



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 HP Indigo Sapphire 5 Solution Q4310A
Registration number -
Synonyms None.
Issue date 05-Jun-2014
Version number 04
Revision date 23-Dec-2018
Supersedes date 11-Apr-2017

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

Identified uses HP product for use with HP Indigo Digital Presses 2000, 4000.
Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

HP Finland Oy
Piispankalliontie 17, Pt. Ground Floor
Espoo
Finland FI-02200
Telephone +35 205 350

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

1.4 Emergency telephone number +358 (0)9 471977

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Environmental hazards

Hazardous to the aquatic environment, Category 3
long-term aquatic hazard

H412 - Harmful to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms None.

Signal word None.

Hazard statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

P273 Avoid release to the environment.

Response Not available.

Storage Not available.

Disposal Not available.

Supplemental label information None.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Polyethyleneimine	<7.5	mixture	-	-	
Classification:	-	-			

SECTION 4: First aid measures

General information Not available.

4.1. Description of first aid measures

Inhalation	If overcome by vapor, remove person from exposure to fresh air. If breathing is difficult, give oxygen. If symptoms persist, get medical attention.
Skin contact	Wash affected areas thoroughly with mild soap and water. Immediately take off all contaminated clothing. Wash clothing separately before reuse. 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. Do not apply neutralizing agents.
Ingestion	Rinse mouth with water. Drink one to two glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. 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	Suitable extinguishing media: Dry chemical, CO ₂ , water spray or regular foam.
Unsuitable extinguishing media	None known.

5.2. Special hazards arising from the substance or mixture None known.

5.3. Advice for firefighters

Special protective equipment for firefighters	Not available.
Special fire fighting procedures	Move containers from fire area if you can do it without risk. Evacuate area and fight fire from a safe distance.

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.

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

6.3. Methods and material for containment and cleaning up Not available.

6.4. Reference to other sections Not available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Avoid prolonged or repeated skin contact with this material. Avoid contact with skin, eyes and clothing. Do not reuse the empty container.

7.2. Conditions for safe storage, including any incompatibilities Keep away from excessive heat or cold. Store in a cool and shaded area. Do not store in direct sunlight.
Keep container closed when not in use.

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits No exposure limits noted for ingredient(s).
Biological limit values No biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures Not available.
Derived no effect levels (DNELs) Not available.
Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Use in a well ventilated area.

Individual protection measures, such as personal protective equipment

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

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

Environmental exposure controls Not available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance aqueous solution

Physical state Liquid.

Form Not available.

Color Not available.

Odor Odorless

Odor threshold Not available.

pH 13 (undiluted)

Melting point/freezing point Not applicable

Initial boiling point and boiling range Not applicable

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Solubility(ies)

Solubility (water) Soluble in water

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

Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidizing properties	Not applicable.
9.2. Other information	
Softening point	Not applicable
Specific gravity	1.03 (20 °C)
VOC	0 g/L

SECTION 10: Stability and reactivity

10.1. Reactivity	Not available.
10.2. Chemical stability	Stable under normal storage conditions.
10.3. Possibility of hazardous reactions	Will not occur.
10.4. Conditions to avoid	Not available.
10.5. Incompatible materials	Not available.
10.6. Hazardous decomposition products	none under normal use

SECTION 11: Toxicological information

General information Refer to Section 2 for potential health effects and Section 4 for first aid measures.

Information on likely routes of exposure

Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
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. Health injuries are not known or expected under normal use.

Symptoms Not available.

11.1. Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Polyethyleneimine		
<u>Acute</u>		
Oral		
LD50	Rat	500 - 2000 mg/kg
Skin corrosion/irritation	Not available.	
Serious eye damage/eye irritation	Not available.	
Respiratory sensitization	Not available.	
Skin sensitization	Not available.	
Germ cell mutagenicity	Not available.	
Carcinogenicity	Not available.	
Reproductive toxicity	Not available.	
Specific target organ toxicity - single exposure	Not available.	
Specific target organ toxicity - repeated exposure	Not available.	
Aspiration hazard	Not available.	
Mixture versus substance information	Not available.	
Other information	No data is available on the product itself.	

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity This product has not been tested for ecological effects.

Components	Species	Test Results	
Polyethyleneimine (CAS mixture)			
Aquatic			
Crustacea	EC50	Daphnia	8.84, 48 Hours
Fish	LC50	Fish	7.1 mg/l, 96 Hours
12.2. Persistence and degradability	Not available.		
12.3. Bioaccumulative potential	Not available.		
Partition coefficient n-octanol/water (log Kow)	Not available.		
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	Empty containers should be taken for local recycling, recovery or waste disposal.
EU waste code	Not available.
Disposal methods/information	Dispose of in compliance with federal, state, and local regulations.

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.

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 (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 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 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not regulated.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

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.

National regulations

Not available.

15.2. Chemical safety assessment

See attached SUMI or GEIS document, if applicable.

SECTION 16: Other information

References

Regulation (EC) No. 1907/2006 of December 18, 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and establishing a European Chemicals Agency (REACH).

Regulation (EU) 2015/830 of May 28, 2015 amending Regulation (EC) No. 1907/2006.

Regulation (EC) No. 1272/2008 of December 16, 2008 on classification, labeling and packaging of substances and mixtures, and amendments (CLP). Regulation (EC) No. 1907/2006 of December 18, 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and establishing a European Chemicals Agency (REACH).

Regulation (EU) 2015/830 of May 28, 2015 amending Regulation (EC) No. 1907/2006.

Regulation (EC) No. 1272/2008 of December 16, 2008 on classification, labeling and packaging of substances and mixtures, and amendments (CLP).

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any H-statements not written out in full under Sections 2 to 15

None.

Revision information

SECTION 11: Toxicological information: Eye contact
SECTION 11: Toxicological information: Ingestion
SECTION 11: Toxicological information: Inhalation
SECTION 11: Toxicological information: Skin contact
SECTION 15: Regulatory information: Other regulations
SECTION 16: Other information: Information on evaluation method leading to the classification of mixture
SECTION 16: Other information: References
SECTION 16: Other information: Training information

Training information

Follow training instructions when handling this material.

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.

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

Safe Use of Mixture Information (SUMI)

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Liquid Electrophotography Digital Printing inks: LE01 *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

Maximum duration	Up to 8 hours per day
Frequency of exposure	< 240 days per year
Process conditions	Covers use at ambient temperatures. Adequate ventilation should be provide for the areas where printing is performed. ANSI/ASHRAE Standard 62.1-2013 provides 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 follow

Risk management measures

Conditions and measures related to Personal Protection Equipment, hygiene and health evaluation

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.
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.



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 in a well-ventilated place.
Keep container tightly closed.
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.
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.