SAFETY DATA SHEET

1. Identification

Product identifier: HP LaserJet CE278A-AC-AD-AF-L Print Cartridge

Other means of identification: Not available.

Recommended use: This product is a toner preparation that is used in HP LaserJet Pro M1536/P1566/P1606 series printers.

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: 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): 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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene acrylate copolymer</td>
<td>Trade Secret</td>
<td>&lt;55</td>
<td></td>
</tr>
<tr>
<td>Ferrite</td>
<td>Trade Secret</td>
<td>&lt;45</td>
<td></td>
</tr>
<tr>
<td>Wax</td>
<td>Wax</td>
<td>Trade Secret</td>
<td>&lt;10</td>
</tr>
</tbody>
</table>

4. First-aid measures

Inhalation: Move person to fresh air immediately. 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.
**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.

**Ingestion**

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

**Most important symptoms/effects, acute and delayed**

Not available.

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### 5. Fire-fighting measures

- **Suitable extinguishing media**: CO2, water, or dry chemical
- **Unsuitable extinguishing media**: None known.
- **Specific hazards arising from the chemical**: Not applicable.
- **Special protective equipment and precautions for firefighters**: Not available.
- **Fire-fighting equipment/instructions**: If fire occurs in the printer, treat as an electrical fire.

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### 6. Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**: Minimize dust generation and accumulation.
- **Methods and materials for containment and cleaning up**: Not available.
- **Environmental precautions**: Do not flush into surface water or sanitary sewer system. See also section 13 Disposal considerations.

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### 7. Handling and storage

- **Precautions for safe 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.
- **Conditions for safe storage, including any incompatibilities**: Keep out of the reach of children. Keep tightly closed and dry. Store at room temperature. Store away from strong oxidizers.

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### 8. Exposure controls/personal protection

- **Occupational exposure limits**: No exposure limits noted for ingredient(s).
- **Biological limit values**: No biological exposure limits noted for the ingredient(s).
- **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)
  - TRGS 900 (Luftgrenzwert) - 10 mg/m³ (Einatembare partikel), 3 mg/m³ (Alveolengängige fraktion)
  - UK WEL: 10 mg/m³ (Respirable Dust), 5 mg/m³ (Inhalable Dust)
- **Appropriate engineering controls**: Use in a well ventilated area.

- **Individual protection measures, such as personal protective equipment**
  - **Eye/face protection**: Not available.
  - **Skin protection**
    - **Hand protection**: Not available.
    - **Other**: Not available.
  - **Respiratory protection**: Not available.
  - **Thermal hazards**: Not available.

---

### 9. Physical and chemical properties

- **Appearance**: Fine powder
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid.</td>
</tr>
<tr>
<td>Color</td>
<td>Black.</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight plastic odor</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</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 applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</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 flammable</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 applicable</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>Negligible in water. Partially soluble in toluene and xylene.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt; 392 °F (&gt; 200 °C)</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Other information</td>
<td></td>
</tr>
<tr>
<td>Percent volatile</td>
<td>Negligible</td>
</tr>
<tr>
<td>Softening point</td>
<td>212 - 302 °F (100 - 150 °C)</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.4 - 1.8</td>
</tr>
<tr>
<td>VOC (Weight %)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>10. Stability and reactivity</td>
<td></td>
</tr>
<tr>
<td>Reactivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under normal storage conditions.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Will not occur.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Imaging Drum: Exposure to light</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Strong oxidizers</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Carbon monoxide and carbon dioxide.</td>
</tr>
<tr>
<td>11. Toxicological information</td>
<td></td>
</tr>
<tr>
<td>Symptoms related to the physical, chemical and toxicological characteristics</td>
<td>Not available.</td>
</tr>
<tr>
<td>Information on toxicological effects</td>
<td></td>
</tr>
<tr>
<td>Acute toxicity</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
</tbody>
</table>
**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**: Negative, does not indicate mutagenic potential (Ames Test: Salmonella typhimurium) Based on available data, the classification criteria are not met.

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

**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.
- **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.

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### 12. Ecological information

#### Ecotoxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Aquatic</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE278A-AC-AD-AF-L</td>
<td><strong>Fish</strong> LL50</td>
<td>&gt; 1000 mg/l, 96 Hours</td>
</tr>
</tbody>
</table>

- **Persistence and degradability**: Not available.
- **Bioaccumulative potential**: Not available.
- **Mobility in soil**: Not available.
- **Other adverse effects**: Not available.

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### 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](http://www.hp.com/recycle).

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### 14. Transport information

- **DOT**: Not regulated as dangerous goods.

- **IATA**
  - **UN number**: UN2807
  - **UN proper shipping name**: Magnetized Material
  - **Transport hazard class(es)**
    - **Class**: Not available.
    - **Subsidiary risk**: -
    - **Packing group**: Not available.
    - **Environmental hazards**: No.
    - **Special precautions for user**: Not available.

- **IMDG**: Not regulated as dangerous goods.

- **ADR**: Not regulated as dangerous goods.

**Further information**: 105 or more of these cartridges shipped together in a single package (e.g., box, container), by air, are regulated as a magnetized material. These requirements do not apply to single or dual pack cartridges contained in an original HP package and shrink wrapped on a pallet for shipment by air.
15. Regulatory information

US federal regulations

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

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 - 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

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

Not applicable.

US. Massachusetts RTK - Substance List
Not regulated.

US. New Jersey Worker and Community Right-to-Know Act
Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law
Not listed.

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
Not Listed.

16. Other information, including date of preparation or last revision

Issue date 02-Dec-2014
Revision date 20-Sep-2015
Version # 04

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Revision Information
Other information, including date of preparation or last revision: Disclaimer
Manufacturer information
HP
11311 Chinden Boulevard
Boise, ID 83714 USA
(Direct) 1-503-494-7199
(Toll-free within the US) 1-800-457-4209

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