



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 C4817Series
Registration number -
Synonyms None.
Issue date 05-Mar-2015
Version number 03
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

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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.

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).

Recommended monitoring procedures

Additional exposure data Exposure limits have not been established for this product.

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
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
		Inhalation	10 mg/m ³	Systemic short term
	Workers	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

Components	Type	Route	Value	Form
Alkyldicarboxylic acid (CAS Proprietary)	Not applicable	Soil	0.0612 mg/kg	Sewage Treatment Plant
		STP	10 mg/l	
		Freshwater	0.1 mg/l	Releases
		Intermittant	1 mg/l	
		Marine water	0.01 mg/l	Freshwater
		Sediment	0.079 mg/kg	
		Sediment	0.0079 mg/kg	Marine water
		Soil	0.0177 mg/kg	Sewage Treatment Plant
STP	3 mg/l			

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 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.

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 No relevant additional information available.

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
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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
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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
C4817Series		
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
Alkyldicarboxylic acid (CAS Proprietary)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) 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/NDSL), 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.

Water hazard class**VwVwS**

WGK3

SECTION 16: Other information**References**

Not available.

Information on evaluation method leading to the classification of mixture

Not available.

Issue date

05-Mar-2015

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

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	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.
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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 individual 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.