



MATERIAL SAFETY DATA SHEET

1. Chemical Product and Company Identification

Material name 51605R Rev B
Use of the preparation Inkjet printing
Version # 02
Revision date 27-Mar-2008
CAS # Mixture
Manufacturer information Hewlett-Packard Company
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Date prepared Mar 26, 2008

2. Hazards Identification

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

Acute health effects Any potential hazards are presumed to be due to exposure to the components.

Skin contact

2-pyrrolidone
Contact with skin may result in irritation.

Alkyldiol
Contact with skin may result in irritation.

Eye contact

2-pyrrolidone
Contact with eyes may result in irritation.

Alkyldiol
Contact with eyes may result in irritation.

Inhalation

2-pyrrolidone
Inhalation may result in respiratory irritation.

Alkyldiol
Inhalation may result in respiratory irritation.

Ingestion

2-pyrrolidone
Ingestion may result in nausea, vomiting and diarrhea.

arylazopyrazolesulfonate salt # 1
Toxic if swallowed.

Ethylene glycol
Harmful if swallowed. May cause kidney and liver damage. May depress the central nervous system.



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Potential health effects

Routes of exposure

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

Chronic health effects

Arylazopyrazolesulfonate salt: Prolonged ingestion exposure may cause serious damage to health.

Carcinogenicity

None of the components present in this formulation at concentrations equal to or greater than 0.1% are listed by EU, MAK, IARC, NTP or OSHA.

3. Composition / Information on Ingredients

Component/substance	CAS number	% by weight
Water	7732-18-5	> 40
2-pyrrolidone	616-45-5	< 30
Ethylene glycol	107-21-1	< 25
Alkyldiol	Proprietary	< 7.5
arylazopyrazolesulfonate 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

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

Flash point and method

> 200 °F (> 93.3 °C); Pensky-Martens Closed Cup

Hazardous combustion products

Refer to section 10.

Flammable properties

None known.

Extinguishing media

Suitable extinguishing media

Dry chemical, CO₂, water spray or regular foam.

Unsuitable extinguishing media

None known.

Unusual fire and explosion hazard

None known.

Special firefighting procedures

None established.



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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 containment	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.
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 limits

ACGIH

Components	CAS #	TWA	STEL	Ceiling
Ethylene glycol	107-21-1	Not established	Not established	100 mg/m ³
arylazopyrazolesulfonate salt # 1	Proprietary	100 ppm	Not established	Not established

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

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

Color	Red
Odor threshold	Not available
Physical state	Liquid.
pH	7 - 7.4
Melting point	Not available
Freezing point	Not available
Boiling point	Not determined
Flash point	> 200 °F (> 93.3 °C); Pensky-Martens Closed Cup
Evaporation rate	Not determined
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available
Flammability limits in air, lower, % by volume	Not determined
Vapor pressure	Not determined



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Vapor density	> 1 (air = 1.0)
Specific gravity	1 - 1.2
Relative density	Not available
Solubility in water	Soluble in water
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
VOC	< 3 %
Viscosity	> 2 cp

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under recommended storage conditions.
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

Oral toxicity	LD50/oral/rat >2500 mg/kg (OECD 401) Not classified for acute oral toxicity according to EU Directive 67/548/EEC and 1999/45/EC.
Eye irritation	Non - irritant in rabbit (OECD 405)
Symptoms and target organs	
NIOSH - Pocket Guide - Target Organs	
Ethylene glycol	107-21-1 respiratory system, skin, eyes, CNS

12. Ecological Information

Aquatic toxicity	LC50/96h/Fathead minnows => 750 mg/L
Persistence and degradability	Not available

13. Disposal Considerations

Disposal instructions	Dispose of in compliance with federal, state, and local regulations.
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14. Transportation Information

Department of Transportation (DOT) Requirements

Not regulated as hazardous goods.

IATA

Proper shipping name	Not applicable
Hazard class	Not applicable
UN number	None
Packing group	N/A
Packaging exceptions	None



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15. Regulatory Information

US federal regulations US TSCA 12(b): Does not contain listed chemicals.
U.S. - CERCLA/SARA - Section 313 - Emission Reporting
Ethylene glycol 107-21-1 1.0 % de minimis concentration
U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Ethylene glycol 107-21-1 5000 lb final RQ; 2270 kg final RQ

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

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

International regulations All chemical substances in this HP product have been notified or are exempt from notification under chemical substances notification laws in the following countries: US (TSCA), EU (EINECS/ELINCS), Switzerland, Canada (DSL/NDSL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

State regulations

U.S. - Pennsylvania - RTK (Right to Know) List
Ethylene glycol 107-21-1 Environmental hazard
U.S. - New Jersey - Right to Know Hazardous Substance List
Ethylene glycol 107-21-1 sn 0878

16. Other Information

HMIS® ratings Health: 1
Flammability: 1
Physical hazard: 0

NFPA ratings Health: 1
Flammability: 1
Instability: 0

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Revision 2

Replaces sheet dated Jan 9 2006 11:17PM

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.

MSDS sections updated 3. Hazards Identification: Routes of exposure



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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