

51649Series[C][3]-MSDS_US-English-08.pdf

51649Series[M][3]-MSDS_US-English-07.pdf

51649Series[Y][3]-MSDS_US-English-07.pdf



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Version # 01
Issue date 31-Jan-2014
Product use Inkjet printing
CAS # Mixture
Company identification Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304-1185
United States
Telephone 650-857-5020

Hewlett-Packard health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-760-710-0048
HP Customer Care Line
(Toll-free within the US) 1-800-474-6836
(Direct) 1-208-323-2551
Email: hpcustomer.inquiries@hp.com

2. Hazards Identification

Emergency overview Contact with skin and eyes may result in irritation.
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.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
1,5-pentanediol	111-29-5	<10
2-pyrrolidone	616-45-5	<10
Non-hazardous components	CAS #	Percent
Water	7732-18-5	> 60
Ethyl alkyldiol	Proprietary	<10
Metal nitrate # 2	Proprietary	<7.5
Substituted phthalocyanine salt # 2	Proprietary	<5
Alkyldiol ethoxylate	Proprietary	<2.5
Substituted triphenylmethane salt #1	Proprietary	<2.5

Composition comments This ink supply contains an aqueous ink formulation. This product has been evaluated using criteria specified in 29 CFR 1910.1200 (Hazard Communication Standard).

4. First Aid Measures

General advice No information
First aid procedures
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.
Skin contact Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
Inhalation Remove to fresh air. If symptoms persist, get medical attention.

Ingestion

If ingestion of a large amount does occur, seek medical attention.

5. Fire Fighting Measures

Flammable properties	None known.
Extinguishing media	
Suitable extinguishing media	Dry chemical, CO2, water spray or regular foam.
Unsuitable extinguishing media	None known.
Fire fighting equipment/instructions	Not available.
Specific methods	None established.
Hazardous combustion products	Refer to section 10.

6. Accidental Release Measures

Personal precautions	Wear appropriate personal protective equipment.
Environmental precautions	Do not let product enter drains. Do not flush into surface water or sanitary sewer system.
Methods for cleaning up	Soak up with inert absorbent material.
Other information	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.

7. Handling and Storage

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

8. Exposure Controls / Personal Protection

Exposure guidelines	Exposure limits have not been established for this product.
Engineering controls	Use in a well ventilated area.
Personal protective equipment	
General	Use personal protective equipment to minimize exposure to skin and eye.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Not available.
Physical state	Liquid.
Form	Not available.
Color	Cyan
Odor	Not available.
pH	6.2 - 6.8
Vapor pressure	Not determined
Boiling point	Not determined
Melting point/Freezing point	Not available.
Solubility (water)	Soluble in water
Specific gravity	Not available.
Flash point	>= 200.00 °F (>= 93.33 °C) Pensky-Martens Closed Cup
Viscosity	>= 2 cp
VOC	< 168 g/l
Other information	No information available

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under recommended storage conditions.
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Conditions to avoid	No information available
Incompatible materials	Incompatible with strong bases and oxidizing agents.
Hazardous decomposition products	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Acute		
<i>Oral</i>		
LD50	Guinea pig	6500 mg/kg
	Rat	6500 mg/kg
Substituted phthalocyanine salt # 2 (CAS Proprietary)		
Acute		
Carcinogenicity		
IARC Monographs. Overall Evaluation of Carcinogenicity		
Substituted triphenylmethane salt #1 (CAS Proprietary) 3 Not classifiable as to carcinogenicity to humans.		
Serious eye damage/eye irritation	Not available.	
Further information	Complete toxicity data are not available for this specific formulation Refer to Section 2 for potential health effects and Section 4 for first aid measures.	

12. Ecological Information

Aquatic toxicity	Static acute toxicity (trout), survival (100 mg/L) = 67% Static acute toxicity (trout), survival (10 mg/L) = 100%
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Ecotoxicological data

Product	Species	Test Results
51649Series[C][3] (CAS Mixture)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) < 400 mg/l, 96 hours
Components		
2-pyrrolidone (CAS 616-45-5)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia pulex</i>) 13.21 mg/l, 48 hours
Ethyl alkyldiol (CAS Proprietary)		
Crustacea	EC50	Daphnia 102, 48 Hours
Fish	LC50	Fish 1000, 96 Hours
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) 10330 - 16360 mg/l, 48 hours
Fish	LC50	Bleak (<i>Alburnus alburnus</i>) > 10000 mg/l, 96 hours
Crustacea	EC50	Daphnia 50 - 100 mg/l, 48 Hours
Aquatic		
Fish	LC50	Pink salmon (<i>Oncorhynchus gorbuscha</i>) 239 mg/l, 96 hours

Ecotoxicity No data available.

Persistence and degradability Not available.

Bioaccumulation / Accumulation

Bioaccumulative potential**Octanol/water partition coefficient log Kow**

2-pyrrolidone -0.85

Partition coefficient

2-pyrrolidone -0.85

13. Disposal Considerations**Disposal instructions**

Dispose of in compliance with federal, state, and local 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>.

14. Transport Information**DOT**

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

Further information

Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.

15. Regulatory Information**US federal regulations**

US TSCA 12(b): Does not contain listed chemicals.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

No

SARA 311/312 Hazardous chemical

No

Other information

Exposure Limits (See Section 8): Executive regulation of Minister of Labour and Social Policy dated Nov. 29, 2002 concerning the highest exposure limits and volume of factors harmful for health and environment at work (Official Journal of Laws no 217/2002 item 1833 with further amendments).
VOC content (less water, less exempt compounds) = <532 g/L (U.S. requirement, not for emissions)
VOC data based on formulation (Organic compounds minus solids)

State regulations**US. Massachusetts RTK - Substance List**

2-pyrrolidone (CAS 616-45-5)
Substituted triphenylmethane salt #1 (CAS Proprietary)

US. Pennsylvania RTK - Hazardous Substances

2-pyrrolidone (CAS 616-45-5)

Listed.

US. Rhode Island RTK

Not regulated.

16. Other Information

HMIS® ratings	Health: 1 Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 1 Flammability: 1 Instability: 0
Disclaimer	This Safety Data Sheet document is provided without charge to customers of Hewlett-Packard Company. Data is the most current known to Hewlett-Packard Company 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.
Other information	This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).
Issue date	31-Jan-2014
This data sheet contains changes from the previous version in section(s):	Hazards Identification: Other hazards Composition / Information on Ingredients: Disclosure Overrides Ecological Information: Ecotoxicity 12. Ecological Information: Aquatic toxicity
Manufacturer information	Hewlett-Packard Company 3000 Hanover Street Palo Alto, California 94304-1112 US (Direct) 1-503-494-7199 (Toll-free within the US) 1-800-457-4209

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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Emergency overview Contact with skin and eyes may result in irritation.
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.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
1,5-pentanediol	111-29-5	<10
2-pyrrolidone	616-45-5	<10
Substituted naphthalenesulfonate salt #10	Proprietary	<5
Non-hazardous components	CAS #	Percent
Water	7732-18-5	> 60
Ethyl alkyldiol	Proprietary	<10
Metal nitrate # 2	Proprietary	<7.5
Alkyldiol ethoxylate	Proprietary	<2.5

Composition comments This ink supply contains an aqueous ink formulation.
This product has been evaluated using criteria specified in 29 CFR 1910.1200 (Hazard Communication Standard).

4. First Aid Measures

General advice No information
First aid procedures
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.
Skin contact Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
Inhalation Remove to fresh air. If symptoms persist, get medical attention.
Ingestion If ingestion of a large amount does occur, seek medical attention.

5. Fire Fighting Measures

Flammable properties	None known.
Extinguishing media	
Suitable extinguishing media	Dry chemical, CO ₂ , water spray or regular foam.
Unsuitable extinguishing media	None known.
Fire fighting equipment/instructions	Not available.
Specific methods	None established.
Hazardous combustion products	Refer to section 10.

6. Accidental Release Measures

Personal precautions	Wear appropriate personal protective equipment.
Environmental precautions	Do not let product enter drains. Do not flush into surface water or sanitary sewer system.
Methods for cleaning up	Soak up with inert absorbent material.
Other information	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.

7. Handling and Storage

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

8. Exposure Controls / Personal Protection

Exposure guidelines	Exposure limits have not been established for this product.
Engineering controls	Use in a well ventilated area.
Personal protective equipment	
General	Use personal protective equipment to minimize exposure to skin and eye.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Not available.
Physical state	Liquid.
Form	Not available.
Color	Magenta
Odor	Not available.
pH	6.2 - 6.8
Vapor pressure	Not determined
Boiling point	Not determined
Melting point/Freezing point	Not available.
Solubility (water)	Soluble in water
Specific gravity	Not available.
Flash point	Not available.
Viscosity	>= 2 cp
VOC	< 168 g/l
Other information	No information available

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	No information available

Incompatible materials	Incompatible with strong bases and oxidizing agents.
Hazardous decomposition products	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Acute		
<i>Oral</i>		
LD50	Guinea pig	6500 mg/kg
	Rat	6500 mg/kg
Sensitization	Non-sensitizer in guinea pig (OECD 406) (OECD 406)	
Carcinogenicity	No data available.	
Serious eye damage/eye irritation	Mild irritant in rabbit (OECD 405)	
Further information	Complete toxicity data are not available for this specific formulation. Refer to Section 2 for potential health effects and Section 4 for first aid measures.	

12. Ecological Information

Aquatic toxicity	Static acute toxicity (trout), survival (100 mg/L) = 100% Static acute toxicity (trout), survival (10 mg/L) = 100%
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Ecotoxicological data

Product	Species	Test Results
51649Series[M][3] (CAS Mixture)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) < 400 mg/l, 96 hours
Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia pulex</i>) 13.21 mg/l, 48 hours
Ethyl alkyldiol (CAS Proprietary)		
Crustacea	EC50	Daphnia 102, 48 Hours
Fish	LC50	Fish 1000, 96 Hours
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) 10330 - 16360 mg/l, 48 hours
Fish	LC50	Bleak (<i>Alburnus alburnus</i>) > 10000 mg/l, 96 hours
Ecotoxicity	No data available.	
Persistence and degradability	Not available.	
Bioaccumulation / Accumulation		
Bioaccumulative potential		
Octanol/water partition coefficient log Kow		
2-pyrrolidone		-0.85
Partition coefficient		
2-pyrrolidone		-0.85

13. Disposal Considerations

Disposal instructions

Dispose of in compliance with federal, state, and local 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>.

14. Transport Information

DOT

Not regulated as dangerous goods.

IATA

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IMDG

Not regulated as dangerous goods.

RID

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Further information

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15. Regulatory Information

US federal regulations

US TSCA 12(b): Does not contain listed chemicals.

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Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

No

SARA 311/312 Hazardous chemical

No

Other information

Exposure Limits (See Section 8): Executive regulation of Minister of Labour and Social Policy dated Nov. 29, 2002 concerning the highest exposure limits and volume of factors harmful for health and environment at work (Official Journal of Laws no 217/2002 item 1833 with further amendments).

VOC content (less water, less exempt compounds) = <523.2 g/L (U.S. requirement, not for emissions)

VOC data based on formulation (Organic compounds minus solids)

State regulations

US. Massachusetts RTK - Substance List

2-pyrrolidone (CAS 616-45-5)

US. Pennsylvania RTK - Hazardous Substances

2-pyrrolidone (CAS 616-45-5)

Listed.

US. Rhode Island RTK

Not regulated.

16. Other Information

HMIS® ratings	Health: 1 Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 1 Flammability: 1 Instability: 0
Disclaimer	This Safety Data Sheet document is provided without charge to customers of Hewlett-Packard Company. Data is the most current known to Hewlett-Packard Company 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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CAS	Chemical Abstracts Service
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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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2. Hazards Identification

Emergency overview Contact with skin and eyes may result in irritation.
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.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
2-pyrrolidone	616-45-5	<5
arylazopyrazolesulfonate salt # 1	Proprietary	<5
Diethylene glycol	111-46-6	<5
Non-hazardous components	CAS #	Percent
Water	7732-18-5	> 70
Ethyl alkyldiol	Proprietary	<10
Metal nitrate # 1	Proprietary	<7.5
Alkyldiol ethoxylate	Proprietary	<2.5

Composition comments This ink supply contains an aqueous ink formulation.
This product has been evaluated using criteria specified in 29 CFR 1910.1200 (Hazard Communication Standard).

4. First Aid Measures

General advice No information
First aid procedures
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.
Skin contact Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.
Inhalation Remove to fresh air. If symptoms persist, get medical attention.
Ingestion If ingestion of a large amount does occur, seek medical attention.

5. Fire Fighting Measures

Flammable properties	None known.
Extinguishing media	
Suitable extinguishing media	Dry chemical, CO ₂ , water spray or regular foam.
Unsuitable extinguishing media	None known.
Fire fighting equipment/instructions	Not available.
Specific methods	None established.
Hazardous combustion products	Refer to section 10.

6. Accidental Release Measures

Personal precautions	Wear appropriate personal protective equipment.
Environmental precautions	Do not let product enter drains. Do not flush into surface water or sanitary sewer system.
Methods for cleaning up	Soak up with inert absorbent material.
Other information	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.

7. Handling and Storage

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

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Diethylene glycol (CAS 111-46-6)	TWA	10 mg/m ³

Exposure guidelines	Exposure limits have not been established for this product.
Engineering controls	Use in a well ventilated area.
Personal protective equipment	
General	Use personal protective equipment to minimize exposure to skin and eye.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Not available.
Physical state	Liquid.
Form	Not available.
Color	Yellow
Odor	Not available.
pH	6.2 - 6.8
Vapor pressure	Not determined
Boiling point	Not determined
Melting point/Freezing point	Not available.
Solubility (water)	Soluble in water
Specific gravity	Not available.
Flash point	>= 200.00 °F (>= 93.33 °C) Pensky-Martens Closed Cup
Viscosity	>= 2 cp
VOC	< 89.6 g/l

Other information No information available

10. Chemical Stability & Reactivity Information

Chemical stability Stable under recommended storage conditions.

Conditions to avoid No information available

Incompatible materials Incompatible with strong bases and oxidizing agents.

Hazardous decomposition products Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

Possibility of hazardous reactions Will not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
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2-pyrrolidone (CAS 616-45-5)

Acute

Oral

LD50	Guinea pig	6500 mg/kg
	Rat	6500 mg/kg

arylazopyrazolesulfonate salt # 1 (CAS Proprietary)

Acute

Dermal

LD50	Rabbit	2000 mg/kg
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Oral

LD50	Rat	81 mg/kg
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Chronic

Oral

NOAEL	Rat	1 mg/kg
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Diethylene glycol (CAS 111-46-6)

Acute

Dermal

LD50	Rabbit	11890 mg/kg
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Oral

LD50	Cat	3300 mg/kg
	Dog	9000 mg/kg
	Guinea pig	8700 mg/kg
		14 g/kg
	Mouse	23700 mg/kg
		13.3 g/kg
	Rabbit	26.9 g/kg
	Rat	12565 mg/kg
		15.6 g/kg

Other

LD50	Mouse	22500 mg/kg
		9.6 g/kg
	Rabbit	2000 mg/kg
	Rat	7700 mg/kg
		7.7 g/kg

Carcinogenicity No data available.

Serious eye damage/eye irritation Not available.

Further information Complete toxicity data are not available for this specific formulation
Refer to Section 2 for potential health effects and Section 4 for first aid measures.

12. Ecological Information

Aquatic toxicity Static acute toxicity (trout), survival (100 mg/L) = 23%
Static acute toxicity (trout), survival (10 mg/L) = 93%

Ecotoxicological data

Product		Species	Test Results
51649Series[Y][3] (CAS Mixture)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	< 400 mg/l, 96 hours
Components			
Species			
Test Results			
2-pyrrolidone (CAS 616-45-5)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia pulex</i>)	13.21 mg/l, 48 hours
arylazopyrazolesulfonate salt # 1 (CAS Proprietary)			
Algae	IC50	Algae	<= 100 mg/l, 72 Hours
Crustacea	EC50	Daphnia	30 mg/l, 48 Hours
Fish	LC50	Fish	1000 mg/l, 96 Hours
Diethylene glycol (CAS 111-46-6)			
Aquatic			
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>)	> 32000 mg/l, 96 hours
Ethyl alkyldiol (CAS Proprietary)			
Crustacea	EC50	Daphnia	102, 48 Hours
Fish	LC50	Fish	1000, 96 Hours
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	10330 - 16360 mg/l, 48 hours
Fish	LC50	Bleak (<i>Alburnus alburnus</i>)	> 10000 mg/l, 96 hours
Ecotoxicity	No data available.		
Persistence and degradability	Not available.		
Bioaccumulation / Accumulation			
Bioaccumulative potential			
Octanol/water partition coefficient log Kow			
2-pyrrolidone			-0.85
Partition coefficient			
2-pyrrolidone			-0.85

13. Disposal Considerations

Disposal instructions Dispose of in compliance with federal, state, and local regulations.
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Not regulated as dangerous goods.

Further information

Not a dangerous good under DOT, IATA, ADR, IMDG, or RID.

15. Regulatory Information**US federal regulations**

US TSCA 12(b): Does not contain listed chemicals.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

Immediate Hazard - No

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

SARA 302 Extremely hazardous substance

No

SARA 311/312 Hazardous chemical

No

Other information

Exposure Limits (See Section 8): Executive regulation of Minister of Labour and Social Policy dated Nov. 29, 2002 concerning the highest exposure limits and volume of factors harmful for health and environment at work (Official Journal of Laws no 217/2002 item 1833 with further amendments).
VOC content (less water, less exempt compounds) = <364.8 g/L (U.S. requirement, not for emissions)

VOC data based on formulation (Organic compounds minus solids)

State regulations**US. Massachusetts RTK - Substance List**

2-pyrrolidone (CAS 616-45-5)

US. Pennsylvania RTK - Hazardous Substances

2-pyrrolidone (CAS 616-45-5)

Listed.

Diethylene glycol (CAS 111-46-6)

Listed.

US. Rhode Island RTK

Diethylene glycol (CAS 111-46-6)

16. Other Information**HMIS® ratings**

Health: 1

Flammability: 1

Physical hazard: 0

NFPA ratings

Health: 1

Flammability: 1

Instability: 0

Disclaimer

This Safety Data Sheet document is provided without charge to customers of Hewlett-Packard Company. Data is the most current known to Hewlett-Packard Company 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.

Other information

This MSDS was prepared in accordance with USA OSHA Hazard Communications regulation (29 CFR 1910.1200).

Issue date

31-Jan-2014

This data sheet contains changes from the previous version in section(s):

Hazards Identification: Other hazards
Composition / Information on Ingredients: Disclosure Overrides
Ecological Information: Ecotoxicity
12. Ecological Information: Aquatic toxicity

Manufacturer information

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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