



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 C4823Series

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	60-75
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
Substituted naphthalenesulfonate salt # 7		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 Not classified.

GHS label elements

Symbols



Signal word

Danger

Hazard statement

Causes serious eye damage. May damage fertility or the unborn child.

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.

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 Yellow

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) Pinsky-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 1.07 g/cm³

Solubility(ies)

Solubility (water) Soluble in water

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

Other information

Evaporation rate Not determined

Viscosity >= 2 cp

VOC < 169 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 Static acute toxicity (trout), survival (100 mg/L) = 80%
Static acute toxicity (trout), survival (10 mg/L) = 100%
LC50/96h/rainbow trout => 100 mg/l
EC50/48h/daphnia => 100mg/l , OECD 202
EC50/72h/algae => 100 mg/l, OECD 201

Ecotoxicity

Static acute toxicity (trout), survival (100 mg/L) = 80%
Static acute toxicity (trout), survival (10 mg/L) = 100%
LC50/96h/rainbow trout => 100 mg/l
EC50/48h/daphnia => 100mg/l , OECD 202
EC50/72h/algae => 100 mg/l, OECD 201

Components		Species	Test Results
2-pyrrolidone (CAS 616-45-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	13.21 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.

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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