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	C4821Series
Registration number	-
Synonyms	None.
Issue date	28-Jun-2013
Version number	06
Revision date	05-Oct-2018
Supersedes date	22-Sep-2016

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

Identified uses	Inkjet printing
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

HP Inc. UK Limited
Cain Road, Amen Corner
Bracknell, Berkshire RG12 1HN
United Kingdom

Telephone	44 (0) 879 013 0790
HP Inc. health effects line	
(Toll-free within the US)	1-800-457-4209
(Direct)	1-760-710-0048
HP Inc. Customer Care Line	
(Toll-free within the US)	1-800-474-6836
(Direct)	1-208-323-2551
Email:	hpcustomer.inquiries@hp.com
1.4 Emergency telephone number	0207771 5307

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Health hazards

Serious eye damage/eye irritation	Category 1	H318 - Causes serious eye damage.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 3	H412 - Harmful to aquatic life with long lasting effects.

2.2. Label elements

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

Contains: 1,5-pentanediol, 2-pyrrolidone, C11-C15 secondary ethoxylated alcohols, Direct Blue 199 Tetramethylammonium Salt, Succinic acid, Water

Hazard pictograms

Signal word Danger

Hazard statements

H318	Causes serious eye damage.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment.

Response

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.

Storage Not available.

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

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	60-70	7732-18-5 231-791-2	-	-	
Classification: -					
1,5-pentanediol	<10	111-29-5 203-854-4	01-2119449341-44-0006	-	
Classification: -					
2-pyrrolidone	<10	616-45-5 210-483-1	01-2119475471-37-XXXX	-	
Classification: Eye Irrit. 2;H319					
Succinic acid	<7.5	110-15-6 -	01-2119896114-34-XXXX	-	
Classification: Eye Dam. 1;H318					
C11-C15 secondary ethoxylated alcohols	<2.5	68131-40-8 -	-	-	
Classification: Acute Tox. 4;H302, Acute Tox. 4;H312, Skin Irrit. 2;H315, Eye Dam. 1;H318, Aquatic Chronic 2;H411					
Direct Blue 199 Tetramethylammonium Salt	<2.5	Not available -	01-0000016309-68-XXXX	-	
Classification: Acute Tox. 4;H302, Eye Irrit. 2;H319, STOT RE 2;H373, Aquatic Chronic 2;H411					

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 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 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 CO_2, 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.

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 levels (DNELs)

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/m3	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/m3	Systemic long term
Succinic acid (CAS 110-15-6)	Consumers	Dermal	67 mg/kg	Systemic short term
		Dermal	43 mg/kg	Systemic long term
		Inhalation	10 mg/m3	Local long term
		Inhalation	10 mg/m3	Local short term
		Inhalation	10 mg/m3	Systemic long term
		Inhalation	10 mg/m3	Systemic short term
		Oral	67 mg/kg	Systemic short term

Components	Type	Route	Value	Form
	Workers	Dermal	71 mg/kg	Systemic long term
		Dermal	67 mg/kg	Systemic short term
		Inhalation	10 mg/m3	Local long term
		Inhalation	10 mg/m3	Local short term
		Inhalation	10 mg/m3	Systemic long term
		Inhalation	10 mg/m3	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	
		Intermittent	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
Succinic acid (CAS 110-15-6)	Not applicable	Freshwater	0.1 mg/l	
		Intermittent	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.
Provide adequate ventilation.

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 Recommended gloves: Nitrile 4 mil minimum thickness.

- Other Protected gloves not required under intended use.

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.

Form Not available.

Color Cyan

Odor Not available.

Odor threshold Not available.

pH 3.8 - 4.3

Melting point/freezing point Not available.

Initial boiling point and boiling range Not determined

Flash point > 230.0 °F (> 110.0 °C) Pensky-Martens 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
Vapor density	Not available.
Solubility(ies)	
Solubility (water)	Soluble in water
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	< 221 g/l Estimated

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.
Information on likely routes of exposure	
Inhalation	Inhalation may result in mild irritation to the respiratory system.
Skin contact	Contact with skin may result in mild irritation.
Eye contact	Causes serious eye damage.
Ingestion	Ingestion is not a likely route of exposure.
Symptoms	Not available.
11.1. Information on toxicological effects	
Acute toxicity	Based on available data, the classification criteria are not met.

Components	**Species**	**Test Results**
2-pyrrolidone (CAS 616-45-5)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg

Skin corrosion/irritation	Based on available data, the classification criteria are not met. Non irritant in rabbit (OECD 404)
Serious eye damage/eye irritation	Causes serious eye damage.
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.

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

12.1. Toxicity

Aquatic toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Static acute toxicity (trout), survival (100 mg/L) = 90%
Static acute toxicity (trout), survival (10 mg/L) = 100%

Product		Species	Test Results
C4821Series			
Aquatic			
Acute			
Algae	EC50	Algae	> 100 mg/l, 72 hours
Crustacea	EC50	Daphnia	> 66 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	< 400 mg/l, 96 hours

Components		Species	Test Results
2-pyrrolidone (CAS 616-45-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	13.21 mg/l, 48 hours
Direct Blue 199 Tetramethylammonium Salt (CAS Not available)			
Aquatic			
Crustacea	EC50	Daphnia	50 - 100 mg/l, 48 Hours
Succinic acid (CAS 110-15-6)			
Aquatic			
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
Succinic 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 (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 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.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

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 (EU) 2015/830. Classification according to Regulation (EC) No 1272/2008 as amended.

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

Regulation (EC) No. 1907/2006 of December 18, 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and establishing a European Chemicals Agency (REACH).

Regulation (EU) 2015/830 of May 28, 2015 amending Regulation (EC) No. 1907/2006.

Regulation (EC) No. 1272/2008 of December 16, 2008 on classification, labeling and packaging of substances and mixtures, and amendments (CLP).

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any H-statements not written out in full under Sections 2 to 15

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H373 May cause damage to organs through prolonged or repeated exposure by ingestion.
H411 Toxic to aquatic life with long lasting effects.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.

Training information

Follow training instructions when handling this material.

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.

This safety data sheet is meant to convey information about HP inks (toners) provided in HP Original ink (toner) supplies. If our Safety Data Sheet has been provided to you with a refilled, remanufactured, compatible or other non-HP Original supply please be aware that the information contained herein was not meant to convey information about such products and there could be considerable differences from information in this document and the safety information for the product you purchased. Please contact the seller of the refilled, remanufactured or compatible supplies for applicable information, including information on personal protective equipment, exposure risks and safe handling guidance. HP does not accept refilled, remanufactured or compatible supplies in our recycling programs.

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)

--

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 resistent gloves: see section 8 of the SDS. Wear appropriate chemical resistent 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.




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.