SAFETY DATA SHEET

1. Identification

Product identifier: CH119Series
Other means of identification
   Synonyms: HP Designjet 788 Black Ink
Recommended use: Inkjet printing
Recommended restrictions: None known.
Company identification: HP
   1501 Page Mill Road
   Palo Alto, CA 94304-1112
   United States
   Telephone 650-857-5020
   HP 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. Hazard(s) identification

Physical hazards: Not classified.
Health hazards
   Skin corrosion/irritation Category 2
   Serious eye damage/eye irritation Category 2A
   Sensitization, skin Category 1
   Reproductive toxicity Category 2
   Specific target organ toxicity, repeated exposure Category 1
Environmental hazards: Hazardous to the aquatic environment, long-term hazard Category 2
OSHA defined hazards: Not classified.
Label elements

Signal word: Danger
Hazard statement:
   Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Suspected of damaging fertility. Causes damage to organs (liver, respiratory system) through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention
   P280 - Wear protective gloves/protective clothing/eye protection/face protection.
   P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
   P201 - Obtain special instructions before use.
   P202 - Do not handle until all safety precautions have been read and understood.
   P270 - Do not eat, drink or smoke when using this product.
   P264 - Wash hands thoroughly after handling.
   P273 - Avoid release to the environment.
Response

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice/attention.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.
P308 + P313 - IF exposed or concerned: Get medical attention/advice.
P391 - Collect spillage.
P362 - Take off contaminated clothing and wash before reuse.

Storage

P405 - Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

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. Benzophenone is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans).

Potential routes of exposure to this product are skin and eye contact, ingestion, and inhalation.

Proprietary initiator - In animal testing, risk of impaired fertility was shown only after repeated ingestion of very high doses of this substance.

Supplemental information

Contains Glycerolpropoxytriacrylate. May produce an allergic reaction.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Phenoxy-ethyl acrylate</td>
<td></td>
<td>48145-04-6</td>
<td>&lt;40</td>
</tr>
<tr>
<td>Carboxylic Acids, Esters</td>
<td></td>
<td>3076-04-8</td>
<td>&lt;25</td>
</tr>
<tr>
<td>N-vinylcaprolactam</td>
<td></td>
<td>2235-00-9</td>
<td>&lt;25</td>
</tr>
<tr>
<td>Alkyl Acrylate Ester #2</td>
<td>Proprietary</td>
<td></td>
<td>&lt;10</td>
</tr>
<tr>
<td>Aliphatic Urethane Acrylate</td>
<td>Proprietary</td>
<td></td>
<td>&lt;5</td>
</tr>
<tr>
<td>Alkyl Acrylate Ester #1</td>
<td>Proprietary</td>
<td></td>
<td>&lt;5</td>
</tr>
<tr>
<td>Multi-Functional Acrylate Ester</td>
<td>Proprietary</td>
<td></td>
<td>&lt;5</td>
</tr>
<tr>
<td>Proprietary initiator</td>
<td>Proprietary</td>
<td></td>
<td>&lt;5</td>
</tr>
<tr>
<td>Carbon black</td>
<td></td>
<td>1333-86-4</td>
<td>&lt;2.5</td>
</tr>
<tr>
<td>2-benzyl-2-dimethylamino-4-morpholinobutyrophene</td>
<td></td>
<td>119313-12-1</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

Composition comments

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

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 the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Not available.

5. Fire-fighting measures

Suitable extinguishing media

Dry powder. Carbon dioxide (CO2). Water may be ineffective.

Unsuitable extinguishing media

Water may be ineffective. Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Not applicable.
Special protective equipment and precautions for firefighters

Fire-fighting equipment/instructions

Avoid runoff into storm sewers and ditches which lead to waterways.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate personal protective equipment. Do not touch or walk through spilled material.

Methods and materials for containment and cleaning up

Not available.

Environmental precautions

Do not let product enter drains. Do not flush into surface water or sanitary sewer system. See also section 13 Disposal considerations.

7. Handling and storage

Precautions for safe handling

Avoid contact with skin, eyes and clothing.

Conditions for safe storage, including any incompatibilities

Keep away from excessive heat or cold. Do not store in direct sunlight. Do not handle or store near an open flame, heat or other sources of ignition. Opaque, high density polyethylene (HDPE) containers are recommended for shipping and storage.

8. Exposure controls/personal protection

Occupational exposure limits

<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 limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Exposure limits have not been established for this product.

Appropriate engineering controls

Not available.

Individual protection measures, such as personal protective equipment

<table>
<thead>
<tr>
<th>Eye/face protection</th>
<th>Wear safety glasses; chemical goggles (if splashing is possible). Eye wash fountain and emergency showers are recommended.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin protection</td>
<td>Wear appropriate chemical resistant gloves.</td>
</tr>
<tr>
<td>Hand protection</td>
<td>Wear appropriate chemical resistant clothing.</td>
</tr>
<tr>
<td>Other</td>
<td>Provide adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Provide adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment.</td>
</tr>
<tr>
<td>Thermal hazards</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. Do not get this material in your eyes, on your skin, or on your clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Launder contaminated clothing before reuse. Keep away from food and drink.

9. Physical and chemical properties

Appearance

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Black.</td>
</tr>
<tr>
<td>Property</td>
<td>Information</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 212.0 °F (&gt; 100.0 °C) (Closed Cup)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other information</td>
<td></td>
</tr>
<tr>
<td>Chemical family</td>
<td>Acrylate/Polymer/Pigment Blend</td>
</tr>
<tr>
<td>Other information</td>
<td>For other VOC regulatory data/information see Section 15.</td>
</tr>
<tr>
<td>VOC (Weight %)</td>
<td>&lt; 95 g/L</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Reactivity: Not available.
Chemical stability: Stable under normal storage conditions.
Possibility of hazardous reactions: Hazardous polymerization can occur with decreased inhibitor content.
Conditions to avoid: Exposure to sunlight.
Incompatible materials: Incompatible with strong bases and oxidizing agents. Alkaline metals.
Hazardous decomposition products: Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. Toxicological information

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.
Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/eye irritation: Causes serious eye irritation.
Respiratory or skin sensitization:
Respiratory sensitization: Based on available data, the classification criteria are not met.
Skin sensitization: May cause sensitization by skin contact.
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity

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. Based on available data, the classification criteria are not met. Benzophenone is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans).

IARC Monographs. Overall Evaluation of Carcinogenicity

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

Reproductive toxicity

Suspected of damaging fertility.

Specific target organ toxicity

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

Specific target organ toxicity - single exposure

Causes damage to organs (liver, respiratory system) through prolonged or repeated exposure.

Aspiration hazard

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

Further information

Complete toxicity data are not available for this specific formulation

Components

<table>
<thead>
<tr>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rat</td>
<td>&gt; 8000 mg/kg</td>
</tr>
</tbody>
</table>

12. Ecological information

Aquatic toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. This product has not been tested for ecological effects.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Not available.

Other adverse effects

Not available.

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.

14. Transport information

DOT

Not regulated as dangerous goods.

DOT supplemental information

DOT Classification only applies to shipments within the US and Puerto Rico.

IATA

<table>
<thead>
<tr>
<th>UN number</th>
<th>Environmentally Hazardous Substance, Liquid, N.O.S. (Acrylates)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>UN3082</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>Class 9</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Yes</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

IATA supplemental information

When shipping ≤ 5L inner packaging, Special Provision A197 may apply.

IMDG

<table>
<thead>
<tr>
<th>UN number</th>
<th>Environmentally Hazardous Substance, Liquid, N.O.S. (Acrylates), MARINE POLLUTANT</th>
</tr>
</thead>
</table>
Transport hazard class(es)

Class 9
Subsidiary risk -
Packing group III
Environmental hazards
Marine pollutant Yes
EmS F-A, S-F
Special precautions for user Not available.

IMDG supplemental information
When shipping ≤ 5L containers, IMDG 2.10.2.7 may apply.

ADR

Proper shipping name Environmentally Hazardous Substance, Liquid, N.O.S. (Acrylates)
Hazard class 9
UN number 3082
Packing group III
Marine pollutant Yes

ADR supplemental information
When shipping ≤ 5L containers, ADR 375 may apply.

IATA; IMDG
15. Regulatory information

US federal regulations
This product is listed on the U.S. EPA TSCA Inventory.
US TSCA 12(b): Contains 2,4-diethyl-9h-thioxanthen-9-one; Benzophenone, subject to export notification requirements.
US TSCA 4(a): Contains Benzophenone, subject to a test rule at 40 CFR Section 799.5115.
TSCA Section 5(a)(2) Significant New Use Rules: This product contains 2,4-diethyl-9h-thioxanthen-9-one which is subject to a Significant New Use Rule at 40 CFR Section 721.9664.
TSCA 8(a) PAIR: heptane; 4-Methoxyphenol
SARA 302/304/311/312 hazardous chemicals: tridecyl acrylate; C.I. Pigment Black 7

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 listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
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
Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

US. Massachusetts RTK - Substance List
Carbon black (CAS 1333-86-4)

US. New Jersey Worker and Community Right-to-Know Act
Carbon black (CAS 1333-86-4)

US. Pennsylvania Worker and Community Right-to-Know Law
Carbon black (CAS 1333-86-4)

US. Rhode Island RTK
Not regulated.

US. California Proposition 65

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

Other information
VOC content (less water, less exempt compounds) = < 95 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 29-Apr-2014
Revision date 09-Aug-2015
Version # 08
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.

Revision Information
1. Product and Company Identification: Alternate Trade Names
Other information, including date of preparation or last revision: Disclaimer

Manufacturer information
HP
1501 Page Mill Road
Palo Alto, CA 94304-1112 US
Product Information 1-800-925-0563

Explanation of abbreviations

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