



SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture C9451Series
Registration number N/A
Synonyms None.
Issue date 25-Jun-2013
Version number 01

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Inkjet printing

Uses advised against None known.

Company identification

Hewlett-Packard, Ltd.
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Email: hpcustomer.inquiries@hp.com
Poison Information Center 0207771 5307

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Emergency overview Contact with skin and eyes may result in irritation. Ingestion may result in nausea, vomiting and diarrhea. May cause sensitization of susceptible persons.

Hazard summary

Physical hazards Not classified for physical hazards.
Health hazards Not classified as a health hazard.
Environmental hazards Not classified for hazards to the environment.
Specific hazards Not available.
Main symptoms Not available.

2.2. Label elements

Label according to Directive 67/548/EEC or 1999/45/EC as amended

Contains: 2-pyrrolidone, Alkyldiol, Carbon black, Diethylene glycol, Triethanolamine, Water

R-phrases(s) Not available.

S-phrases(s) Not available.

Authorization number Not available.

Supplemental label information Not applicable.

2.3. Other hazards

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. This light gray ink is not classified according to EU Directive 1999/45/EC. 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. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

| Chemical name | % | CAS-No. / EC No. | REACH Registration No. | Index No. | Notes |
|------------------------|---|--------------------------|------------------------|--------------|-------|
| Water | <90 | 7732-18-5 231-791-2 | - | - | |
| Classification: | DSD: - | | | | |
| | CLP: - | | | | |
| Alkyldiol | <7.5 | Proprietary 230-029-6 | - | - | |
| Classification: | DSD: Xi;R36/37/38 | | | | |
| | CLP: Skin Irrit. 2;H315, Eye Irrit. 2;H319, STOT SE 3;H335 | | | | |
| 2-pyrrolidone | <5 | 616-45-5 210-483-1 | - | - | |
| Classification: | DSD: Xi;R36 | | | | |
| | CLP: Eye Irrit. 2;H319 | | | | |
| Diethylene glycol | <5 | 111-46-6 203-872-2 | - | 603-140-00-6 | |
| Classification: | DSD: Xn;R22 | | | | |
| | CLP: Acute Tox. 4;H302 | | | | |
| Carbon black | <1 | 1333-86-4 215-609-9 | - | - | |
| Classification: | DSD: - | | | | |
| | CLP: - | | | | |
| Triethanolamine | <1 | 102-71-6 203-049-8 | - | - | |
| Classification: | DSD: - | | | | |
| | CLP: - | | | | |

Composition comments

This ink supply contains an aqueous ink formulation.
This product has been evaluated using criteria specified in the EU Directives 67/548/EEC and 1999/45/EC, as amended.
For the full text of the R phrases mentioned in this Section, see Section 16.
Carbon black is present only in a bound form in this preparation.

SECTION 4: First aid measures

General information

Not available.

4.1. Description of 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. If irritation persists get medical attention.

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 material is ingested, immediately contact a physician or poison control center.

4.2. Most important symptoms and effects, both acute and delayed

Not available.

4.3. Indication of any immediate medical attention and special treatment needed

No notes to physicians.

SECTION 5: Firefighting measures

| | |
|---|-----------------------------------|
| General fire hazards | Not available. |
| 5.1. Extinguishing media | |
| Suitable extinguishing media | CO2, water, dry chemical, or foam |
| Unsuitable extinguishing media | None known. |
| 5.2. Special hazards arising from the substance or mixture | Not available. |
| 5.3. Advice for firefighters | |
| Special protective equipment for firefighters | Not available. |
| Special fire fighting procedures | Not available. |

SECTION 6: Accidental release measures

| | |
|---|--|
| 6.1. Personal precautions, protective equipment and emergency procedures | |
| For non-emergency personnel | Wear appropriate personal protective equipment. |
| For emergency responders | Not available. |
| 6.2. Environmental precautions | Do not let product enter drains. Do not flush into surface water or sanitary sewer system. |
| 6.3. Methods and material for containment and cleaning up | Not available. |
| 6.4. Reference to other sections | Not available. |

SECTION 7: Handling and storage

| | |
|--|--|
| 7.1. Precautions for safe handling | Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. |
| 7.2. Conditions for safe storage, including any incompatibilities | Keep in a dry place. Keep away from excessive heat or cold. Store away from strong oxidizers. |
| 7.3. Specific end use(s) | Not available. |

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

| Components | Type | Value |
|----------------------------------|------|-----------------------|
| Carbon black (CAS 1333-86-4) | STEL | 7 mg/m ³ |
| | TWA | 3.5 mg/m ³ |
| Diethylene glycol (CAS 111-46-6) | TWA | 101 mg/m ³ |
| | | 23 ppm |

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Not available.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Use in a well ventilated area.

Individual protection measures, such as personal protective equipment

| | |
|-------------------------------|---|
| General information | Use personal protective equipment to minimize exposure to skin and eye. |
| Eye/face protection | Not available. |
| Skin protection | |
| - Hand protection | Not available. |
| - Other | Not available. |
| Respiratory protection | Not available. |
| Thermal hazards | Not available. |

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Appearance**

| | |
|-----------------------|----------------|
| Physical state | Not available. |
| Form | Not available. |
| Color | Light Grey |

Odor Not available.

Odor threshold Not available.

pH 9.4

Melting point/freezing point Not available.

Initial boiling point and boiling range Not determined

Flash point Not applicable.

Evaporation rate Not determined

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not determined

Flammability limit - upper (%) Not available.

Vapor pressure Not determined

Relative density Not available.

Solubility(ies) Soluble in water

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

Auto-ignition temperature Not determined

Decomposition temperature Not available.

Viscosity Not applicable.

Explosive properties Not available.

Oxidizing properties Not determined

9.2. Other information

VOC (Weight %) < 63.7 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity Not available.

10.2. Chemical stability Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions Will not occur.

10.4. Conditions to avoid Not available.

10.5. Incompatible materials Incompatible with strong bases and oxidizing agents.

10.6. Hazardous decomposition products Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. hydrogen fluoride, fluorinated hydrocarbons

SECTION 11: Toxicological information

General information Not available.

Information on likely routes of exposure**Ingestion** Not available.**Inhalation** Not available.**Skin contact** Not available.**Eye contact** Not available.**Symptoms** Not available.**11.1. Information on toxicological effects**

| Components | Species | Test Results |
|--|----------------|---------------------|
| 2-pyrrolidone (CAS 616-45-5) | | |
| Acute | | |
| <i>Oral</i> | | |
| LD50 | Guinea pig | 6500 mg/kg |
| | Rat | 6500 mg/kg |
| Carbon black (CAS 1333-86-4) | | |
| Acute | | |
| <i>Oral</i> | | |
| LD50 | Rat | > 8000 mg/kg |
| Diethylene glycol (CAS 111-46-6) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | 11890 mg/kg |
| <i>Oral</i> | | |
| LD50 | Cat | 3300 mg/kg |
| | Dog | 9000 mg/kg |
| | Guinea pig | 8700 mg/kg |
| | | 14 g/kg |
| | Mouse | 23700 mg/kg |
| | | 13.3 g/kg |
| | Rabbit | 26.9 g/kg |
| | Rat | 12565 mg/kg |
| | | 15.6 g/kg |
| <i>Other</i> | | |
| LD50 | Mouse | 22500 mg/kg |
| | | 9.6 g/kg |
| | Rabbit | 2000 mg/kg |
| | Rat | 7700 mg/kg |
| | | 7.7 g/kg |
| Triethanolamine (CAS 102-71-6) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 20000 mg/kg |
| <i>Oral</i> | | |
| LD50 | Guinea pig | 5300 mg/kg |
| | Rat | 8 g/kg |
| <i>Other</i> | | |
| LD50 | Mouse | 1450 mg/kg |
| Skin corrosion/irritation | Not available. | |
| Serious eye damage/eye irritation | Not available. | |
| Respiratory sensitization | Not available. | |
| Skin sensitization | Not available. | |

| | |
|---|---|
| Germ cell mutagenicity | Not available. |
| 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. |
| Reproductive toxicity | Not available. |
| Specific target organ toxicity - single exposure | Not available. |
| Specific target organ toxicity - repeated exposure | Not available. |
| Aspiration hazard | Not available. |
| Mixture versus substance information | Not available. |
| Other information | This ink formulation has not been tested for toxicological effects. Refer to Section 2 for potential health effects and Section 4 for first aid measures. |

SECTION 12: Ecological information

Aquatic toxicity LC50/96h/Fathead minnows => 750 mg/L

12.1. Toxicity

| Components | Species | Test Results |
|----------------------------------|---------|--|
| 2-pyrrolidone (CAS 616-45-5) | | |
| Aquatic | | |
| Crustacea | EC50 | Water flea (<i>Daphnia pulex</i>) 13.21 mg/l, 48 hours |
| Diethylene glycol (CAS 111-46-6) | | |
| Aquatic | | |
| Fish | LC50 | Western mosquitofish (<i>Gambusia affinis</i>) > 32000 mg/l, 96 hours |
| Triethanolamine (CAS 102-71-6) | | |
| Aquatic | | |
| Crustacea | EC50 | Water flea (<i>Ceriodaphnia dubia</i>) 565.2 - 658.3 mg/l, 48 hours |
| Fish | LC50 | Fathead minnow (<i>Pimephales promelas</i>) 10610 - 13010 mg/l, 96 hours |

12.2. Persistence and degradability Not available.

12.3. Bioaccumulative potential Not available.

Partition coefficient n-octanol/water (log Kow)

| | |
|-----------------|-------|
| 2-pyrrolidone | -0.85 |
| Triethanolamine | -1 |

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil Not available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Not available.

Contaminated packaging Not available.

EU waste code Not available.

Disposal methods/information 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>.

SECTION 14: Transport information

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

ADN

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulations****Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I**

Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA

Not listed.

Authorizations**Regulation (EC) No. 143/2011 Annex XIV Substances Subject to Authorization**

Not listed.

Restrictions on use**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not regulated.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding

Not regulated.

Other EU regulations**Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances**

Not regulated.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Diethylene glycol (CAS 111-46-6)

Directive 94/33/EC on the protection of young people at work

Not regulated.

Other regulations

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.

| | |
|---|----------------|
| National regulations | Not available. |
| 15.2. Chemical Safety Assessment | Not available. |

SECTION 16: Other information

| | |
|---|---|
| References | Not available. |
| Full text of any statements or R-phrases and H-statements under Sections 2 to 15 | R22 Harmful if swallowed. R36 Irritating to eyes. R36/37/38 Irritating to eyes, respiratory system and skin. H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. |
| Revision information | Product and Company Identification: Product and Company Identification Composition / Information on Ingredients: Ingredients Fire Fighting Measures: Fire & Explosion Properties Physical & Chemical Properties: Physical & Chemical Properties 14. Transport Information: Material Transportation Information 15. Regulatory Information: United States |
| Training information | Not available. |
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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 |