



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material name** CR334Series  
**Version #** 04  
**Issue date** 10-Mar-2013  
**Revision date** 29-Sep-2013  
**Product use** Inkjet printing  
**CAS #** Mixture  
**Company identification** Hewlett-Packard Company  
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## 2. Hazards Identification

**Emergency overview** Contact with skin and eyes may result in irritation.  
**Other hazards** Carbon black is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans). Carbon black in this preparation, due to its bound form, does not present this carcinogenic risk. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA. 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

<b>Hazardous components</b>	<b>CAS #</b>	<b>Percent</b>
2-pyrrolidone	616-45-5	<20
Carbon black	1333-86-4	<2.5
<b>Non-hazardous components</b>	<b>CAS #</b>	<b>Percent</b>
Water	7732-18-5	>60
Substituted diol	2163-42-0	<10
Acrylic-Styrene Polymer	Mixture	<7.5

**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).  
  
Carbon black is present only in a bound form in this preparation.

## 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.

<b>Skin contact</b>	Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.
<b>Inhalation</b>	Move to fresh air. If symptoms persist, get medical attention.
<b>Ingestion</b>	If ingestion of a large amount does occur, seek medical attention.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	None known.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	CO2, water, dry chemical, or foam For small (incipient) fires, use media such as foam, sand, dry chemical, or carbon dioxide. For large fires use very large (flooding) quantities of water and/or foam, applied as a mist or spray.
<b>Unsuitable extinguishing media</b>	None known.
<b>Fire fighting equipment/instructions</b>	Not available.
<b>Specific methods</b>	None established.
<b>Hazardous combustion products</b>	Refer to section 10.

## 6. Accidental Release Measures

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

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

## 8. Exposure Controls / Personal Protection

<b>Occupational exposure limits</b>			
<b>US. ACGIH Threshold Limit Values</b>			
<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Carbon black (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.
<b>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)</b>			
<b>Components</b>	<b>Type</b>	<b>Value</b>	
Carbon black (CAS 1333-86-4)	PEL	3.5 mg/m3	
<b>US. NIOSH: Pocket Guide to Chemical Hazards</b>			
<b>Components</b>	<b>Type</b>	<b>Value</b>	
Carbon black (CAS 1333-86-4)	TWA	0.1 mg/m3	
<b>US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A</b>			
<b>Components</b>	<b>Type</b>	<b>Value</b>	
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m3	
<b>Exposure guidelines</b>	Exposure limits have not been established for this product.		
<b>Engineering controls</b>	Use in a well ventilated area.		
<b>Personal protective equipment</b>			
<b>General</b>	Use personal protective equipment to minimize exposure to skin and eye.		
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice.		

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## 9. Physical & Chemical Properties

<b>Appearance</b>	Not available.
<b>Physical state</b>	Liquid.
<b>Form</b>	Not available.
<b>Color</b>	Black.
<b>Odor</b>	Not available.
<b>pH</b>	9
<b>Vapor pressure</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Melting point/Freezing point</b>	Not available.
<b>Solubility (water)</b>	Not available.
<b>Specific gravity</b>	Not available.
<b>Flash point</b>	200.00 °F (93.33 °C) Pensky-Martens Closed Cup
<b>VOC</b>	294 g/l Method 24/ASTM D403-93
<b>Other information</b>	For other VOC regulatory data/information see Section 15.

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## 10. Chemical Stability & Reactivity Information

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

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## 11. Toxicological Information

### Toxicological data

Components	Species	Test Results
2-pyrrolidone (CAS 616-45-5)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Guinea pig	6500 mg/kg
	Rat	6500 mg/kg
Carbon black (CAS 1333-86-4)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	> 8000 mg/kg
Substituted diol (CAS 2163-42-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 5.1 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg

### Carcinogenicity

#### ACGIH Carcinogens

CARBON BLACK, INHALABLE FRACTION (CAS 1333-86-4) A3 Confirmed animal carcinogen with unknown relevance to humans.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Carbon black (CAS 1333-86-4) 2B Possibly carcinogenic to humans.

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**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.

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## 12. Ecological Information

### Ecotoxicological data

Product		Species	Test Results
CR334Series (CAS Mixture)			
<b>Aquatic</b>			
<i>Acute</i>			
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )	< 531.3 mg/l, 96 hours

Components		Species	Test Results
2-pyrrolidone (CAS 616-45-5)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea ( <i>Daphnia pulex</i> )	13.21 mg/l, 48 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

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## 13. Disposal Considerations

**Disposal instructions** Do not dispose of together with general office waste. 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.  
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>.

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## 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.

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## 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) = g/L (U.S. requirement, not for emissions)  
 VOC data based on formulation (Organic compounds minus solids)

**Other regulations**

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

**State regulations****US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

CARBON BLACK (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE [ $\leq 10$  MICROMETERS]) (CAS 1333-86-4) Listed: February 21, 2003 Carcinogenic.

**US - New Jersey RTK - Substances: Listed substance**

Carbon black (CAS 1333-86-4) Listed.

**US. Massachusetts RTK - Substance List**

2-pyrrolidone (CAS 616-45-5)  
 Carbon black (CAS 1333-86-4)

**US. Pennsylvania RTK - Hazardous Substances**

2-pyrrolidone (CAS 616-45-5) Listed.  
 Carbon black (CAS 1333-86-4) Listed.

**US. Rhode Island RTK**

Carbon black (CAS 1333-86-4)

**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** 10-Mar-2013

**This data sheet contains changes from the previous version in section(s):** 1. Product and Company Identification: Alternate Trade Names  
 Ecological Information: Ecotoxicity  
 12. Ecological Information: Aquatic toxicity

**Manufacturer information**

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**Explanation of abbreviations**

<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>CAS</b>	Chemical Abstracts Service
<b>CERCLA</b>	Comprehensive Environmental Response Compensation and Liability Act
<b>CFR</b>	Code of Federal Regulations
<b>COC</b>	Cleveland Open Cup
<b>DOT</b>	Department of Transportation
<b>EPCRA</b>	Emergency Planning and Community Right-to-Know Act (aka SARA)
<b>IARC</b>	International Agency for Research on Cancer
<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>NTP</b>	National Toxicology Program
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PEL</b>	Permissible Exposure Limit
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>REC</b>	Recommended
<b>REL</b>	Recommended Exposure Limit
<b>SARA</b>	Superfund Amendments and Reauthorization Act of 1986
<b>STEL</b>	Short-Term Exposure Limit
<b>TCLP</b>	Toxicity Characteristics Leaching Procedure
<b>TLV</b>	Threshold Limit Value
<b>TSCA</b>	Toxic Substances Control Act
<b>VOC</b>	Volatile Organic Compounds