



# 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** CH645Series  
**Registration number** -  
**Synonyms** None.  
**Issue date** 19-Jun-2013  
**Version number** 04  
**Revision date** 20-May-2016  
**Supersedes date** 02-Sep-2015

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

**Identified uses** Inkjet printing  
**Uses advised against** None known.  
**Company identification** HP Inc UK Limited  
Cain Rd., Amen Corner, Pt 2nd Floor (Bldg BRA03)  
Bracknell, United Kingdom RG12 1HN  
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  
Poison Information Center 0207771 5307

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

### 2.2. Label elements

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

**Contains:** 1-(2-hydroxyethyl)-2-pyrrolidone, 2-pyrrolidone, Water  
**Hazard pictograms** None.  
**Signal word** None.  
**Hazard statements** The mixture does not meet the criteria for classification.  
**Precautionary statements**  
**Prevention** Not available.  
**Response** Not available.  
**Storage** Not available.  
**Disposal** Not available.  
**Supplemental label information** Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.

### 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	70-85	7732-18-5 231-791-2	-	-	
<b>Classification:</b>	-				
1-(2-hydroxyethyl)-2-pyrrolidone	< 10	3445-11-2 222-359-4	01-2119977089-21-XXXX	-	
<b>Classification:</b>	-				
2-pyrrolidone	< 7.5	616-45-5 210-483-1	01-2119475471-37-XXXX	-	
<b>Classification:</b>	Eye Irrit. 2;H319				

**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** CO2, 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.

<b>6.2. Environmental precautions</b>	Do not let product enter drains. Do not flush into surface water or sanitary sewer system.
<b>6.3. Methods and material for containment and cleaning up</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.
<b>6.4. Reference to other sections</b>	Not available.

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## SECTION 7: Handling and storage

<b>7.1. Precautions for safe handling</b>	Avoid contact with skin, eyes and clothing.
<b>7.2. Conditions for safe storage, including any incompatibilities</b>	Keep out of the reach of children. Keep away from excessive heat or cold.
<b>7.3. Specific end use(s)</b>	Not available.

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## SECTION 8: Exposure controls/personal protection

<b>8.1. Control parameters</b>	
<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Recommended monitoring procedures</b>	Not available.

### Derived no-effect level (DNEL)

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/m <sup>3</sup>	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/m <sup>3</sup>	Systemic long term

### Predicted no effect concentrations (PNECs)

Components	Type	Route	Value	Form
2-pyrrolidone (CAS 616-45-5)	Not applicable	Freshwater	0.5 mg/l	
		Intermittant	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

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

### 8.2. Exposure controls

**Appropriate engineering controls** Use in a well ventilated area.

### Individual protection measures, such as personal protective equipment

<b>General information</b>	Use personal protective equipment to minimize exposure to skin and eye.
<b>Eye/face protection</b>	Not available.
<b>Skin protection</b>	
- Hand protection	Not available.
- Other	Not available.
<b>Respiratory protection</b>	Not available.
<b>Thermal hazards</b>	Not available.

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** Not available.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	Not available.
<b>Color</b>	Yellow
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	7.1 - 7.7
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not determined
<b>Flash point</b>	> 200.0 °F (> 93.3 °C) Setafash Closed Tester
<b>Evaporation rate</b>	Not determined
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not determined
<b>Flammability limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not determined
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Soluble in water
<b>Solubility (other)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	> 2 cp
<b>Explosive properties</b>	Not available.
<b>Oxidizing properties</b>	Not determined
<b>9.2. Other information</b>	
<b>VOC (Weight %)</b>	< 225 g/L EPA Method 24

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## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	Not available.
<b>10.2. Chemical stability</b>	Stable under recommended storage conditions.
<b>10.3. Possibility of hazardous reactions</b>	Will not occur.
<b>10.4. Conditions to avoid</b>	Not available.
<b>10.5. Incompatible materials</b>	Incompatible with strong bases and oxidizing agents.
<b>10.6. Hazardous decomposition products</b>	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

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## SECTION 11: Toxicological information

<b>General information</b>	Not available.
<b>11.1. Information on toxicological effects</b>	
<b>Acute toxicity</b>	Based on available data, the classification criteria are not met.
<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met.
<b>Serious eye damage/eye irritation</b>	Based on available data, the classification criteria are not met.
<b>Respiratory sensitization</b>	Based on available data, the classification criteria are not met.
<b>Skin sensitization</b>	Based on available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - single exposure</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - repeated exposure</b>	Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
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2-pyrrolidone (CAS 616-45-5)

**Acute**

*Oral*

LD50

Guinea pig

6500 mg/kg

Rat

6500 mg/kg

**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

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

### 12.1. Toxicity

<b>Product</b>	<b>Species</b>	<b>Test Results</b>
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CH645Series

**Aquatic**

*Acute*

Fish

LC50

Fathead minnow (*Pimephales promelas*)

> 750 mg/l, 96 hours

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
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2-pyrrolidone (CAS 616-45-5)

**Aquatic**

Crustacea

EC50

Water flea (*Daphnia pulex*)

13.21 mg/l, 48 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

**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.

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**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 (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended**

Not listed.

**Regulation (EC) No. 689/2008 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 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding**

Not regulated.

**Other EU regulations****Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances**

Not regulated.

**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 (EC) No 1907/2006.

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.

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**SECTION 16: Other information****References**

Not available.

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**Information on evaluation method leading to the classification of mixture** Not available.

**Issue date** 19-Jun-2013

**Revision information** None.

**Training information** 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**

<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

**List of abbreviations** Not available.

# Safe Use of Mixture Information (SUMI)

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## 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

<b>Maximum duration</b>	Up to 8 hours per day
<b>Frequency of exposure</b>	< 240 days per year
<b>Process conditions</b>	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

<b>Conditions and measures related to Personal Protection Equipment, hygiene and health evaluation</b>	Wear safety glasses with side shields (or goggles), if splashing is possible. Wear appropriate chemical resistant gloves: see section 8 of the SDS. Wear appropriate chemical resistant 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.
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### 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 individual 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.