1. Identification

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. ***

Product identifier
C5023Series

Other means of identification
None.

Recommended use
Inkjet printing

Recommended restrictions
None known.

Manufacturer/Importer/Supplier/Distributor information
HP Inc.
1501 Page Mill Road
Palo Alto, CA 94304-1112
United States

Telephone
650-857-5020

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

Physical hazards
Not classified.

Health hazards
Not classified.

Environmental hazards
Not classified.

OSHA defined hazards
Not classified.

Label elements
Hazard symbol
None.

Signal word
None.

Hazard statement
Not available.

Precautionary statement
Prevention
Not available.

Response
Not available.

Storage
Not available.

Disposal
Not available.

Hazard(s) not otherwise classified (HNOC)
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. 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. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.

Supplemental information
This product is not classified as hazardous according to OSHA CFR 1910.1200 (HazCom 2012).

3. Composition/information on ingredients

Mixtures
**4. First-aid measures**

**Inhalation**
Move to fresh air. If symptoms persist, get medical attention.

**Skin contact**
Wash affected areas thoroughly with mild soap and water. If irritation persists get medical attention.

**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.

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

**Most important symptoms/effects, acute and delayed**
Not available.

**5. Fire-fighting measures**

**Suitable extinguishing media**
CO2, water, dry chemical, or foam

**Unsuitable extinguishing media**
None known.

**Specific hazards arising from the chemical**
None known.

**Special protective equipment and precautions for firefighters**
Not available.

**Specific methods**
None established.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**
Wear appropriate personal protective equipment.

**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. Handling and storage**

**Precautions for safe handling**
Avoid contact with skin, eyes and clothing.

**Conditions for safe storage, including any incompatibilities**
Keep out of the reach of children. Keep away from excessive heat or cold.

**8. Exposure controls/personal protection**

**Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>PEL</td>
<td>3.5 mg/m3</td>
</tr>
</tbody>
</table>

**US. ACGIH Threshold Limit Values**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>TWA</td>
<td>3 mg/m3</td>
<td>Inhalable fraction</td>
</tr>
</tbody>
</table>

**US. NIOSH: Pocket Guide to Chemical Hazards**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>TWA</td>
<td>0.1 mg/m3</td>
</tr>
</tbody>
</table>
Biological exposure limits
No biological exposure limits noted for the ingredient(s).

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

Appropriate engineering controls
Use in a well ventilated area.
Provide adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection
Not available.

Skin protection

Hand protection
Recommended gloves: Nitrile 4 mil minimum thickness.

Other
Protected gloves not required under intended use.

Respiratory protection
Not available.

Thermal hazards
Not available.

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

9. Physical and chemical properties

Appearance

Physical state
Liquid.

Form
Not available.

Color
Black.

Odor
Not available.

Odor threshold
Not available.

pH
7.8 - 8.8

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

Evaporation rate
Not determined

Flammability (solid, gas)
Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)
Not determined

Flammability limit - upper (%)
Not available.

Explosive limit - lower (%)
Not available.

Explosive limit - upper (%)
Not available.

Vapor pressure
Not determined

Vapor density
Not available.

Solubility(ies)

Solubility (water)
Soluble in water

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

Auto-ignition temperature
Not available.

Decomposition temperature
Not available.

Viscosity
>= 2 cp

Other information
For other VOC regulatory data/information see Section 15.

Oxidizing properties
Not determined

VOC
< 20 g/l Estimated

10. Stability and reactivity

Reactivity
Not available.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Will not occur.
11. Toxicological information

Information on likely routes of exposure

**Inhalation**
Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

**Skin contact**
Contact with skin may result in mild irritation.

**Eye contact**
Contact with eyes may result in mild irritation.

**Ingestion**
Health injuries are not known or expected under normal use.

Symptoms related to the physical, chemical and toxicological characteristics

Not available.

Information on toxicological effects

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
<td>Oral LD50</td>
<td>Rat &gt; 5000 mg/kg</td>
</tr>
<tr>
<td>Carbon black (CAS 1333-86-4)</td>
<td>Oral LD50</td>
<td>Rat &gt; 10000 mg/kg</td>
</tr>
</tbody>
</table>

**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.

**Respiratory or skin sensitization**

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

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

**Germ cell mutagenicity**
Based on available data, the classification criteria are not met.

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

Carbon black is classified as a carcinogen by the IARC (possibly carcinogenic to humans, Group 2B) and by the State of California under Proposition 65. In their evaluations of carbon black, both organizations indicate that exposure to carbon black, per se, does not occur when it remains bound within a product matrix, specifically, rubber, ink, or paint. Carbon black is present only in a bound form in this preparation.

**IARC Monographs. Overall Evaluation of Carcinogenicity**
Carbon black (CAS 1333-86-4) 2B Possibly carcinogenic to humans.

Not regulated.

**US. National Toxicology Program (NTP) Report on Carcinogens**
Not listed.

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

**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.

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

**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

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>C5023Series</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fathead minnow (Pimephales promelas) &gt; 750 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Species</th>
<th>Test Results</th>
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<tbody>
<tr>
<td>2-pyrrolidone (CAS 616-45-5)</td>
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<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia pulex) 13.21 mg/l, 48 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability
Not available.

Bioaccumulative potential
Not available.

Partition coefficient n-octanol / water (log Kow)
2-pyrrolidone -0.85

Mobility in soil
Not available.

Other adverse effects
Not available.

13. Disposal considerations

Disposal instructions
Do not allow this material to drain into sewers/water supplies. Dispose of waste material according to Local, State, Federal, and Provincial Environmental 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.

ADR
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.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not regulated.

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
Not listed.
SARA 311/312 Hazardous chemical
No

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.
Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations
US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
CARBON BLACK (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE <= 10 MICROMETERS) (CAS 1333-86-4)
Listed: February 21, 2003
US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
Carbon black (CAS 1333-86-4)

Other information
VOC content (less water, less exempt compounds) = <106 g/L (U.S. requirement, not for emissions)
VOC data based on formulation (Organic compounds minus solids)

Regulatory information
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.

16. Other information, including date of preparation or last revision
Issue date 10-Mar-2015
Revision date 05-May-2019
Version # 04

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

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.

Revision information
Identification: Important information
### Explanation of abbreviations

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