



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name 51645 Series
Product use Inkjet printing
Version # 06
Revision date 08-Apr-2010
CAS # Mixture
Company identification Hewlett-Packard Company
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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 Carbon Black: Chronic inhalation studies performed with fine dust particles resulted in lung tumors in animals. The IARC classification was based upon these results. IARC also concluded "there is inadequate evidence in humans for the carcinogenicity of carbon black." Inhalation of fine dust particles is not expected to occur during normal conditions of use of this ink.

Carcinogenicity Carbon black is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans).
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

| Components | CAS # | Percent |
|-------------------|-----------|---------|
| Isopropyl Alcohol | 67-63-0 | < 2.5 |
| Carbon black | 1333-86-4 | < 5 |
| 2-pyrrolidone | 616-45-5 | < 15 |
| Water | 7732-18-5 | < 80 |

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

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. |

5. Fire Fighting Measures

| | |
|---|-----------------------------------|
| Flammable properties | None known. |
| Extinguishing media | |
| Suitable extinguishing media | CO2, water, dry chemical, or foam |
| Unsuitable extinguishing media | None known. |
| Protection of firefighters | |
| Specific hazards arising from the chemical | 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. |
| 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

ACGIH

| Components | Type | Value |
|-----------------------------|------|--------------|
| Carbon black (1333-86-4) | TWA | 3.5000 mg/m3 |
| Isopropyl Alcohol (67-63-0) | STEL | 400.0000 ppm |
| | TWA | 200.0000 ppm |

U.S. - OSHA**Components**

| | Type | Value |
|-----------------------------|-------------|-----------------|
| Isopropyl Alcohol (67-63-0) | PEL | 400.0000 ppm |
| | | 980.0000 mg/m3 |
| | STEL | 1225.0000 mg/m3 |
| | | 500.0000 ppm |
| | TWA | 400.0000 ppm |
| | | 980.0000 mg/m3 |

U.S. - Tennessee**Components**

| | Type | Value |
|-----------------------------|-------------|-----------------|
| Carbon black (1333-86-4) | TWA | 3.5000 mg/m3 |
| Isopropyl Alcohol (67-63-0) | STEL | 1225.0000 mg/m3 |
| | | 500.0000 ppm |
| | TWA | 980.0000 mg/m3 |
| | | 400.0000 ppm |

Exposure guidelines

Exposure limits have not been established for this product.

Engineering controls

Use in a well ventilated area.
Provide adequate ventilation.

Personal protective equipment**Eye / face protection**

Not required under intended use.

Skin protection

Protected gloves not required under intended use.

Respiratory protection

For use other than intended use (such as in the event of a large spill), goggles and respirators may be required.

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 - 8.4

Melting point

Not available.

Freezing point

Not available.

Boiling point

>= 200 °F (>= 93.3 °C)

Flash point

131 - 136 °F (55 - 57.8 °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 - 1.2

Relative density

Not available.

Solubility (water)

Soluble in water

| | |
|----------------------------------|----------------|
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | >= 2 cp |
| Bulk density | 1 - 1.2 gm/ml |
| VOC | < 3 % |

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

ACGIH Carcinogens

| | |
|---------------------------------|--|
| Carbon black (CAS 1333-86-4) | A4 Not classifiable as a human carcinogen. |
| 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.

Skin sensitization 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 Dispose of in compliance with federal, state, and local 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.

General

Not a dangerous good under United States 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).

IATA

Basic shipping requirements:

Proper shipping name Not applicable
Hazard class Not applicable
UN number None
Packing group N/A

Additional information:

Packaging exceptions None

Basic shipping requirements:

Labels required None

Additional information:

Packaging non bulk None

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations US TSCA 12(b): Contains tetrahydrofuran (CASRN 109-99-9), subject to export notification requirements.

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)

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

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

State regulations

US - Pennsylvania 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/NDL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

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

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Issue date 08-Apr-2010

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

Product and Company Identification: Alternate Trade Names
Composition / Information on Ingredients: Ingredients
Fire Fighting Measures: Fire & Explosion Properties
5. Fire Fighting Measures: Specific hazards arising from the chemical
Physical & Chemical Properties: Physical & Chemical Properties
9. Physical & Chemical Properties: Color
11. Toxicological Information: Further information
14. Transport Information: General
Regulatory Information: Risk Phrases - Labeling

Manufacturer information

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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 |