



SAFETY DATA SHEET

1. Identification

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 identifier	51605R Rev B	
Other means of identification	None.	
Recommended use of the chemical and restrictions on use		
Recommended use	Inkjet printing	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
	HP Singapore (Private) Limited 1 Depot Close Singapore, 109841	
Telephone	62753888	
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	
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Email:	hpcustomer.inquiries@hp.com	

2. Hazards identification

GHS classification

Physical hazards	Not classified.	
Health hazards	Reproductive toxicity (fertility, the unborn child)	Category 1B
	Specific target organ toxicity, repeated exposure	Category 2 (kidney)
Environmental hazards	Not classified.	

GHS label elements, including precautionary statements

Pictograms



Signal word	Danger	
Hazard statements	May damage fertility or the unborn child. May cause damage to organs (kidney) through prolonged or repeated exposure.	
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. Do not breathe the mist or vapor.	
Response	Get medical attention/advice if you feel unwell. 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 which do not result in classification	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.

3. Composition/information on ingredients

Substance or mixture	Mixture		
Chemical name	Common name and synonyms	CAS Number	Concentration (%)
Water		7732-18-5	40-50
2-pyrrolidone		616-45-5	<30
Ethylene glycol		107-21-1	<30
Alkyldiol		Proprietary	<7.5
Acid Yellow 23 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.

4. 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. 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.

Most important symptoms/effects, acute and delayed Not available.

Indication of immediate medical attention and special treatment needed Not available.

5. Fire-fighting measures

Suitable extinguishing media Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical Not available.

Special protective equipment and precautions for firefighters Not available.

Specific methods None established.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Wear appropriate personal protective equipment.

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

Methods and materials 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.

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. Exposure controls/personal protection

Occupational exposure limits

Singapore. PELs. (Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order)

Components	Type	Value
Ethylene glycol (CAS 107-21-1)	STEL	127 mg/m3
		50 ppm

Control parameters/Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol.

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

Appropriate engineering control measures Use in a well ventilated area.

Individual protection measures, such as personal protective equipment

Eye/face protection Not available.

Skin protection

Hand protection Recommended gloves: Nitrile 4 mil minimum thickness.

Other Use personal protective equipment to minimize exposure to skin and eye.

Respiratory protection Not available.

Thermal hazards Not available.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	liquid
Physical state	Liquid.
Form	Not available.
Color	Red, Magenta
Odor	Not available.
Odor threshold	Not available.
pH	7 - 7.4
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not determined
Flash point	338.0 - 347.0 °F (170.0 - 175.0 °C) Closed Cup EPA Method 1020
Evaporation rate	Not determined
Flammability (solid, gas)	Not available.
Flammability limit - lower (%)	Not determined
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not determined
Vapor density	>= 1 (air = 1.0)
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
Other data	
Oxidizing properties	Not determined
Percent volatile	25 % estimated

10. Stability and reactivity

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

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	Contact with eyes may result in mild irritation.
Ingestion	Ingestion is not a likely route of exposure.

Acute toxicity Based on available data, the classification criteria are not met.
LD50/oral/rat >2500 mg/kg (OECD 401).

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
<u>Acute</u>		
Oral		
LD50	Rat	> 5000 mg/kg
Acid Yellow 23 Tetramethylammonium Salt		
<u>Acute</u>		
Dermal		
LD50	Rabbit	2000 mg/kg
Oral		
LD50	Rat	81 mg/kg
<u>Chronic</u>		
Oral		
NOAEL	Rat	1 mg/kg
Ethylene glycol (CAS 107-21-1)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	9530 mg/kg
Inhalation		
<i>Aerosol</i>		
LC50	Rat	> 2.5 mg/l, 6 Hours
Other		
LD50	Rat	2800 mg/kg
Symptoms	Not available.	
Skin corrosion/irritation	Based on available data, the classification criteria are not met. Non irritant in rabbit (OECD 404)	
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met. Not classified as an irritant according to, OECD 405.	
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	May cause damage to organs (kidney) through prolonged or repeated exposure by ingestion.
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. Ecological information

Ecotoxicity

Product	Species	Test Results
51605R Rev B		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) > 750 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
Acid Yellow 23 Tetramethylammonium Salt		
Aquatic		
Algae	IC50	Algae <= 100 mg/l, 72 Hours
Crustacea	EC50	Daphnia 30 mg/l, 48 Hours
Fish	LC50	Fish 1000 mg/l, 96 Hours

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Octanol/water partition coefficient log Kow

2-pyrrolidone	-0.85
Ethylene glycol	-1.36

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal methods/information Do not dispose of together with general office waste. 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 an appropriately licensed waste contractor.

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.
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UN proper shipping name	Not Regulated
Transport hazard class(es)	
Class	Not available.
Subsidiary risk	-
Packing group	Not available.
Environmental hazards	None
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	None
Special precautions for user	Not available.

Further information Not a dangerous good under 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

Safety, health and environmental regulations specific for the product in question

Chemical Weapons Prohibition (Act)

Not applicable.

Controlled Narcotic Drugs (Misuse of Drugs Act, First Schedule, Part I, II & III)

Not regulated.

Controlled Specified Drugs (Misuse of Drugs Act, Fourth Schedule)

Not regulated.

Environmental Protection and Management (Hazardous Substances) Regulations

Not applicable.

Environmental Public Health Act

Not applicable.

Prior Informed Consent (PIC) Substances (Environment Protection and Management Act, 2nd Schedule, Part 1, Jul. 1, 2013)

Not regulated.

International 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.

Montreal Protocol

Not applicable.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Basel Convention

Not applicable.

16. Other information

References Not available.

Issued by

Company name HP Inc.

Prepared by

HP Inc.

Disclaimer

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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.

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Key/legend Not applicable.

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