



# SAFETY DATA SHEET

## 1. Product and company identification

<b>Important information</b>	*** 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. ***
<b>Name of the chemical</b>	51645 Series
<b>Other means of identification</b>	None.
<b>Recommended use of the chemical and restrictions on use</b>	
<b>Recommended use</b>	Inkjet printing
<b>Recommended restrictions</b>	None known.
<b>Company identification</b>	HP Taiwan Information Technology Ltd. 10F-2, No. 66 Jing Mao 2 Road Taipei, Taipei City, Taiwan 11568
<b>Telephone</b>	886-2-8722-9000
<b>HP Inc. health effects line</b>	
<b>(Toll-free within the US)</b>	1-800-457-4209
<b>(Direct)</b>	1-760-710-0048
<b>HP Inc. Customer Care Line</b>	
<b>(Toll-free within the US)</b>	1-800-474-6836
<b>(Direct)</b>	1-208-323-2551
<b>Email:</b>	hpcustomer.inquiries@hp.com

## 2. Hazards identification

<b>Hazard classification</b>	
<b>Physical hazards</b>	Not classified.
<b>Health hazards</b>	Not classified.
<b>Environmental hazards</b>	Not classified.
<b>Label elements</b>	
<b>Symbols</b>	None.
<b>Signal word</b>	None.
<b>Hazard statement</b>	None.
<b>Precautionary statement</b>	
<b>Prevention</b>	Not available.
<b>Response</b>	Not available.
<b>Storage</b>	Not available.
<b>Disposal</b>	Not available.
<b>Other hazards</b>	Complete toxicity data are not available for this specific formulation.

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.

Carbon black is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans). Carbon black in this preparation, due to its bound form, does not present this carcinogenic risk. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.

<b>Supplemental information</b>	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.
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## 3. Composition/information on ingredients

### Mixture

Chemical properties	CAS Number	Concentration (%)
Water	7732-18-5	75-85
2-pyrrolidone	616-45-5	<3
Isopropyl alcohol	67-63-0	<2.5

**Composition comments** 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.

This ink supply contains an aqueous ink formulation.

Carbon black is present only in a bound form in this preparation.

#### 4. First aid measures

##### First aid measures for different exposure routes

<b>Inhalation</b>	Move to fresh air. If symptoms persist, get medical attention.
<b>Skin contact</b>	Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.
<b>Eye contact</b>	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.
<b>Ingestion</b>	If ingestion of a large amount does occur, seek medical attention.

**Most important symptoms and effects** Contact with skin and eyes may result in irritation.

**Personal protection for first-aid responders** Not available.

**Notes to physician** Not available.

#### 5. Fire-fighting measures

<b>Extinguishing media</b>	CO2, water, dry chemical, or foam
<b>Extinguishing media to avoid</b>	None known.
<b>Specific hazards during fire fighting</b>	None.
<b>Special fire fighting procedures</b>	None.
<b>Protection of fire-fighters</b>	None established.
<b>General fire hazards</b>	Contact with skin and eyes may result in irritation.
<b>Specific methods</b>	None established.

#### 6. Accidental release measures

<b>Personal precautions</b>	Wear appropriate personal protective equipment.
<b>Environmental precautions</b>	Do not let product enter drains. Do not flush into surface water or sanitary sewer system.
<b>Spill cleanup methods</b>	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. Slowly vacuum or sweep the material into a bag or other sealed container. Dispose of in compliance with federal, state, and local regulations.

#### 7. Handling and storage

<b>Handling</b>	Avoid contact with skin, eyes and clothing.
<b>Storage</b>	Keep out of the reach of children. Keep away from excessive heat or cold.

#### 8. Exposure controls/personal protection

##### Exposure limits

##### OELs. (Standards on Workplace Atmosphere of Dangerous and Hazardous Materials)

Components	Type	Value
Isopropyl alcohol (CAS 67-63-0)	TWA	983 mg/m3
		400 ppm

##### US. ACGIH Threshold Limit Values

Components	Type	Value
Isopropyl alcohol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

## Biological limit values

### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Isopropyl alcohol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*

\* - For sampling details, please see the source document.

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

**Appropriate engineering controls** 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

**Physical state** Liquid.

**Form** Not available.

**Color** Black.

**Odor** Not available.

**Odor threshold** Not available.

**Melting point/freezing point** Not available.

**pH** 7.8 - 8.4

**Boiling point, initial boiling point, and boiling range** 200 °F (93.33 °C)

**Flammability (solid, gas)** Not available.

**Flash point** 131.0 - 136.0 °F (55.0 - 57.8 °C) Pensky-Martens Closed Cup

**Decomposition temperature** Not available.

**Auto-ignition temperature** Not available.

### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**Vapor pressure** Not determined

**Vapor density** Not available.

**Density** 1.04 g/cm<sup>3</sup>

### Solubility(ies)

**Solubility (water)** Soluble in water

**Partition coefficient (n-octanol/water)** Not determined

**Evaporation rate** Not determined

### Other data

**Bulk density** 1 - 1.2 gm/ml

**Oxidizing properties** Not determined

**Percent volatile** 3.1 % estimated

**Relative density** 1 - 1.2 g/cm<sup>3</sup>

**Specific gravity** 1 - 1.2

**Viscosity** > 2 cp

## 10. Stability and reactivity

<b>Stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	Will not occur.
<b>Conditions to avoid</b>	None.
<b>Incompatible materials</b>	Incompatible with strong bases and oxidizing agents.
<b>Hazardous decomposition products</b>	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

<b>Inhalation</b>	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
<b>Skin contact</b>	Contact with skin may result in mild irritation.
<b>Eye contact</b>	Contact with eyes may result in mild irritation.
<b>Ingestion</b>	Health injuries are not known or expected under normal use.

**Symptoms** Not available.

### Information on toxicological effects

**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

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/eye irritation** Not classified as an irritant according to, OECD 405. Based on available data, the classification criteria are not met.

### 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.

Carbon black is classified as a carcinogen by the IARC (possibly carcinogenic to humans, Group 2B) and by the State of California under Proposition 65. In their evaluations of carbon black, both organizations indicate that exposure to carbon black, per se, does not occur when it remains bound within a product matrix, specifically, rubber, ink, or paint. Carbon black is present only in a bound form in this preparation.

### ACGIH Carcinogens

Isopropyl alcohol (CAS 67-63-0)

A4 Not classifiable as a human carcinogen.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

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. Ecological information

**Aquatic toxicity** Not expected to be harmful to aquatic organisms.

## Ecotoxicity

Product	Species	Test Results
51645 Series		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) > 750 mg/l, 96 hours
<b>Components</b>	<b>Species</b>	<b>Test Results</b>

2-pyrrolidone (CAS 616-45-5)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea ( <i>Daphnia pulex</i> )	13.21 mg/l, 48 hours
Isopropyl alcohol (CAS 67-63-0)			
<b>Aquatic</b>			
<i>Acute</i>			
Algae	EC50	Algae	> 1000 mg/l, 72 hours
Crustacea	EC50	Daphnia	13299 mg/l, 48 hours
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )	9460 mg/l, 96 hours

**Persistence and degradability** No data is available on the degradability of this product.

### Bioaccumulation

#### Bioaccumulative potential

##### Octanol/water partition coefficient log Kow

2-pyrrolidone	-0.85
Isopropyl alcohol	0.05

**Mobility in soil** Not available.

**Other hazardous effects** Not available.

## 13. Disposal considerations

<b>Disposal instructions</b>	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 <a href="http://www.hp.com/recycle">http://www.hp.com/recycle</a> .
<b>Residual waste</b>	Not available.
<b>Contaminated packaging</b>	No special precautions.
<b>Local disposal regulations</b>	Not available.

## 14. Transport information

<b>DOT</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>ADR</b>	Not regulated as dangerous goods.
<b>Further information</b>	No ignition, sustained combustion, or flashing detected, using the Sustained Combustibility Test prescribed in the UN Manual of Tests and Criteria, Part III subsection 32.5.2. Refer to Dangerous Goods Regulations Section 3.3.1.3.

## 15. Regulatory information

### Applicable regulations

#### Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste

Not listed.

#### Priority Management Chemical List (Regulations on Handling Priority Managed Chemicals), as amended

Not listed.

**Toxic Chemical Substances (TCS) List (EPA Toxic Substances Notice No. 0960095331E, Tables 1-3, Dec. 17, 2007, as amended)**

Not listed.

**Standards on Workplace Atmosphere of Dangerous and Hazardous Materials**

Isopropyl alcohol (CAS 67-63-0) Listed.

**Regulations for Governing Prevention of Organic Solvent Poisoning**

Isopropyl alcohol (CAS 67-63-0) Type 2 Organic Solvent

**GHS Classification List: GHS implementation phase 1, 2 and 3 (CLA No. 0980145063, 0990146707, and 1020146801)**

2-pyrrolidone (CAS 616-45-5)

Isopropyl alcohol (CAS 67-63-0)

**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.

**Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Montreal Protocol**

Not applicable.

**Kyoto protocol**

Not applicable.

**Basel Convention**

Not applicable.

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**16. Other information**

**References**

Not available.

**Issued by**

HP Inc.

**Prepared by**

HP Inc.

**Disclaimer**

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. 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.

## Explanation of abbreviations

<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>CAS</b>	Chemical Abstracts Service
<b>CERCLA</b>	Comprehensive Environmental Response Compensation and Liability Act
<b>CFR</b>	Code of Federal Regulations
<b>COC</b>	Cleveland Open Cup
<b>DOT</b>	Department of Transportation
<b>EPCRA</b>	Emergency Planning and Community Right-to-Know Act (aka SARA)
<b>IARC</b>	International Agency for Research on Cancer
<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>NTP</b>	National Toxicology Program
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>REC</b>	Recommended
<b>REL</b>	Recommended Exposure Limit
<b>SARA</b>	Superfund Amendments and Reauthorization Act of 1986
<b>STEL</b>	Short-Term Exposure Limit
<b>TCLP</b>	Toxicity Characteristics Leaching Procedure
<b>TLV</b>	Threshold Limit Value
<b>TSCA</b>	Toxic Substances Control Act
<b>VOC</b>	Volatile Organic Compounds