not caused adverse effects on sexual function or damage to fertility in an animal study (OECD Testing Guideline 443: Extended One-Generation Reproductive Toxicity Study).

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

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

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

Further information
Complete toxicity data are not available for this specific formulation

12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2321Series</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fathead minnow (Pimephales promelas) &gt; 750 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

Components

<table>
<thead>
<tr>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
</tr>
</tbody>
</table>

Persistence and degradability
Not available.

Bioaccumulative potential
Not available.

Partition coefficient n-octanol / water (log Kow)

| 2-pyrrolidone   | -0.85                          |
| Aliphatic diol  | -0.106                         |

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. Ensure collection and disposal with an appropriately licensed waste contractor.

14. Transport information

DOT

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

IATA

| UN number                  | Not available. |
|                           | Not Regulated  |
| UN proper shipping name   |                 |
| Transport hazard class(es) |                 |
| Class                      | Not available. |
| Subsidiary risk            | -               |
| Packing group              | Not available. |
| Environmental hazards      | No              |
### IMDG

<table>
<thead>
<tr>
<th>Field</th>
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</thead>
<tbody>
<tr>
<td>UN number</td>
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<tr>
<td>UN proper shipping name</td>
<td>Not Regulated</td>
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<tr>
<td>Transport hazard class(es)</td>
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</tr>
<tr>
<td>Class</td>
<td>Not available</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not available</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td></td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>No</td>
</tr>
<tr>
<td>EmS</td>
<td>Not available</td>
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<tr>
<td>Special precautions for user</td>
<td>Not available</td>
</tr>
</tbody>
</table>

### ADR

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>UN number</td>
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<tr>
<td>UN proper shipping name</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td></td>
</tr>
<tr>
<td>Class</td>
<td>Not available</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Hazard No. (ADR)</td>
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</tr>
<tr>
<td>Tunnel restriction code</td>
<td>Not available</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not available</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Not available</td>
</tr>
</tbody>
</table>

### Further information

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

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

### 15. Regulatory information

#### US federal regulations

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

**Toxic Substances Control Act (TSCA)**

- 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.


Not listed.

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**SARA 302 Extremely hazardous substance**

Not listed.

#### Other federal regulations

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

No intentionally added HAP substances.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)**

Not regulated.

#### Other information

VOC content (less water, less exempt compounds) = \(< 1616 \text{ g/L (U.S. requirement, not for emissions)}\)

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 19-Jun-2015
Revision date 31-May-2020
Version # 07
Other information
This SDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).

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
Hazard(s) identification: Supplemental information
Composition/information on ingredients: Composition comments
Toxicological information: Reproductivity

Explanation of abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</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>