SAFETY DATA SHEET

1. Identification

Product identifier  51604A Rev B
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  650-857-5020

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
Sensitization, skin  Category 1
Specific target organ toxicity, repeated exposure  Category 2

Environmental hazards  Not classified.
OSHA defined hazards  Not classified.

Label elements

Signal word  Warning

Hazard statement  May cause an allergic skin reaction. May cause damage to organs (Kidney) through prolonged or repeated exposure.

Precautionary statement

Prevention  Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray.

Response  IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Get medical attention/advice if you feel unwell. Wash contaminated clothing before reuse.

Storage  Not available.

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

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.
Contains Food Black 2 acid salt.
### 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>30-40</td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td></td>
<td>616-45-5</td>
<td>&lt;30</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td></td>
<td>107-21-1</td>
<td>&lt;25</td>
</tr>
<tr>
<td>Alkyldiol*</td>
<td>Proprietary*</td>
<td></td>
<td>&lt;7.5</td>
</tr>
<tr>
<td>Food Black 2 Acid Salt*</td>
<td>Proprietary*</td>
<td></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).

### 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.

### 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

None known.

#### Special protective equipment and precautions for firefighters

Not available.

### 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**

This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit.

#### US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol (CAS 107-21-1)</td>
<td>Ceiling</td>
<td>100 mg/m3</td>
<td>Aerosol</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

<table>
<thead>
<tr>
<th>Protection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye/face protection</td>
<td>Not available.</td>
</tr>
<tr>
<td>Skin protection</td>
<td></td>
</tr>
<tr>
<td>Hand protection</td>
<td>Recommended gloves: Nitrile 4 mil minimum thickness.</td>
</tr>
<tr>
<td>Other</td>
<td>Not available.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Not available.</td>
</tr>
<tr>
<td>Thermal hazards</td>
<td>Not available.</td>
</tr>
<tr>
<td>General hygiene considerations</td>
<td>Handle in accordance with good industrial hygiene and safety practice.</td>
</tr>
</tbody>
</table>

### 9. Physical and chemical properties

#### Appearance
- **Physical state**: Liquid.
- **Form**: Not available.
- **Color**: Black.
- **Odor**: Not available.
- **Odor threshold**: Not available.
- **pH**: 7 - 7.4
- **Melting point/freezing point**: Not available.
- **Initial boiling point and boiling range**: Not determined
- **Flash point**: > 200.0 °F (> 93.3 °C) Closed Cup EPA Method 1020
- **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.

#### Others
- **Vapor pressure**: Not available.
- **Vapor density**: Not available.
- **Solubility (water)**: 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.
- **VOC**: < 578 g/l 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

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Inhalation may result in mild irritation to the respiratory system.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>May cause sensitization by skin contact.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Contact with eyes may result in mild irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Ingestion is not a likely route of exposure.</td>
</tr>
</tbody>
</table>

## 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. LD50/oral/rat >2500 mg/kg (OECD 401).

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Oral</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Dermal</td>
<td>Rabbit</td>
<td>9530 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aerosol LC50</td>
<td>Rat</td>
<td>&gt; 2.5 mg/l, 6 Hours</td>
</tr>
<tr>
<td>Other LD50</td>
<td>Rat</td>
<td>2800 mg/kg</td>
</tr>
</tbody>
</table>

### Skin corrosion/irritation

Based on available data, the classification criteria are not met. Non irritant in rabbit (OECD 404).

### Serious eye damage/eye irritation

Based on available data, the classification criteria are not met. Not classified as an irritant according to, OECD 405.

### Respiratory or skin sensitization

<table>
<thead>
<tr>
<th>Sensitization</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Skin</td>
<td>May cause sensitization by skin contact.</td>
</tr>
<tr>
<td>Germ cell</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
</tbody>
</table>

### IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

### US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

### 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

May cause damage to organs (kidney) through prolonged or repeated exposure by ingestion.

### 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.
12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>51604A Rev B</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></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 Test Results**

<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><strong>Aquatic</strong></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)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone</td>
<td>-0.85</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>-1.36</td>
</tr>
</tbody>
</table>

**Mobility in soil**

Not available.

**Other adverse effects**

Not available.

13. Disposal considerations

**Disposal instructions**

Do not dispose of together with general office waste. 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**

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)

Ethylene glycol (CAS 107-21-1) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances**

(29 CFR 1910.1001-1050)

Not regulated.

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

**Hazard categories**

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

**SARA 302 Extremely hazardous substance**

Not listed.
SARA 311/312 Hazardous chemical

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Ethylene glycol (CAS 107-21-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)

US state regulations

US - California Proposition 65 - CRT: Listed date/Developmental toxin
ETHYLENE GLYCOL (INGESTED) (CAS 107-21-1) Listed: June 19, 2015

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
Ethylene glycol (CAS 107-21-1)

Other information
VOC content (less water, less exempt compounds) = < 982 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 26-May-2015
Revision date 01-Jan-2019
Version # 04
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: Prevention
Hazard(s) identification: Response
3. Composition / Information on Ingredients: Disclosure Overrides
Physical & Chemical Properties: Multiple Properties
Toxicological information: Acute toxicity
Toxicological information: Corrosivity
Toxicological information: Eye contact
Toxicological information: Eye contact
Toxicological information: Ingestion
Toxicological information: Inhalation
Toxicological information: Skin contact
Regulatory information: Regulatory information
Other information, including date of preparation or last revision: Disclaimer
GHS: Classification
### 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>