



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 C4813Series
Registration number -
Synonyms None.
Issue date 21-Jun-2013
Version number 05
Revision date 01-May-2016
Supersedes date 28-Aug-2015

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 HP Inc UK Limited
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Bracknell, United Kingdom RG12 1HN
Telephone 44 (0) 879 013 0790

HP Inc. health effects line
(Toll-free within the US) 1-800-457-4209
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HP Inc. Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
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 Regulation (EC) No 1272/2008 as amended

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: 1,5-pentanediol, 2-pyrrolidone, Alkyldicarboxylic acid, Water
Hazard pictograms None.
Signal word None.
Hazard statements The mixture does not meet the criteria for classification.

Precautionary statements

Prevention Not available.
Response Not available.
Storage Not available.
Disposal Not available.

Supplemental label information None.

2.3. Other hazards

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.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

| Chemical name | % | CAS-No. / EC No. | REACH Registration No. | Index No. | Notes |
|------------------------|-------------------|------------------------|------------------------|-----------|-------|
| Water | 65-75 | 7732-18-5 231-791-2 | - | - | |
| Classification: | - | | | | |
| 1,5-pentanediol | <15 | 111-29-5 203-854-4 | 01-2119449341-44-XXXX | - | |
| Classification: | - | | | | |
| 2-pyrrolidone | <7.5 | 616-45-5 210-483-1 | 01-2119475471-37-XXXX | - | |
| Classification: | Eye Irrit. 2;H319 | | | | |
| Alkyldicarboxylic acid | <5 | Proprietary | 01-2119896114-34-XXXX | - | |
| Classification: | Eye Dam. 1;H318 | | | | |

Composition comments This ink supply contains an aqueous ink formulation.

SECTION 4: First aid measures

General information Not available.

4.1. Description of first aid measures

Inhalation Remove 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.

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 Not available.

SECTION 5: Firefighting measures

General fire hazards Not available.

5.1. Extinguishing media

Suitable extinguishing media For small (incipient) fires, use media such as foam, sand, dry chemical, or carbon dioxide. For large fires use very large (flooding) quantities of water and/or foam, applied as a mist or spray.

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.

Specific methods None established.

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 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.

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.

7.2. Conditions for safe storage, including any incompatibilities Keep out of the reach of children. Keep away from excessive heat or cold.

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits No exposure limits noted for ingredient(s).

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

Recommended monitoring procedures Not available.

Derived no-effect level (DNEL)

| Components | Type | Route | Value | Form | | |
|------------------------------|----------------------|--|------------------------|---------------------------|----------|---------------------|
| 2-pyrrolidone (CAS 616-45-5) | Consumers | Dermal | 6 mg/kg bw/d | Systemic long term | | |
| | | Dermal | 167 mg/kg bw/d | Systemic acute short term | | |
| | | Inhalation | 17.1 mg/m ³ | Systemic long term | | |
| | | Oral | 5.2 mg/kg bw/d | Systemic long term | | |
| | | Oral | 33.3 mg/kg bw/d | Systemic acute short term | | |
| | Workers | Dermal | 277 mg/kg bw/d | Systemic acute short term | | |
| | | Dermal | 10 mg/kg bw/d | Systemic long term | | |
| | | Inhalation | 57.8 mg/m ³ | Systemic long term | | |
| | | Alkyldicarboxylic acid (CAS Proprietary) | Consumers | Dermal | 67 mg/kg | Systemic short term |
| | | | | Dermal | 43 mg/kg | Systemic long term |
| Inhalation | 10 mg/m ³ | | | Local long term | | |
| Inhalation | 10 mg/m ³ | | | Local short term | | |
| Inhalation | 10 mg/m ³ | | | Systemic long term | | |
| Workers | Inhalation | | 10 mg/m ³ | Systemic short term | | |
| | Oral | | 67 mg/kg | Systemic short term | | |
| | Dermal | | 71 mg/kg | Systemic long term | | |
| | Dermal | | 67 mg/kg | Systemic short term | | |
| | Inhalation | | 10 mg/m ³ | Local long term | | |
| Inhalation | 10 mg/m ³ | Local short term | | | | |
| Inhalation | 10 mg/m ³ | Systemic long term | | | | |
| Inhalation | 10 mg/m ³ | Systemic short term | | | | |

Predicted no effect concentrations (PNECs)

| Components | Type | Route | Value | Form |
|--|----------------|--------------|--------------|------------------------|
| 2-pyrrolidone (CAS 616-45-5) | Not applicable | Freshwater | 0.5 mg/l | |
| | | Intermittant | 0.5 mg/l | Releases |
| | | Marine water | 0.05 mg/l | |
| | | Sediment | 0.4205 mg/kg | Freshwater |
| | | Soil | 0.0612 mg/kg | |
| | | STP | 10 mg/l | Sewage Treatment Plant |
| Alkyldicarboxylic acid (CAS Proprietary) | Not applicable | Freshwater | 0.1 mg/l | |

| Components | Type | Route | Value | Form |
|------------|------|--------------|--------------|------------------------|
| | | Intermittant | 1 mg/l | Releases |
| | | Marine water | 0.01 mg/l | |
| | | Sediment | 0.079 mg/kg | Freshwater |
| | | Sediment | 0.0079 mg/kg | Marine water |
| | | Soil | 0.0177 mg/kg | |
| | | STP | 3 mg/l | Sewage Treatment Plant |

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

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.

Environmental exposure controls Not available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Liquid.

Color Yellow

Odor Not available.

Odor threshold Not available.

pH 3.8 - 4.2

Melting point/freezing point Not available.

Initial boiling point and boiling range Not determined

Flash point > 200.0 °F (> 93.3 °C) Setaflash Closed Cup

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.

Vapor pressure Not determined

Solubility(ies)

Solubility (water) Soluble in water

Solubility (other) Not available.

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

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity >= 2 cp

Explosive properties Not available.

Oxidizing properties Not determined

9.2. Other information

VOC (Weight %) 196.45 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. |

SECTION 11: Toxicological information

General information Not available.

11.1. Information on toxicological effects

| | |
|---|---|
| Acute toxicity | Based on available data, the classification criteria are not met. |
| Skin corrosion/irritation | Based on available data, the classification criteria are not met. |
| Serious eye damage/eye irritation | Based on available data, the classification criteria are not met. |
| Respiratory sensitization | Based on available data, the classification criteria are not met. |
| Skin sensitization | Based on available data, the classification criteria are not met. |
| Germ cell mutagenicity | Based on available data, the classification criteria are not met. |
| Carcinogenicity | Based on available data, the classification criteria are not met. |
| 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 | Based on available data, the classification criteria are not met. |
| Aspiration hazard | Based on available data, the classification criteria are not met. |

| Components | Species | Test Results |
|-------------------|----------------|---------------------|
|-------------------|----------------|---------------------|

2-pyrrolidone (CAS 616-45-5)

Acute

Oral

| | | |
|------|------------|------------|
| LD50 | Guinea pig | 6500 mg/kg |
| | Rat | 6500 mg/kg |

Alkyldicarboxylic acid (CAS Proprietary)

Acute

Oral

| | | |
|------|-----|------------|
| LD50 | Rat | 2260 mg/kg |
|------|-----|------------|

Mixture versus substance information Not available.

Other 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.

SECTION 12: Ecological information

Aquatic toxicity Static acute toxicity (trout), survival (100 mg/L) = 100%
Static acute toxicity (trout), survival (10 mg/L) = 100%

12.1. Toxicity

| Product | Species | Test Results |
|------------------------------|----------------|--|
| C4813Series | | |
| Aquatic | | |
| <i>Acute</i> | | |
| Fish | LC50 | Fathead minnow (<i>Pimephales promelas</i>) < 400 mg/l, 96 hours |
| 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 |

| Components | Species | Test Results |
|--|---|---|
| Alkyldicarboxylic acid (CAS Proprietary) | | |
| Aquatic | | |
| Crustacea | EC50 | Water flea (Daphnia magna) 350 - 400 mg/l, 48 hours |
| Fish | LC50 | Fish 101, 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 |
| Alkyldicarboxylic acid | | -0.59 |
| 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 | 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>.

SECTION 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.

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 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.

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

Other information

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

Specific Provisions: Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (in the amended version OJ L 396 from 29.05.2007 page 3 with further rectifications and amendments).

National regulations

Not available.

15.2. Chemical safety assessment

See attached SUMI or GEIS document, if applicable.

SECTION 16: Other information

References

Not available.

Information on evaluation method leading to the classification of mixture

Not available.

Issue date

21-Jun-2013

Revision information

None.

Training information

Not available.

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.

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 |

List of abbreviations Not available.

Safe Use of Mixture Information (SUMI)

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Water Based Ink: WB01 *English*

Disclaimer

This SUMI is a generic document for communicating conditions of safe use of a product in response to the REACH obligation. This document relates only to conditions of safe use and is not specific to a product. By adding this SUMI to a specific product SDS, the importer/formulator declares that the mixture can safely be used following the instructions below. Following occupational health legislation, the employer of workers remains responsible for communicating relevant use information to employees. When developing workplace instructions for employees, SUMI Sheets should always be considered in combination with the SDS and the label of the product. Derived No Effect Levels (DNEL) and Predicted No Effect Concentration (PNEC) values of substances derived from the Chemical Safety Assessment (CSA) will be given in section 8 of the SDS.

The REACH registration number(s), where applicable, completes an extended product SDS.

Operational conditions

| | |
|------------------------------|---|
| Maximum duration | Up to 8 hours per day |
| Frequency of exposure | < 240 days per year |
| Process conditions | Covers use at ambient temperatures. Adequate ventilation should be provide for the areas where printing is performed. ANSI/ASHRAE Standard 62.1-2013 provides guidelines to ensure acceptable air quality in the workspace. Avoid direct contact. Regular cleaning of equipment and work area. Supervision in place to check that Risk Management Measures are in place are being correctly used and Operational Conditions followed. |

Risk management measures

| | |
|--|---|
| Conditions and measures related to Personal Protection Equipment, hygiene and health evaluation | <p>Wear safety glasses with side shields (or goggles), if splashing is possible. Wear appropriate chemical resistant gloves: see section 8 of the SDS. Wear appropriate chemical resistant clothing. In case of inadequate ventilation wear respiratory protection. Eye wash fountain and emergency showers are recommended. Avoid breathing mist/vapours. Avoid contact with skin, eyes and clothing. Training of workers in relation to proper use and maintenance of all Personal protection equipment (PPE) must be ensured.</p> <div style="display: flex; justify-content: space-around; align-items: center;">     </div> |
|--|---|

Good practice advice

Use personal protective equipment as required.
Wash hands before breaks and after work.
Keep good industrial hygiene and safety practice.
Use only with adequate ventilation.
Do no eat, drink or smoke when using this product.
Wash contaminated clothing before reuse.
Store at room temperature.



Environmental measures

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 appropriately licenced waste contractor.

Use descriptors

- IS-Use at industrial sites
- PW-Widespread use by professional workers
- SU7-Printing and reproduction media
- PC18-Inks and Toners
- PROC1-Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
- PROC2-Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
- PROC3- Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
- PROC8a-Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
- PROC8b-Transfer of substance or mixture (charging and discharging) at dedicated facilities
- ERC5-Use at industrial site leading to inclusion into/onto article
- ERC8c-Widespread use leading to inclusion into/onto article (indoor)

Additional information on product composition

In section 2 of the SDS as well as on the label, the classification of the mixture is provided.
Most of the water based inks are "not classified".
The classification of the mixture is based on the individuel ingredients and their concentration within the mixture.
All ingredients contributing to the classification are stated in Section 3 of the SDS.
Relevant limit values of ingredients on which the exposure assessment is based, are listed in section 8 of the SDS.
The product may contain sensitizing ingredients that may cause allergic reaction to certain people.
Section 2 of the SDS states these ingredients where applicable.