MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Identification of the preparation
HP Color LaserJet CE410A-X Black Print Cartridge

Product use
This product is a black toner preparation that is used in HP LaserJet Pro 300 color M351/ HP LaserJet Pro 400 color M451/ HP LaserJet Pro 300 color MFP M375/ HP LaserJet Pro 400 color MFP M475 series printers.

Version #
02

Revision date
01-May-2012

Company identification
Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304-1185
United States
Telephone 650-857-1501

Hewlett-Packard health effects line
(Toll-free within the US) 1-800-457-4209
(Direct) 1-503-494-7199

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

Acute health effects

Skin contact
Unlikely to cause skin irritation.

Eye contact
May cause transient slight irritation.

Inhalation
Minimal respiratory tract irritation may occur with exposure to large amounts of toner dust. Use of this product as intended does not result in inhalation of excessive amounts of dust.

Ingestion
Low acute toxicity. Ingestion is a minor route of entry for intended use of this product.

Potential health effects

Routes of exposure
Potential routes of exposure under normal use conditions are skin, eye contact and inhalation.

Ingestion is not expected to be a primary route of exposure for this product under normal use conditions.

Chronic health effects

Prolonged inhalation of excessive amounts of any dust may cause lung damage. Use of this product as intended does not result in inhalation of excessive amounts of dust.

Carcinogenicity
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.

Other information
This product is not classified as hazardous according to OSHA CFR 1910.1200 or EU Directive 1999/45/EC, as amended.

This preparation contains no component classified as Persistent, Bioaccumulative, and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB) as defined under Regulation (EC) 1907/2006.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene acrylate copolymer</td>
<td>Trade Secret</td>
<td>&lt; 85</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>Wax</td>
<td>Trade Secret</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>Amorphous silica</td>
<td>7631-86-9</td>
<td>&lt; 3</td>
</tr>
</tbody>
</table>

Material name: CE410A-X

12717   Version #: 02   Revision date: 01-May-2012   Print date: 01-May-2012
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, consult a physician.

**Skin contact**
Wash affected areas thoroughly with mild soap and water. Get medical attention if irritation develops or persists.

**Inhalation**
Move person to fresh air immediately. If irritation persists, consult a physician.

**Ingestion**
Rinse mouth out with water. Drink one to two glasses of water. If symptoms occur, consult a physician.

5. Fire Fighting Measures

**Flammable properties**
Like most organic material in powder form, toner can form explosive dust-air mixtures when finely dispersed in air.

**Extinguishing media**

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

**Unsuitable extinguishing media**
None known.

**Protection of firefighters**
If fire occurs in the printer, treat as an electrical fire.

**Specific methods**
None established.

**Hazardous combustion products**
Carbon monoxide and carbon dioxide.

6. Accidental Release Measures

**Personal precautions**
Minimize dust generation and accumulation.

**Environmental precautions**
Do not flush into surface water or sanitary sewer system. See also section 13 Disposal considerations.

**Other information**
Slowly vacuum or sweep the material into a bag or other sealed container. Clean remainder with a damp cloth or vacuum cleaner. If a vacuum is used, the motor must be rated as dust explosion-proof. Fine powder can form explosive dust-air mixtures. Dispose of in compliance with federal, state, and local regulations.

7. Handling and Storage

**Handling**
Keep out of the reach of children. Avoid inhalation of dust and contact with skin and eyes. Use with adequate ventilation. Keep away from excessive heat, sparks, and open flames.

**Storage**
Keep out of the reach of children. Keep tightly closed and dry. Store away from strong oxidizers. Store at room temperature.

8. Exposure Controls / Personal Protection

**Occupational exposure limits**

**ACGIH Components**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (1333-86-4)</td>
<td>TWA</td>
<td>3.0000 mg/m³</td>
<td>Inhalable fraction</td>
</tr>
</tbody>
</table>

**U.S. - Tennessee Components**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black (1333-86-4)</td>
<td>TWA</td>
<td>3.5000 mg/m³</td>
</tr>
</tbody>
</table>

**Exposure guidelines**

USA OSHA (TWA/PEL): 15 mg/m³ (Total Dust), 5 mg/m³ (Respirable Fraction)

ACGIH (TWA/TLV): 10 mg/m³ (Inhalable Particulate), 3 mg/m³ (Respirable Particulate)

Amorphous silica: USA OSHA (TWA/PEL): 20 mppcf 80 (mg/m³)/%SiO₂, ACGIH (TWA/TLV): 10 mg/m³
9. Physical & Chemical Properties

**Appearance** Fine powder
**Color** Black.
**Odor** Slight plastic odor
**Odor threshold** Not available.
**Physical state** Solid
**Form** solid
**pH** Not applicable
**Melting point** Not available.
**Freezing point** Not available.
**Boiling point** Not applicable
**Flash point** Not applicable
**Evaporation rate** Not applicable
**Flammability limits in air, upper, % by volume** Not available.
**Flammability limits in air, lower, % by volume** Not flammable
**Vapor pressure** Not applicable
**Vapor density** Not available.
**Specific gravity** 1 - 1.2 (H2O = 1)
**Relative density** Not available.
**Solubility (water)** Negligible in water. Partially soluble in toluene and xylene.
**Auto-ignition temperature** Not applicable
**Decomposition temperature** Not available.
**Softening point** 176 - 266 °F (80 - 130 °C)
**Viscosity** Not applicable
**Percent volatile** 0 % estimated
**VOC** Not available.
**Other information** Decomposition temperature: > 200 °C

10. Chemical Stability & Reactivity Information

**Chemical stability** Stable under normal storage conditions.
**Conditions to avoid** Imaging Drum: Exposure to light
**Incompatible materials** Strong oxidizers
**Hazardous decomposition products** Carbon monoxide and carbon dioxide.
**Possibility of hazardous reactions** Will not occur.

11. Toxicological Information

**Oral toxicity** LD50/oral/rat >2000 mg/kg; (OECD 401); Not harmful. Not classified for acute oral toxicity according to EU Directive 67/548/EEC and 1999/45/EC.

**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. None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.
### ACGIH Carcinogens

Carbon black (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.

### IARC Monographs: Evidence of carcinogenicity in humans

Carbon black (CAS 1333-86-4)  
Inadequate data.

#### Inhalation toxicity

No information available.

Not classified for acute inhalation toxicity according to EU Directive 67/548/EEC and 1999/45/EC.

#### Serious eye damage/eye irritation

Not classified as irritant, according to OSHA Hazard Communication Standard (HCS) and EU Directive 67/548/EEC and as amended.

#### Chronic toxicity

No information available.

#### Sensitization

Not classified as a sensitizer according to EU Directive 67/548/EEC and as amended, and OSHA HCS (US).

#### Mutagenicity

Negative, does not indicate mutagenic potential (Ames Test: Salmonella typhimurium)

#### Reproductivity

Not classified as toxic according to EU Directive 67/548/EEC and as amended, California Prop. 65, and DFG (Germany).

### Symptoms and target organs

#### Target Organs (NIOSH)

- Carbon black (CAS 1333-86-4)
  - Eyes
  - Respiratory system

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

#### Ecotoxicity

LC50: > 100 mg/l, Fish, 96.00 Hours

#### Persistence and degradability

Not available.

#### Other adverse effects

This product has not been tested for ecological effects.

### 13. Disposal Considerations

#### Disposal instructions

Do not shred toner cartridge, unless dust-explosion prevention measures are taken. Finely dispersed particles may form explosive mixtures in air. 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

#### Further information

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

### 15. Regulatory Information

#### US federal regulations

US EPA TSCA Inventory: All chemical substances in this product comply with all rules or orders under TSCA.

#### CERCLA (Superfund) reportable quantity

None

#### Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical  
No

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

<table>
<thead>
<tr>
<th>Hazard categories</th>
<th>Section 302 extremely hazardous substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate Hazard - No</td>
<td>No</td>
</tr>
<tr>
<td>Delayed Hazard - No</td>
<td></td>
</tr>
<tr>
<td>Fire Hazard - No</td>
<td></td>
</tr>
<tr>
<td>Pressure Hazard - No</td>
<td></td>
</tr>
<tr>
<td>Reactivity Hazard - No</td>
<td></td>
</tr>
</tbody>
</table>
Section 311 hazardous chemical

No

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

Other information

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

HMIS® ratings

Health: 1
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 1
Instability: 0

Disclaimer

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Issue date

01-May-2012

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