

CN646Series[B][4]-MSDS_RUSSIA-English-15.pdf

CN646Series[C][4]-MSDS_RUSSIA-English-15.pdf

CN646Series[M][4]-MSDS_RUSSIA-English-15.pdf

CN646Series[Y][4]-MSDS_RUSSIA-English-16.pdf



SAFETY DATA SHEET

1. Identification of the chemical and information about the manufacturer or supplier

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. ***

1.1 Identification of the chemical products

1.1.1 Technical name CN646Series[B][4]

Other means of identification None.

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use Not available.

Limitations on use None known.

1.2 Manufacturer/Importer/Supplier/Distributor information

1.2.1 Manufacturer

ZAO Hewlett-Packard A.O.
Highway Leningradskoe, House 16A, Building 3,
125171, Moscow

Telephone 7 495 797-3500

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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2. Hazard(s) identification

2.1. Hazard identification of chemical product as a whole (classification according to GOST 12.1.007-76 and GHS)

Classification according to GOST 12.1.007-76 Not available.

GHS classification

Physical hazards Not classified.

Health hazards Reproductive toxicity (fertility, the unborn child) Category 1B

Environmental hazards Not classified.

2.2 Labeling elements in compliance with GOST 31340-2013

2.2.1 Signal word Danger



2.2.3 Hazard statement

H360 May damage fertility or the unborn child.

Precautionary statement

Prevention

P280 Wear protective gloves/protective clothing/eye protection.

P202 Do not handle until all safety precautions have been read and understood.

P201 Obtain special instructions before use.

Response

P308 + P313 IF exposed or concerned: Get medical advice/attention.

Storage

P405 Store locked up.

Disposal	P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards		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.
GHS Supplemental information	2-pyrrolidone:	Specific Concentration Limits, Reproductive toxicity Category 1B, fertility or the unborn child 3%.

3. Composition/information on ingredients

3.1 Information on product as a whole

3.1.1 Chemical name (IUPAC)	CN646Series[B][4]
3.1.2 Chemical formula	H2O (7732-18-5), C4-H7-N-O (616-45-5), C4-H7-N-O (616-45-5), (C2H4O)n(C2H4O)nC14H26O2 (9014-85-1), (C2H4O)n(C2H4O)nC14H26O2 (9014-85-1), C7H5NOS (2634-33-5), C7H5NOS (2634-33-5), C4H5NOS (2682-20-4)
3.1.3 General description of the composition (taking into account the brand assortment; preparation method)	Not applicable.

3.2 Components

Components	Concentration by weight (%)	Hygienic standards in the working area		CAS-No.	EC No.
		MAC, mg/m3	TSEL, mg/m3		
Water	50-60			7732-18-5	231-791-2
2-pyrrolidone	< 7.5	10		616-45-5	210-483-1
ethoxylated 2,4,7,9-tetramethyl-5-decyn-4,7-diol	<2.5			9014-85-1	500-022-5
1,2-Benzisothiazolin-3-one	<0.05			2634-33-5	220-120-9
2-methyl-2h-isothiazol-3-one	<0.05			2682-20-4	220-239-6

Composition comments This ink supply contains an aqueous ink formulation.
2-pyrrolidone: Specific Concentration Limit 3%.

4. First-aid measures

4.1. Observed symptoms

4.1.1 In case of exposure via inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
4.1.2 In contact with skin	Contact with skin may result in mild irritation.
4.1.3 In contact with eyes	Contact with eyes may result in mild irritation.
4.1.4 In case of exposure via ingestion	Health injuries are not known or expected under normal use.

4.2 First-aid measures to be provided to victims

4.2.1 In case of exposure via inhalation	Move to fresh air. If symptoms persist, get medical attention.
4.2.2 In contact with skin	Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.
4.2.3 In contact with eyes	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.
4.2.4 In case of exposure via ingestion	If ingestion of a large amount does occur, seek medical attention.
4.2.5 Contraindications	Not available.

5. Fire-fighting and explosion safety measures and means

5.1 General characteristics of fire-explosion properties Not available.

5.2 Fire-explosion indicators	Not available.
5.3 Combustion and/or thermal destruction products and hazards arising from these	Not available.
5.4 Recommended extinguishing media	CO2, water, dry chemical, or foam
5.5 Forbidden extinguishing media	None known.
5.6 Special protective equipment for firefighters	Not available.
5.7 Specific extinguishing methods	Wear self contained breathing apparatus for fire fighting if necessary.

6. Accident and emergency prevention and response measures and their consequences

6.1 Measures to prevent harmful effects on people, environment, buildings, constructions, etc. in case of accidents and emergencies

6.1.1 General required actions in case of an accident or emergency Wear appropriate personal protective equipment.

6.1.2 Personal protection equipment in case of the accident Not available.

6.2 Procedures for the elimination of accidents and emergencies

6.2.1 Procedures in case of leaks, spills, splashes 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.

6.2.2 Actions in case of fire Not available.

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.

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

7. Storage and handling requirements of chemicals during loading and unloading

7.1 Safety precautions when handling chemical products

7.1.1 Technical safety measures Not available.

7.1.2 Environmental protection measures Not available.

7.1.3 Recommended safe handling and transportation advice Avoid contact with skin, eyes and clothing.

7.2 Chemical storage requirements

7.2.1 Terms and conditions for safe storage Not available.

7.2.2 Packaging Not available.

7.3 Safety measures and storage requirements at domestic use

Keep out of the reach of children.
Keep away from excessive heat or cold.

8. Equipment for monitoring exposure and personal protective equipment

8.1 Parameters of the working area that require monitoring No exposure limits noted for ingredient(s).

Occupational exposure limits

Russian Federation. Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

Components	Type	Value	Form
2-pyrrolidone (CAS 616-45-5)	Ceiling	10 mg/m3	Aerosol.

8.2 Measures to ensure the content of harmful substances in the working area below the exposure level concentration Exposure limits have not been established for this product.

Appropriate engineering controls Use in a well ventilated area.

8.3 Worker personal protective equipment

8.3.1 General recommendations	Not available.
8.3.2 Respiratory protection	Not available.
8.3.3 Protective equipment	
Eye/face protection	Not available.
Hand protection	Not available.
Other	Use personal protective equipment to minimize exposure to skin and eye.
Thermal hazards	Not available.
8.3.4 Personal protection equipment in case of domestic use	Not applicable.

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

9. Physical and chemical properties

9.1 Physical appearance

Physical state	Liquid.
Form	Not available.
Color	Black.

Odor Not available.

Odor threshold Not available.

9.2 Parameters characterizing basic properties of the product

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not determined

Flash point ≥ 230.0 °F (≥ 110.0 °C) Pensky-Martens Closed Cup

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not determined

Flammability limit - upper (%) Not available.

Vapor pressure Not determined

Viscosity Not available.

Solubility(ies)

Solubility (water) Soluble in water

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

Other data

Evaporation rate Not determined

Oxidizing properties Not determined

Percent volatile 5.28 % estimated

VOC < 56.34 g/l

10. Stability and reactivity

10.1 Chemical stability Stable under recommended storage conditions.

Hazardous decomposition products Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

10.2 Reactivity Not available.

10.3 Conditions to avoid Not available.

Possibility of hazardous reactions Will not occur.

Incompatible materials Incompatible with strong bases and oxidizing agents.

11. Toxicological information

11.1 General exposure characteristics Not available.

11.2 Routes of exposure Not available.

11.3 Affected/target organs, tissues and systems of humans

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.

11.4 Information on health hazards in case of direct exposure to the product and its effect

Effect on upper respiratory tract irritation Not available.

Respiratory or skin sensitization

Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

Not listed.

Respiratory sensitization Based on available data, the classification criteria are not met.

Skin sensitization Based on available data, the classification criteria are not met.

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

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

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

11.5 Information on long-term hazardous health effects

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity May damage fertility or the unborn child.

Mutagenicity

2-pyrrolidone: This component showed developmental effects only at high, maternally toxic doses in test animals. Uptake by people of small doses is not expected to cause developmental toxicity.

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

Cumulativeness Not available.

Chronic effects Not available.

11.6 Acute toxicity data 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

Further information Complete toxicity data are not available for this specific formulation

12. Environmental impact information

12.1 General description of the impact on the environment Not available.

12.2 Routes of exposure to environment Not available.

12.3 The most important characteristics of the environmental impact

12.3.1 Hygienic standards Not available.

12.3.2 Ecotoxicity

Product	Species	Test Results
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CN646Series[B][4]

Aquatic

Acute

Fish

LC50

Fathead minnow (*Pimephales promelas*) < 750 mg/l, 96 hours

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia pulex) 13.21 mg/l, 48 hours
12.3.3 Biomigration and transformation of the environment due to the biodegradation or other processes		
Persistence and degradability	Not available.	
Bioaccumulative potential		
Partition coefficient n-octanol / water (log Kow)		
2-pyrrolidone		-0.85
Mobility in soil	Not available.	
Other adverse effects	Not available.	

13. Recommendations for waste (residues) disposal

13.1 Safety precautions when handling the waste generated during use, storage, transportation	Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
13.2 Information on the location and disposal methods, recycling or disposal of product waste, including packaging	Not available.
13.3 Recommendation on the waste disposal generated during its domestic use	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 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. National and international regulatory information

15.1 National legislation

15.1.1 Laws of the Russian Federation Not available.

15.1.2 Information about the documentation, regulatory requirements for the protection of human health and environment

Sanitary-Epidemiological Rules, 1.2.2353-08, Chemical substances, mixtures and products which are carcinogenic factors, 21 April 2008

Not listed.

Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

2-pyrrolidone (CAS 616-45-5)

Slightly hazardous.

15.2 International Conventions and Agreements

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.

16. Other information

16.1 Information on revision of the SDS

Issue date	10-Oct-2015
Revision date	28-Jan-2020
Version #	04
Previous SDS number	Not applicable.
Revision information	3. Composition / Information on Ingredients: Disclosure Overrides

16.2 List of references used in compiling the safety data sheet 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.

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.

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



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1.1 Identification of the chemical products

1.1.1 Technical name CN646Series[C][4]

Other means of identification None.

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use Inkjet printing

Limitations on use None known.

1.2 Manufacturer/Importer/Supplier/Distributor information

1.2.1 Manufacturer

ZAO Hewlett-Packard A.O.
Highway Leningradskoe, House 16A, Building 3,
125171, Moscow

Telephone 7 495 797-3500

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2. Hazard(s) identification

2.1. Hazard identification of chemical product as a whole (classification according to GOST 12.1.007-76 and GHS)

Classification according to GOST 12.1.007-76 Not available.

GHS classification

Physical hazards Not classified.

Health hazards Reproductive toxicity (fertility, the unborn child) Category 1B

Environmental hazards Not classified.

2.2 Labeling elements in compliance with GOST 31340-2013

2.2.1 Signal word Danger



2.2.3 Hazard statement

H360 May damage fertility or the unborn child.

Precautionary statement

Prevention

P280 Wear protective gloves/protective clothing/eye protection.

P202 Do not handle until all safety precautions have been read and understood.

P201 Obtain special instructions before use.

Response

P308 + P313 IF exposed or concerned: Get medical advice/attention.

Storage

P405 Store locked up.

Disposal	P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards		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.
GHS Supplemental information		2-pyrrolidone: Specific Concentration Limits, Reproductive toxicity Category 1B, fertility or the unborn child 3%.

3. Composition/information on ingredients

3.1 Information on product as a whole

3.1.1 Chemical name (IUPAC)	CN646Series[C][4]
3.1.2 Chemical formula	H2O (7732-18-5), C4-H7-N-O (616-45-5), C4-H7-N-O (616-45-5), (C2H4O)n(C2H4O)nC14H26O2 (9014-85-1), (C2H4O)n(C2H4O)nC14H26O2 (9014-85-1), C7H5NOS (2634-33-5), C7H5NOS (2634-33-5), C4H5NOS (2682-20-4)
3.1.3 General description of the composition (taking into account the brand assortment; preparation method)	Not applicable.

3.2 Components

Components	Concentration by weight (%)	Hygienic standards in the working area		CAS-No.	EC No.
		MAC, mg/m3	TSEL, mg/m3		
Water	50-60			7732-18-5	231-791-2
2-pyrrolidone	< 7.5	10		616-45-5	210-483-1
ethoxylated 2,4,7,9-tetramethyl-5-decyn-4,7-diol	<2.5			9014-85-1	500-022-5
1,2-Benzisothiazolin-3-one	<0.05			2634-33-5	220-120-9
2-methyl-2h-isothiazol-3-one	<0.05			2682-20-4	220-239-6

Composition comments This ink supply contains an aqueous ink formulation.
2-pyrrolidone: Specific Concentration Limit 3%.

4. First-aid measures

4.1. Observed symptoms

4.1.1 In case of exposure via inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
4.1.2 In contact with skin	Contact with skin may result in mild irritation.
4.1.3 In contact with eyes	Contact with eyes may result in mild irritation.
4.1.4 In case of exposure via ingestion	Health injuries are not known or expected under normal use.

4.2 First-aid measures to be provided to victims

4.2.1 In case of exposure via inhalation	Move to fresh air. If symptoms persist, get medical attention.
4.2.2 In contact with skin	Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.
4.2.3 In contact with eyes	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.
4.2.4 In case of exposure via ingestion	If ingestion of a large amount does occur, seek medical attention.
4.2.5 Contraindications	Not available.

5. Fire-fighting and explosion safety measures and means

5.1 General characteristics of fire-explosion properties Not available.

5.2 Fire-explosion indicators	Not available.
5.3 Combustion and/or thermal destruction products and hazards arising from these	Not available.
5.4 Recommended extinguishing media	CO2, water, dry chemical, or foam
5.5 Forbidden extinguishing media	None known.
5.6 Special protective equipment for firefighters	Not available.
5.7 Specific extinguishing methods	Wear self contained breathing apparatus for fire fighting if necessary.

6. Accident and emergency prevention and response measures and their consequences

6.1 Measures to prevent harmful effects on people, environment, buildings, constructions, etc. in case of accidents and emergencies

6.1.1 General required actions in case of an accident or emergency Wear appropriate personal protective equipment.

6.1.2 Personal protection equipment in case of the accident Not available.

6.2 Procedures for the elimination of accidents and emergencies

6.2.1 Procedures in case of leaks, spills, splashes 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.

6.2.2 Actions in case of fire Not available.

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.

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

7. Storage and handling requirements of chemicals during loading and unloading

7.1 Safety precautions when handling chemical products

7.1.1 Technical safety measures Not available.

7.1.2 Environmental protection measures Not available.

7.1.3 Recommended safe handling and transportation advice Avoid contact with skin, eyes and clothing.

7.2 Chemical storage requirements

7.2.1 Terms and conditions for safe storage Not available.

7.2.2 Packaging Not available.

7.3 Safety measures and storage requirements at domestic use

Keep out of the reach of children.
Keep away from excessive heat or cold.

8. Equipment for monitoring exposure and personal protective equipment

8.1 Parameters of the working area that require monitoring No exposure limits noted for ingredient(s).

Occupational exposure limits

Russian Federation. Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

Components	Type	Value	Form
2-pyrrolidone (CAS 616-45-5)	Ceiling	10 mg/m3	Aerosol.

8.2 Measures to ensure the content of harmful substances in the working area below the exposure level concentration Exposure limits have not been established for this product.

Appropriate engineering controls Use in a well ventilated area.

8.3 Worker personal protective equipment

8.3.1 General recommendations	Not available.
8.3.2 Respiratory protection	Not available.
8.3.3 Protective equipment	
Eye/face protection	Not available.
Hand protection	Not available.
Other	Use personal protective equipment to minimize exposure to skin and eye.
Thermal hazards	Not available.
8.3.4 Personal protection equipment in case of domestic use	Not applicable.

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

9. Physical and chemical properties

9.1 Physical appearance

Physical state	Liquid.
Form	Not available.
Color	Cyan

Odor Not available.

Odor threshold Not available.

9.2 Parameters characterizing basic properties of the product

pH 9 - 10

Melting point/freezing point Not available.

Initial boiling point and boiling range Not determined

Flash point ≥ 230.0 °F (≥ 110.0 °C) Pensky-Martens Closed Cup

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not determined

Flammability limit - upper (%) Not available.

Vapor pressure Not determined

Vapor density ≥ 1 (air = 1.0)

Viscosity Not available.

Solubility(ies)

Solubility (water) Soluble in water

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

Other data

Evaporation rate Not determined

Oxidizing properties Not determined

Percent volatile 5 % estimated

VOC < 56.33 g/l

10. Stability and reactivity

10.1 Chemical stability Stable under recommended storage conditions.

Hazardous decomposition products Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

10.2 Reactivity Not available.

10.3 Conditions to avoid Not available.

Possibility of hazardous reactions Will not occur.

Incompatible materials Incompatible with strong bases and oxidizing agents.

11. Toxicological information

11.1 General exposure characteristics Not available.

11.2 Routes of exposure Not available.

11.3 Affected/target organs, tissues and systems of humans

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.

11.4 Information on health hazards in case of direct exposure to the product and its effect

Effect on upper respiratory tract irritation Not available.

Respiratory or skin sensitization

Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

Not listed.

Respiratory sensitization Based on available data, the classification criteria are not met.

Skin sensitization Based on available data, the classification criteria are not met.

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

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

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

11.5 Information on long-term hazardous health effects

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity May damage fertility or the unborn child.

Mutagenicity

2-pyrrolidone: This component showed developmental effects only at high, maternally toxic doses in test animals. Uptake by people of small doses is not expected to cause developmental toxicity.

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

Cumulativeness Not available.

Chronic effects Not available.

11.6 Acute toxicity data

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

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg

Further information Complete toxicity data are not available for this specific formulation

12. Environmental impact information

12.1 General description of the impact on the environment Not available.

12.2 Routes of exposure to environment Not available.

12.3 The most important characteristics of the environmental impact

12.3.1 Hygienic standards Not available.

12.3.2 Ecotoxicity

Product	Species	Test Results
CN646Series[C][4]		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fathead minnow (Pimephales promelas) < 750 mg/l, 96 hours

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia pulex) 13.21 mg/l, 48 hours
12.3.3 Biomigration and transformation of the environment due to the biodegradation or other processes		
Persistence and degradability	Not available.	
Bioaccumulative potential		
Partition coefficient n-octanol / water (log Kow)		
2-pyrrolidone		-0.85
Mobility in soil	Not available.	
Other adverse effects	Not available.	

13. Recommendations for waste (residues) disposal

13.1 Safety precautions when handling the waste generated during use, storage, transportation	Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
13.2 Information on the location and disposal methods, recycling or disposal of product waste, including packaging	Not available.
13.3 Recommendation on the waste disposal generated during its domestic use	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 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. National and international regulatory information

15.1 National legislation

15.1.1 Laws of the Russian Federation Not available.

15.1.2 Information about the documentation, regulatory requirements for the protection of human health and environment

Sanitary-Epidemiological Rules, 1.2.2353-08, Chemical substances, mixtures and products which are carcinogenic factors, 21 April 2008

Not listed.

Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

2-pyrrolidone (CAS 616-45-5)

Slightly hazardous.

15.2 International Conventions and Agreements

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.

16. Other information

16.1 Information on revision of the SDS

Issue date	10-Oct-2015
Revision date	28-Jan-2020
Version #	04
Previous SDS number	Not applicable.
Revision information	3. Composition / Information on Ingredients: Disclosure Overrides

16.2 List of references used in compiling the safety data sheet

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.

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.

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



SAFETY DATA SHEET

1. Identification of the chemical and information about the manufacturer or supplier

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. ***

1.1 Identification of the chemical products

1.1.1 Technical name CN646Series[M][4]

Other means of identification None.

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use Inkjet printing

Limitations on use None known.

1.2 Manufacturer/Importer/Supplier/Distributor information

1.2.1 Manufacturer

ZAO Hewlett-Packard A.O.
Highway Leningradskoe, House 16A, Building 3,
125171, Moscow

Telephone 7 495 797-3500

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

2. Hazard(s) identification

2.1. Hazard identification of chemical product as a whole (classification according to GOST 12.1.007-76 and GHS)

Classification according to GOST 12.1.007-76 Not available.

GHS classification

Physical hazards Not classified.

Health hazards Reproductive toxicity (fertility, the unborn child) Category 1B

Environmental hazards Not classified.

2.2 Labeling elements in compliance with GOST 31340-2013

2.2.1 Signal word Danger



2.2.3 Hazard statement

H360 May damage fertility or the unborn child.

Precautionary statement

Prevention

P280 Wear protective gloves/protective clothing/eye protection.

P202 Do not handle until all safety precautions have been read and understood.

P201 Obtain special instructions before use.

Response

P308 + P313 IF exposed or concerned: Get medical advice/attention.

Storage

P405 Store locked up.

Disposal	P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards		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.
GHS Supplemental information		2-pyrrolidone: Specific Concentration Limits, Reproductive toxicity Category 1B, fertility or the unborn child 3%.

3. Composition/information on ingredients

3.1 Information on product as a whole

3.1.1 Chemical name (IUPAC)	CN646Series[M][4]
3.1.2 Chemical formula	H2O (7732-18-5), C4-H7-N-O (616-45-5), C4-H7-N-O (616-45-5), (C2H4O)n(C2H4O)nC14H26O2 (9014-85-1), (C2H4O)n(C2H4O)nC14H26O2 (9014-85-1), C7H5NOS (2634-33-5), C7H5NOS (2634-33-5), C4H5NOS (2682-20-4)
3.1.3 General description of the composition (taking into account the brand assortment; preparation method)	Not applicable.

3.2 Components

Components	Concentration by weight (%)	Hygienic standards in the working area		CAS-No.	EC No.
		MAC, mg/m3	TSEL, mg/m3		
Water	50-60			7732-18-5	231-791-2
2-pyrrolidone	< 7.5	10		616-45-5	210-483-1
ethoxylated 2,4,7,9-tetramethyl-5-decyn-4,7-diol	<2.5			9014-85-1	500-022-5
1,2-Benzisothiazolin-3-one	< 0.05			2634-33-5	220-120-9
2-methyl-2h-isothiazol-3-one	< 0.05			2682-20-4	220-239-6

Composition comments This ink supply contains an aqueous ink formulation.
2-pyrrolidone: Specific Concentration Limit 3%.

4. First-aid measures

4.1. Observed symptoms

4.1.1 In case of exposure via inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
4.1.2 In contact with skin	Contact with skin may result in mild irritation.
4.1.3 In contact with eyes	Contact with eyes may result in mild irritation.
4.1.4 In case of exposure via ingestion	Health injuries are not known or expected under normal use.

4.2 First-aid measures to be provided to victims

4.2.1 In case of exposure via inhalation	Move to fresh air. If symptoms persist, get medical attention.
4.2.2 In contact with skin	Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.
4.2.3 In contact with eyes	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.
4.2.4 In case of exposure via ingestion	If ingestion of a large amount does occur, seek medical attention.
4.2.5 Contraindications	Not available.

5. Fire-fighting and explosion safety measures and means

5.1 General characteristics of fire-explosion properties Not available.

5.2 Fire-explosion indicators	Not available.
5.3 Combustion and/or thermal destruction products and hazards arising from these	Not available.
5.4 Recommended extinguishing media	CO2, water, dry chemical, or foam
5.5 Forbidden extinguishing media	None known.
5.6 Special protective equipment for firefighters	Not available.
5.7 Specific extinguishing methods	Wear self contained breathing apparatus for fire fighting if necessary.

6. Accident and emergency prevention and response measures and their consequences

6.1 Measures to prevent harmful effects on people, environment, buildings, constructions, etc. in case of accidents and emergencies

6.1.1 General required actions in case of an accident or emergency Wear appropriate personal protective equipment.

6.1.2 Personal protection equipment in case of the accident Not available.

6.2 Procedures for the elimination of accidents and emergencies

6.2.1 Procedures in case of leaks, spills, splashes 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.

6.2.2 Actions in case of fire Not available.

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.

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

7. Storage and handling requirements of chemicals during loading and unloading

7.1 Safety precautions when handling chemical products

7.1.1 Technical safety measures Not available.

7.1.2 Environmental protection measures Not available.

7.1.3 Recommended safe handling and transportation advice Avoid contact with skin, eyes and clothing.

7.2 Chemical storage requirements

7.2.1 Terms and conditions for safe storage Not available.

7.2.2 Packaging Not available.

7.3 Safety measures and storage requirements at domestic use

Keep out of the reach of children.
Keep away from excessive heat or cold.

8. Equipment for monitoring exposure and personal protective equipment

8.1 Parameters of the working area that require monitoring No exposure limits noted for ingredient(s).

Occupational exposure limits

Russian Federation. Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

Components	Type	Value	Form
2-pyrrolidone (CAS 616-45-5)	Ceiling	10 mg/m3	Aerosol.

8.2 Measures to ensure the content of harmful substances in the working area below the exposure level concentration Exposure limits have not been established for this product.

Appropriate engineering controls Use in a well ventilated area.

8.3 Worker personal protective equipment

8.3.1 General recommendations	Not available.
8.3.2 Respiratory protection	Not available.
8.3.3 Protective equipment	
Eye/face protection	Not available.
Hand protection	Not available.
Other	Use personal protective equipment to minimize exposure to skin and eye.
Thermal hazards	Not available.
8.3.4 Personal protection equipment in case of domestic use	Not applicable.

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

9. Physical and chemical properties

9.1 Physical appearance

Physical state	Liquid.
Form	Not available.
Color	Magenta

Odor Not available.

Odor threshold Not available.

9.2 Parameters characterizing basic properties of the product

pH	9 - 10
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not determined
Flash point	≥ 230.0 °F (≥ 110.0 °C) Pensky-Martens Closed Cup
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not determined
Flammability limit - upper (%)	Not available.
Vapor pressure	Not determined
Vapor density	≥ 1 (air = 1.0)
Viscosity	Not available.
Solubility(ies)	
Solubility (water)	Soluble in water
Partition coefficient (n-octanol/water)	Not available.
Other data	
Evaporation rate	Not determined
Oxidizing properties	Not determined
Percent volatile	5 % estimated
VOC	< 56.36 g/l

10. Stability and reactivity

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

11. Toxicological information

11.1 General exposure characteristics Not available.

11.2 Routes of exposure Not available.

11.3 Affected/target organs, tissues and systems of humans

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.

11.4 Information on health hazards in case of direct exposure to the product and its effect

Effect on upper respiratory tract irritation Not available.

Respiratory or skin sensitization

Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

Not listed.

Respiratory sensitization Based on available data, the classification criteria are not met.

Skin sensitization Based on available data, the classification criteria are not met.

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

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

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

11.5 Information on long-term hazardous health effects

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity May damage fertility or the unborn child.

Mutagenicity

2-pyrrolidone: This component showed developmental effects only at high, maternally toxic doses in test animals. Uptake by people of small doses is not expected to cause developmental toxicity.

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

Cumulativeness Not available.

Chronic effects Not available.

11.6 Acute toxicity data

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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Further information Complete toxicity data are not available for this specific formulation

12. Environmental impact information

12.1 General description of the impact on the environment Not available.

12.2 Routes of exposure to environment Not available.

12.3 The most important characteristics of the environmental impact

12.3.1 Hygienic standards Not available.

12.3.2 Ecotoxicity

Product	Species	Test Results
---------	---------	--------------

CN646Series[M][4]

Aquatic

Acute

Fish	LC50	Fathead minnow (Pimephales promelas) < 750 mg/l, 96 hours
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Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia pulex) 13.21 mg/l, 48 hours
12.3.3 Biomigration and transformation of the environment due to the biodegradation or other processes		
Persistence and degradability	Not available.	
Bioaccumulative potential		
Partition coefficient n-octanol / water (log Kow)		
2-pyrrolidone		-0.85
Mobility in soil	Not available.	
Other adverse effects	Not available.	

13. Recommendations for waste (residues) disposal

13.1 Safety precautions when handling the waste generated during use, storage, transportation	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. Do not dispose of together with general office waste.
13.2 Information on the location and disposal methods, recycling or disposal of product waste, including packaging	Not available.
13.3 Recommendation on the waste disposal generated during its domestic use	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 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. National and international regulatory information**15.1 National legislation**

15.1.1 Laws of the Russian Federation Not available.

15.1.2 Information about the documentation, regulatory requirements for the protection of human health and environment

Sanitary-Epidemiological Rules, 1.2.2353-08, Chemical substances, mixtures and products which are carcinogenic factors, 21 April 2008

Not listed.

Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

2-pyrrolidone (CAS 616-45-5)

Slightly hazardous.

15.2 International Conventions and Agreements

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.

16. Other information**16.1 Information on revision of the SDS**

Issue date 10-Oct-2015

Revision date 28-Jan-2020

Version # 04

Previous SDS number Not applicable.

Revision information 3. Composition / Information on Ingredients: Disclosure Overrides

16.2 List of references used in compiling the safety data sheet Not available.

Disclaimer

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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



SAFETY DATA SHEET

1. Identification of the chemical and information about the manufacturer or supplier

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. ***

1.1 Identification of the chemical products

1.1.1 Technical name CN646Series[Y][4]

Other means of identification None.

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use Not available.

Limitations on use None known.

1.2 Manufacturer/Importer/Supplier/Distributor information

1.2.1 Manufacturer

ZAO Hewlett-Packard A.O.
Highway Leningradskoe, House 16A, Building 3,
125171, Moscow

Telephone 7 495 797-3500

HP Inc. health effects line

(Toll-free within the US) 1-800-457-4209

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HP Inc. Customer Care Line

(Toll-free within the US) 1-800-474-6836

(Direct) 1-208-323-2551

Email: hpcustomer.inquiries@hp.com

2. Hazard(s) identification

2.1. Hazard identification of chemical product as a whole (classification according to GOST 12.1.007-76 and GHS)

Classification according to GOST 12.1.007-76 Not available.

GHS classification

Physical hazards Not classified.

Health hazards Reproductive toxicity (fertility, the unborn child) Category 1B

Environmental hazards Not classified.

2.2 Labeling elements in compliance with GOST 31340-2013

2.2.1 Signal word Danger



2.2.3 Hazard statement

H360 May damage fertility or the unborn child.

Precautionary statement

Prevention

P280 Wear protective gloves/protective clothing/eye protection.

P202 Do not handle until all safety precautions have been read and understood.

P201 Obtain special instructions before use.

Response

P308 + P313 IF exposed or concerned: Get medical advice/attention.

Storage

P405 Store locked up.

Disposal	P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards		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.
GHS Supplemental information	2-pyrrolidone:	Specific Concentration Limits, Reproductive toxicity Category 1B, fertility or the unborn child 3%.

3. Composition/information on ingredients

3.1 Information on product as a whole

3.1.1 Chemical name (IUPAC)	CN646Series[Y][4]
3.1.2 Chemical formula	H2O (7732-18-5), C4-H7-N-O (616-45-5), C4-H7-N-O (616-45-5), (C2H4O)n(C2H4O)nC14H26O2 (9014-85-1), (C2H4O)n(C2H4O)nC14H26O2 (9014-85-1), C7H5NOS (2634-33-5), C7H5NOS (2634-33-5), C4H5NOS (2682-20-4)
3.1.3 General description of the composition (taking into account the brand assortment; preparation method)	Not applicable.

3.2 Components

Components	Concentration by weight (%)	Hygienic standards in the working area		CAS-No.	EC No.
		MAC, mg/m3	TSEL, mg/m3		
Water	50-60			7732-18-5	231-791-2
2-pyrrolidone	< 7.5	10		616-45-5	210-483-1
ethoxylated 2,4,7,9-tetramethyl-5-decyn-4,7-diol	<2.5			9014-85-1	500-022-5
1,2-Benzisothiazolin-3-one	< 0.05			2634-33-5	220-120-9
2-methyl-2h-isothiazol-3-one	< 0.05			2682-20-4	220-239-6

Composition comments This ink supply contains an aqueous ink formulation.
2-pyrrolidone: Specific Concentration Limit 3%.

4. First-aid measures

4.1. Observed symptoms

4.1.1 In case of exposure via inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
4.1.2 In contact with skin	Contact with skin may result in mild irritation.
4.1.3 In contact with eyes	Contact with eyes may result in mild irritation.
4.1.4 In case of exposure via ingestion	Health injuries are not known or expected under normal use.

4.2 First-aid measures to be provided to victims

4.2.1 In case of exposure via inhalation	Move to fresh air. If symptoms persist, get medical attention.
4.2.2 In contact with skin	Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.
4.2.3 In contact with eyes	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.
4.2.4 In case of exposure via ingestion	If ingestion of a large amount does occur, seek medical attention.
4.2.5 Contraindications	Not available.

5. Fire-fighting and explosion safety measures and means

5.1 General characteristics of fire-explosion properties Not available.

5.2 Fire-explosion indicators	Not available.
5.3 Combustion and/or thermal destruction products and hazards arising from these	Not available.
5.4 Recommended extinguishing media	CO2, water, dry chemical, or foam
5.5 Forbidden extinguishing media	None known.
5.6 Special protective equipment for firefighters	Not available.
5.7 Specific extinguishing methods	Wear self contained breathing apparatus for fire fighting if necessary.

6. Accident and emergency prevention and response measures and their consequences

6.1 Measures to prevent harmful effects on people, environment, buildings, constructions, etc. in case of accidents and emergencies

6.1.1 General required actions in case of an accident or emergency Wear appropriate personal protective equipment.

6.1.2 Personal protection equipment in case of the accident Not available.

6.2 Procedures for the elimination of accidents and emergencies

6.2.1 Procedures in case of leaks, spills, splashes 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.

6.2.2 Actions in case of fire Not available.

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.

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

7. Storage and handling requirements of chemicals during loading and unloading

7.1 Safety precautions when handling chemical products

7.1.1 Technical safety measures Not available.

7.1.2 Environmental protection measures Not available.

7.1.3 Recommended safe handling and transportation advice Avoid contact with skin, eyes and clothing.

7.2 Chemical storage requirements

7.2.1 Terms and conditions for safe storage Not available.

7.2.2 Packaging Not available.

7.3 Safety measures and storage requirements at domestic use

Keep out of the reach of children.
Keep away from excessive heat or cold.

8. Equipment for monitoring exposure and personal protective equipment

8.1 Parameters of the working area that require monitoring No exposure limits noted for ingredient(s).

Occupational exposure limits

Russian Federation. Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

Components	Type	Value	Form
2-pyrrolidone (CAS 616-45-5)	Ceiling	10 mg/m3	Aerosol.

8.2 Measures to ensure the content of harmful substances in the working area below the exposure level concentration Exposure limits have not been established for this product.

Appropriate engineering controls Use in a well ventilated area.

8.3 Worker personal protective equipment

8.3.1 General recommendations	Not available.
8.3.2 Respiratory protection	Not available.
8.3.3 Protective equipment	
Eye/face protection	Not available.
Hand protection	Not available.
Other	Use personal protective equipment to minimize exposure to skin and eye.
Thermal hazards	Not available.
8.3.4 Personal protection equipment in case of domestic use	Not applicable.

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

9. Physical and chemical properties

9.1 Physical appearance

Physical state	Liquid.
Form	Not available.
Color	Yellow

Odor Not available.

Odor threshold Not available.

9.2 Parameters characterizing basic properties of the product

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not determined

Flash point ≥ 230.0 °F (≥ 110.0 °C) Pensky-Martens Closed Cup

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not determined

Flammability limit - upper (%) Not available.

Vapor pressure Not determined

Viscosity Not available.

Solubility(ies)

Solubility (water) Soluble in water

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

Other data

Evaporation rate Not determined

Oxidizing properties Not determined

Percent volatile 5.84 % estimated

VOC < 56.33 g/l

10. Stability and reactivity

10.1 Chemical stability Stable under recommended storage conditions.

Hazardous decomposition products Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

10.2 Reactivity Not available.

10.3 Conditions to avoid Not available.

Possibility of hazardous reactions Will not occur.

Incompatible materials Not available.

11. Toxicological information

11.1 General exposure characteristics Not available.

11.2 Routes of exposure Not available.

11.3 Affected/target organs, tissues and systems of humans

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.

11.4 Information on health hazards in case of direct exposure to the product and its effect

Effect on upper respiratory tract irritation Not available.

Respiratory or skin sensitization

Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

Not listed.

Respiratory sensitization Based on available data, the classification criteria are not met.

Skin sensitization Based on available data, the classification criteria are not met.

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

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

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

11.5 Information on long-term hazardous health effects

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity May damage fertility or the unborn child.

Mutagenicity

2-pyrrolidone: This component showed developmental effects only at high, maternally toxic doses in test animals. Uptake by people of small doses is not expected to cause developmental toxicity.

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

Cumulativeness Not available.

Chronic effects Not available.

11.6 Acute toxicity data

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

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
<u>Acute</u>		
Oral		
LD50	Rat	> 5000 mg/kg

Further information Complete toxicity data are not available for this specific formulation

12. Environmental impact information

12.1 General description of the impact on the environment Not available.

12.2 Routes of exposure to environment Not available.

12.3 The most important characteristics of the environmental impact

12.3.1 Hygienic standards Not available.

12.3.2 Ecotoxicity

Product	Species	Test Results
CN646Series[Y][4]		
<u>Aquatic</u>		
Acute		
Fish	LC50	Fathead minnow (Pimephales promelas) < 750 mg/l, 96 hours

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia pulex) 13.21 mg/l, 48 hours
12.3.3 Biomigration and transformation of the environment due to the biodegradation or other processes		
Persistence and degradability	Not available.	
Bioaccumulative potential		
Partition coefficient n-octanol / water (log Kow)		
2-pyrrolidone		-0.85
Mobility in soil	Not available.	
Other adverse effects	Not available.	

13. Recommendations for waste (residues) disposal

13.1 Safety precautions when handling the waste generated during use, storage, transportation	Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
13.2 Information on the location and disposal methods, recycling or disposal of product waste, including packaging	Not available.
13.3 Recommendation on the waste disposal generated during its domestic use	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 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. National and international regulatory information

15.1 National legislation

15.1.1 Laws of the Russian Federation Not available.

15.1.2 Information about the documentation, regulatory requirements for the protection of human health and environment

Sanitary-Epidemiological Rules, 1.2.2353-08, Chemical substances, mixtures and products which are carcinogenic factors, 21 April 2008

Not listed.

Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

2-pyrrolidone (CAS 616-45-5)

Slightly hazardous.

15.2 International Conventions and Agreements All chemical substances in this product are notified or exempt from notification under chemical substance notification laws in the following countries:

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Montreal Protocol

Not applicable.

Kyoto protocol

Not applicable.

Basel Convention

Not applicable.

16. Other information

16.1 Information on revision of the SDS

Issue date	10-Oct-2015
Revision date	28-Jan-2020
Version #	04
Previous SDS number	Not applicable.
Revision information	3. Composition / Information on Ingredients: Disclosure Overrides

16.2 List of references used in compiling the safety data sheet Not available.

Disclaimer

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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