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 650-857-1501

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
Sensitization, skin Category 1
Reproductive toxicity (fertility, the unborn child) Category 1B
Specific target organ toxicity, repeated exposure Category 2 (kidney)

Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements

Signal word Danger
Hazard statement May cause an allergic skin reaction. May cause damage to organs (kidney) through prolonged or repeated exposure. 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. Do not breathe mist or vapor.
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. IF exposed or concerned: Get medical advice/attention. 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.

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>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></td>
<td>Proprietary</td>
<td>&lt;7.5</td>
</tr>
<tr>
<td>Food Black 2 acid salt # 3</td>
<td>Food Black 2 acid salt # 3</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).

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 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 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.
Keep out of the reach of children. Keep away from excessive heat or cold.

8. Exposure controls/personal protection

Occupational exposure limits

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

Eye/face protection
Not available.

Skin protection

Hand protection
Recommended gloves: Nitrile 4 mil minimum thickness.

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
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.

Vapor pressure
Not available.

Vapor density
Not available.

Solubility(ies)

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

Percent volatile  25 % estimated
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

Inhalation  Inhalation may result in mild irritation to the respiratory system.
Skin contact  May cause sensitization by skin contact.
Eye contact  Contact with eyes may result in mild irritation.
Ingestion  Ingestion is not a likely route of exposure.

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 (CAS 616-45-5)</td>
<td></td>
<td></td>
</tr>
<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>
<tr>
<td>Ethylene glycol (CAS 107-21-1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>9530 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aerosol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>&gt; 2.5 mg/l, 6 Hours</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>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

Respiratory sensitization  Based on available data, the classification criteria are not met.
Skin sensitization  May cause sensitization by skin contact.

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

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

IARC Monographs. Overall Evaluation of Carcinogenicity  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
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>Aquatic</td>
<td>Fathead minnow (Pimephales promelas)</td>
<td>&gt; 750 mg/l, 96 hours</td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td></td>
</tr>
<tr>
<td>Components</td>
<td>Species</td>
<td>Test Results</td>
</tr>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>13.21 mg/l, 48 hours</td>
</tr>
<tr>
<td>Partition coefficient n-octanol / water (log Kow)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td>-0.85</td>
<td></td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>-1.36</td>
<td></td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Not available.</td>
<td></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

| UN number | Not available. |
| UN proper shipping name | Not Regulated |
| 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. |
| UN proper shipping name | Not Regulated |
Transport hazard class(es)
- Class
- Subsidiary risk
- Packing group
- Environmental hazards
- Special precautions for user

IMDG
- UN number
- UN proper shipping name
- Transport hazard class(es)
- Class
- Subsidiary risk
- Packing group
- Transport hazard class(es)
- Marine pollutant
- EmS
- Special precautions for user

ADR
- UN number
- UN proper shipping name
- Transport hazard class(es)
- Class
- Subsidiary risk
- Hazard No. (ADR)
- Tunnel restriction code
- Packing group
- Environmental hazards
- Special precautions for user

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)
    Ethylene glycol (CAS 107-21-1)
      Listed.
  SARA 304 Emergency release notification
    Not regulated.
  OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
    Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
- SARA 302 Extremely hazardous substance
  Not listed.
- SARA 311/312 Hazardous chemical
  Yes
  Classified hazard categories
    Respiratory or skin sensitization
    Reproductive toxicity
    Specific target organ toxicity (single or repeated exposure)

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

California Proposition 65

California Proposition 65 - CRT: Listed date/Developmental toxin
Ethylene glycol (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-Jun-2020
Version # 06
Other information This SDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).

Disclaimer
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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.
<table>
<thead>
<tr>
<th>Abbreviation</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>