1. Product and Company Identification

Identification of the preparation
51645 Series

Product use
Inkjet printing

Version #
10

Revision date
11-Sep-2012

CAS #
Mixture

Company identification
Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304-1185
United States
Telephone 650-857-1501

Hewlett-Packard health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-503-494-7199
HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomer.inquiries@hp.com

2. Hazards Identification

Emergency overview
Contact with skin and eyes may result in irritation.

Acute health effects

Any potential hazards are presumed to be due to exposure to the components.

Skin contact
2-pyrrolidone
Contact with skin may result in irritation.

Eye contact
2-pyrrolidone
Contact with eyes may result in irritation.
Isopropyl Alcohol
Contact with eyes may result in severe irritation.

Inhalation
2-pyrrolidone
Inhalation may result in respiratory irritation.
Isopropyl Alcohol
Inhalation may cause drowsiness or dizziness.

Ingestion
2-pyrrolidone
Ingestion may result in nausea, vomiting and diarrhea.

Potential health effects

Routes of exposure
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

Chronic health effects
None known.

Carcinogenicity
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.
None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.
3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&lt; 80</td>
</tr>
<tr>
<td>2-pyrrolidone</td>
<td>616-45-5</td>
<td>&lt; 15</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>&lt; 5</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>67-63-0</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).

Carbon black is present only in a bound form in this preparation.

4. First Aid Measures

First aid procedures

- **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.

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

- **Inhalation**: Move to fresh air. If symptoms persist, get medical attention.

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

General advice

No additional information

5. Fire Fighting Measures

Flammable properties

None known.

Extinguishing media

- Suitable extinguishing media: CO2, water, dry chemical, or foam

- Unsuitable extinguishing media: None known.

Specific methods

None established.

Hazardous combustion products

Refer to section 10.

6. Accidental Release Measures

Personal precautions

Wear appropriate personal protective equipment.

Environmental precautions

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

Methods for containment

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.

Methods for cleaning up

Soak up with inert absorbent material.

Other information

Soak up with inert absorbent material. Slowly vacuum or sweep the material into a bag or other sealed container. Dispose of in compliance with federal, state, and local regulations. See also section 13 Disposal considerations.

7. Handling and Storage

Handling

Avoid contact with skin, eyes and clothing.

Storage

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>ACGIH Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (1333-86-4)</td>
<td>TWA</td>
<td>3.0000 mg/m3</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Isopropyl Alcohol (67-63-0)</td>
<td>BEI</td>
<td>40.0000 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>400.0000 ppm</td>
<td></td>
</tr>
</tbody>
</table>

Material name: 51645 Series
9235 Version #: 10 Revision date: 10-Sep-2012 Print date: 11-Sep-2012
Components | Type | Value | Form |
--- | --- | --- | --- |
| U.S. - OSHA Components | | | |
Isopropyl Alcohol (67-63-0) | PEL | 400.0000 ppm | |
| | TWA | 200.0000 ppm | |
| | | 980.0000 mg/m3 | |
| | U.S. - Tennessee Components | | |
Carbon black (1333-86-4) | TWA | 3.5000 mg/m3 | |
Isopropyl Alcohol (67-63-0) | STEL | 1225.0000 mg/m3 | |
| | TWA | 400.0000 ppm | |
| | | 980.0000 mg/m3 | |

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

Engineering controls
Use in a well ventilated area.

Personal protective equipment
General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

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

9. Physical & Chemical Properties
Appearance
Not available.
Color
Black.
Odor
Not available.
Odor threshold
Not available.
Physical state
Liquid
Form
Not available.
pH
7.8
Melting point
Not available.
Freezing point
Not available.
Boiling point
200 °F (93.3 °C)
Flash point
131 °F (55 °C) Pensky-Martens Closed Cup; No ignition, sustained combustion or flashing detected using the Sustained Combustibility Test (method in US 49CFR173, Appendix H).
Evaporation rate
Not determined
Flammability limits in air, upper, % by volume
Not available.
Flammability limits in air, lower, % by volume
Not available.
Vapor pressure
Not determined
Vapor density
Not available.
Specific gravity
1
Relative density
Not available.
Solubility (water)
Soluble in water
Auto-ignition temperature
Not available.
Decomposition temperature
Not available.
10. Chemical Stability & Reactivity Information

Chemical stability: Stable under recommended storage conditions.
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.
Possibility of hazardous reactions: Will not occur.

11. Toxicological Information

Carcinogenicity: 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.

ACGIH Carcinogens
- Carbon black (CAS 1333-86-4) A3 Confirmed animal carcinogen with unknown relevance to humans.
- Isopropyl Alcohol (CAS 67-63-0) A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity
- Carbon black (CAS 1333-86-4) 2B Possibly carcinogenic to humans.
- IARC Monographs: Evidence of carcinogenicity in humans
  - Carbon black (CAS 1333-86-4) Inadequate data.

Serious eye damage/eye irritation: Not available.

Symptoms and target organs
- Target Organs (NIOSH)
  - Carbon black (CAS 1333-86-4) Eyes, Respiratory system
  - Isopropyl Alcohol (CAS 67-63-0) Eyes, Respiratory system, Skin

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

Aquatic toxicity: LC50/96h/Fathead minnows =>750 mg/L
Persistence and degradability: Not available.
Partition coefficient: Not determined

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

Further information: Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.
No ignition, sustained combustion, or flashing detected, using the Sustained Combustibility Test prescribed in the UN Manual of Tests and Criteria, Part III subsection 32.5.2. Refer to Dangerous Goods Regulations Section 3.3.1.3.
No ignition, sustained combustion or flashing detected using the sustained combustibility test (method in US CFR173, Appendix H).
15. Regulatory Information

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

CERCLA (Superfund) reportable quantity
None

Occupational Safety and Health Administration (OSHA)
29 CFR 1910.1200 hazardous chemical
Yes

Superfund Amendments and Reauthorization Act of 1986 (SARA)

<table>
<thead>
<tr>
<th>Hazard categories</th>
<th>Immediate Hazard - No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delayed Hazard - No</td>
</tr>
<tr>
<td></td>
<td>Fire Hazard - No</td>
</tr>
<tr>
<td></td>
<td>Pressure Hazard - No</td>
</tr>
<tr>
<td></td>
<td>Reactivity Hazard - No</td>
</tr>
</tbody>
</table>

Section 302 extremely hazardous substance
No

Section 311 hazardous chemical
No

State regulations
US - Pennslyvania RTK - Hazardous Substances: Listed substance
2-pyrrolidone (CAS 616-45-5) Listed.
Carbon black (CAS 1333-86-4) Listed.
Isopropyl Alcohol (CAS 67-63-0) Listed.

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.

Other information

16. Other Information

Other information
This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).

HMIS® ratings
Health: 1
Flammability: 2
Physical hazard: 0

NFPA ratings
Health: 1
Flammability: 2
Instability: 0
Disclaimer

This Safety Data Sheet document is provided without charge to customers of Hewlett-Packard Company. Data is the most current known to Hewlett-Packard Company 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.

Issue date

11-Sep-2012

This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Alternate Trade Names

Manufacturer information

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3000 Hanover Street
Palo Alto, California 94304-1112 US
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(Toll-free within the US) 1-800-457-4209

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