



SAFETY DATA SHEET

1. Identification of the dangerous substance/preparation and the identity of the manufacturer, importer, agent or marketer

Important information *** This Safety Data Sheet is only authorised for use by HP for HP Original products. Any unauthorised use of this Safety Data Sheet is strictly prohibited and may result in legal action being taken by HP. ***

Product name C4821Series

Other means of identification Not available.

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2. Identification of the components of the substance/preparation

Substance or Preparation	Preparation	CAS number	Percent
Water		7732-18-5	60-80
2-pyrrolidone		616-45-5	<10
Trimethylolpropane		77-99-6	<10
succinic acid		110-15-6	<7.5
C11-C15 secondary ethoxylated alcohols		Proprietary	<2.5
Direct Blue 199 Tetramethylammonium Salt		Proprietary	<2.5

Composition comments This ink supply contains an aqueous ink formulation.

2-pyrrolidone: Specific Concentration Limit 3%. Mixture classification threshold based on data related to developmental toxicity in animals. No adverse effects on sexual function or damage to fertility have been observed in an animal study. See Section 11.

3. Dangers of the dangerous substance/preparation

Classification R43, R52/53

Physical hazards Not classified as a physical hazard.

Health hazards May impair fertility. May cause harm to the unborn child. May cause sensitization by skin contact.

Environmental hazards Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

GHS classification

Physical hazards	Not classified.	
Health hazards	Serious eye damage/eye irritation	Category 1
	Reproductive toxicity (fertility, the unborn child)	Category 1B
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 3

GHS label elements

Symbols



Signal word

Danger

Hazard statement

Causes serious eye damage. May damage fertility or the unborn child. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention

Wear protective gloves/protective clothing/eye protection. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Avoid release to the environment.

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. IF exposed or concerned: Get medical advice/attention.

Storage

Store locked up.

Disposal

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

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.

Supplemental information

2-pyrrolidone: Specific Concentration Limits, Reproductive toxicity Category 1B, fertility or the unborn child 3%. Mixture classification threshold based on data related to developmental toxicity in animals. No adverse effects on sexual function or damage to fertility have been observed in an animal study. See Section 11.

4. First aid instructions

First aid measures for different exposure routes

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.

Main symptoms

Not available.

Personal protection for first-aid responders

Not available.

Notes to physician

Not available.

Special first aid equipment

Not available.

5. Firefighting procedure

Extinguishing media

Suitable extinguishing media

CO2, water, dry chemical, or foam

Extinguishing media which must not be used for safety reasons

None known.

Specific hazards during fire fighting

Not available.

Special fire fighting procedures

Not available.

Protection of fire-fighters

Not available.

Specific methods

None established.

6. Safety precautions

Containment procedures

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.

Environmental precautions

Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up

Soak up with inert absorbent material.

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.
Personal precautions	Wear appropriate personal protective equipment.

7. Handling and storage

Precautions for safe handling	Avoid contact with skin, eyes and clothing.
Conditions for safe storage, including any incompatibilities	Keep out of the reach of children. Keep away from excessive heat or cold.

8. Means of reducing exposure and personal protection

Engineering measures to reduce exposure	Use in a well ventilated area. Provide adequate ventilation.
Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	Exposure limits have not been established for this product.
Personal protective equipment	
Respiratory protection	Not available.
Hand protection	Recommended gloves: Nitrile 4 mil minimum thickness.
Eye protection	Not available.
Skin and body protection	Use personal protective equipment to minimize exposure to skin and eye.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Not available.
Color	Cyan
Odor	Not available.
pH	3.8 - 4.3
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not determined
Decomposition temperature	Not available.
Flash point	> 230.0 °F (> 110.0 °C) Pensky-Martens Closed Cup
Flammability	Not available.
Auto-ignition temperature	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not determined
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Oxidizing properties	Not determined
Vapor pressure	Not determined
Density	1.06 g/cm ³
Solubility(ies)	
Solubility (water)	Soluble in water
Partition coefficient (n-octanol/water)	Not available.
Other information	
Evaporation rate	Not determined
Viscosity	>= 2 cp
VOC	< 221 g/l Estimated

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Not available.
Possibility of hazardous reactions	Will not occur.
Incompatibility	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.
Materials to avoid	Not available.

11. Toxicological information

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.

Toxicological data Not available.

Acute toxicity 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	Rat	> 5000 mg/kg
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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 or skin sensitization

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 May damage fertility or the unborn child.

2-pyrrolidone: This component showed developmental effects only at high doses that were toxic to pregnant test animals (OECD Testing Guideline 414: Prenatal Developmental Toxicity Study). Uptake by people of small doses is not expected to cause developmental toxicity. This component has not caused adverse effects on sexual function or damage to fertility in an animal study (OECD Testing Guideline 443: Extended One-Generation Reproductive Toxicity Study).

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.

Chronic effects 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.

12. Environmental information

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%

Ecotoxicity

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			
<i>Acute</i>			
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			
Aquatic			
Crustacea	EC50	Daphnia	50 - 100 mg/l, 48 Hours
succinic acid (CAS 110-15-6)			
Aquatic			
Fish	LC50	Fish	101, 96 Hours
Trimethylolpropane (CAS 77-99-6)			
Aquatic			
Crustacea	EC50	Daphnia	102, 48 Hours
Fish	LC50	Fish	1000, 96 Hours

Environmental effects Not available.

Persistence and degradability

Mobility in soil Not available.

Other information Not available.

13. Dangerous substance disposal methods

Disposal instructions Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Dispose of in compliance with Israeli Ministry of the Environment 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>.

Waste from residues / unused products Not available.

Contaminated packaging Not available.

Special precautions Not available.

14. Transport information

DOT

UN number Not available.

UN proper shipping name Not Regulated

Transport hazard class(es)

Class Not available.

Subsidiary risk -

Packing group Not available.

Environmental hazards

Marine pollutant No

Special precautions for user Not available.

IATA

UN number Not available.

UN proper shipping name Not Regulated
Transport hazard class(es)
Class Not available.
Subsidiary risk -
Packing group Not available.
Environmental hazards No
Special precautions for user Not available.

IMDG

UN number Not available.
UN proper shipping name Not Regulated
Transport hazard class(es)
Class Not available.
Subsidiary risk -
Packing group Not available.
Transport hazard class(es)
Marine pollutant No
EmS Not available.
Special precautions for user Not available.

ADR

UN number Not available.
UN proper shipping name Not Regulated
Transport hazard class(es)
Class Not available.
Subsidiary risk -
Hazard No. (ADR) Not available.
Tunnel restriction code Not available.
Packing group Not available.
Environmental hazards No
Special precautions for user Not available.

Further information Not a regulated article under Israeli Transport Services Law and Regulation 1997, United States DOT, IATA, ADR, IMDG or RID.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC code: Not applicable.

15. Regulatory information

Israel regulations

Israel. Harmful Chemicals (Hazardous Substances Law, 5753-1993, Annex 1, as amended)

Not listed.

Israel. Toxic Chemicals (Hazardous Substances Law, 5753-1993, Annex 2, as amended)

Not 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/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

16. Other information

Training information Follow training instructions when handling this material.
Recommended use Not available.
Recommended restrictions Not available.
Further information Not available.
Bibliography 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.

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