



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material name** HP Color LaserJet CF351A Cyan Print Cartridge  
**Version #** 01  
**Issue date** 08-Nov-2013  
**Product use** This product is a cyan toner preparation that is used in HP Color LaserJet Pro MFP M176/ HP Color LaserJet Pro MFP M177 series printers.  
**Company identification** Hewlett-Packard Company  
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## 2. Hazards Identification

**Potential health effects**  
**Eyes** May cause transient slight irritation  
**Skin** Unlikely to cause skin 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.  
**Other hazards** This product is not classified as hazardous according to OSHA CFR 1910.1200 or EU Directive 1999/45/EC, as amended.

## 3. Composition / Information on Ingredients

| Hazardous components       | CAS #        | Percent |
|----------------------------|--------------|---------|
| Titanium dioxide           | 13463-67-7   | <1      |
| Non-hazardous components   | CAS #        | Percent |
| Styrene acrylate copolymer | Trade Secret | <85     |
| Pigment                    | Trade Secret | <10     |
| Wax                        | Trade Secret | <10     |
| Amorphous silica           | 7631-86-9    | <3      |

## 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, 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.

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## 5. Fire Fighting Measures

|   |   |
|---|---|
| <b>Flammable properties</b>                 | Like most organic material in powder form, toner can form explosive dust-air mixtures when finely dispersed in air. |
| <b>Extinguishing media</b>                  |   |
| <b>Suitable extinguishing media</b>         | CO <sub>2</sub> , water, or dry chemical  |
| <b>Unsuitable extinguishing media</b>       | None known.   |
| <b>Fire fighting equipment/instructions</b> | If fire occurs in the printer, treat as an electrical fire.   |
| <b>Specific methods</b>                     | None established.   |
| <b>Hazardous combustion products</b>        | Carbon monoxide and carbon dioxide.   |

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## 6. Accidental Release Measures

|                                  |   |
|----------------------------------|---|
| <b>Personal precautions</b>      | Minimize dust generation and accumulation.  |
| <b>Environmental precautions</b> | Do not flush into surface water or sanitary sewer system. See also section 13 Disposal considerations.  |
| <b>Other information</b>         | 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. |

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## 7. Handling and Storage

|                 |  |
|-----------------|--|
| <b>Handling</b> | 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. |
| <b>Storage</b>  | Keep out of the reach of children. Keep tightly closed and dry. Store away from strong oxidizers. Store at room temperature.   |

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## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

| Components                        | Type | Value                |
|-----------------------------------|------|----------------------|
| Titanium dioxide (CAS 13463-67-7) | TWA  | 10 mg/m <sup>3</sup> |

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

| Components                        | Type | Value                | Form        |
|-----------------------------------|------|----------------------|-------------|
| Titanium dioxide (CAS 13463-67-7) | PEL  | 15 mg/m <sup>3</sup> | Total dust. |

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

| Components                       | Type | Value               |
|----------------------------------|------|---------------------|
| Amorphous silica (CAS 7631-86-9) | TWA  | 6 mg/m <sup>3</sup> |

#### US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A

| Components                        | Type | Value                | Form        |
|-----------------------------------|------|----------------------|-------------|
| Titanium dioxide (CAS 13463-67-7) | TWA  | 10 mg/m <sup>3</sup> | Total dust. |

|                            |   |
|----------------------------|---|
| <b>Exposure guidelines</b> | USA OSHA (TWA/PEL): 15 mg/m <sup>3</sup> (Total Dust), 5 mg/m <sup>3</sup> (Respirable Fraction)<br><br>ACGIH (TWA/TLV): 10 mg/m <sup>3</sup> (Inhalable Particulate), 3 mg/m <sup>3</sup> (Respirable Particulate)<br><br>Amorphous silica: USA OSHA (TWA/PEL): 20 mppcf 80 (mg/m <sup>3</sup> )/%SiO <sub>2</sub> , ACGIH (TWA/TLV): 10 mg/m <sup>3</sup> |
|----------------------------|---|

|                             |                                |
|-----------------------------|--------------------------------|
| <b>Engineering controls</b> | Use in a well ventilated area. |
|-----------------------------|--------------------------------|

### Personal protective equipment

|                |   |
|----------------|---|
| <b>General</b> | No personal respiratory protective equipment required under normal conditions of use. |
|----------------|---|

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## 9. Physical & Chemical Properties

|                                     |   |
|-------------------------------------|---|
| <b>Appearance</b>                   | Fine powder   |
| <b>Physical state</b>               | Solid.  |
| <b>Form</b>                         | solid   |
| <b>Color</b>                        | Cyan  |
| <b>Odor</b>                         | Slight plastic odor   |
| <b>pH</b>                           | Not applicable  |
| <b>Vapor pressure</b>               | Not applicable  |
| <b>Boiling point</b>                | Not applicable  |
| <b>Melting point/Freezing point</b> | Not available.  |
| <b>Solubility (water)</b>           | Negligible in water. Partially soluble in toluene and xylene. |
| <b>Specific gravity</b>             | 1 - 1.2   |
| <b>Flash point</b>                  | Not applicable  |
| <b>Viscosity</b>                    | Not applicable  |
| <b>Percent volatile</b>             | 0 % estimated   |
| <b>Softening point</b>              | 176 - 266 °F (80 - 130 °C)                                    |
| <b>VOC</b>                          | Not available   |
| <b>Other information</b>            | No information available                                      |
| <b>Other data</b>                   |   |
| <b>Decomposition temperature</b>    | > 392 °F (> 200 °C)   |

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## 10. Chemical Stability & Reactivity Information

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

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## 11. Toxicological Information

### Toxicological data

| <b>Components</b>                 | <b>Species</b>  | <b>Test Results</b> |
|-----------------------------------|---|---------------------|
| Amorphous silica (CAS 7631-86-9)  |   |                     |
| <b>Acute</b>                      |   |                     |
| <i>Oral</i>                       |   |                     |
| LD50                              | Mouse   | > 15000 mg/kg       |
|                                   | Rat   | > 22500 mg/kg       |
| <b>Sensitization</b>              | Not classified as a sensitizer according to EU Directive 67/548/EEC and as amended, and OSHA HCS (US).  |                     |
| <b>Chronic effects</b>            | No information available.   |                     |
| <b>Carcinogenicity</b>            | Titanium dioxide is classified by the IARC as a Group 2B carcinogen (the substance is possibly carcinogenic to humans). The IARC classification was based on high concentrations of titanium dioxide particles in animal lungs. Under intended use of this toner product, exposure to titanium dioxide is much lower. |                     |
|                                   | None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.   |                     |
| <b>ACGIH Carcinogens</b>          |   |                     |
| TITANIUM DIOXIDE (CAS 13463-67-7) | A4 Not classifiable as a human carcinogen.  |                     |

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## IARC Monographs. Overall Evaluation of Carcinogenicity

Titanium dioxide (CAS 13463-67-7)

2B Possibly carcinogenic to humans.

### 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.

### Mutagenicity

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

### Reproductive effects

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

### 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

### Ecotoxicological data

| Product | Species | Test Results |
|---------|---------|--------------|
|---------|---------|--------------|

CF351A

|      |      |      |                      |
|------|------|------|----------------------|
| Fish | LC50 | Fish | > 100 mg/l, 96 Hours |
|------|------|------|----------------------|

### Components

### Species

### Test Results

Titanium dioxide (CAS 13463-67-7)

### Aquatic

|           |      |                            |                       |
|-----------|------|----------------------------|-----------------------|
| Crustacea | EC50 | Water flea (Daphnia magna) | > 1000 mg/l, 48 hours |
|-----------|------|----------------------------|-----------------------|

|      |      |                                   |                       |
|------|------|-----------------------------------|-----------------------|
| Fish | LC50 | Mummichog (Fundulus heteroclitus) | > 1000 mg/l, 96 hours |
|------|------|-----------------------------------|-----------------------|

### Ecotoxicity

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

### Persistence and degradability

Not available.

## 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.

### 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 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**

TITANIUM DIOXIDE (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE) (CAS 13463-67-7) Listed: September 2, 2011 Carcinogenic.

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

Titanium dioxide (CAS 13463-67-7) Listed.

**US. Massachusetts RTK - Substance List**

Amorphous silica (CAS 7631-86-9)

Titanium dioxide (CAS 13463-67-7)

**US. Pennsylvania RTK - Hazardous Substances**

Titanium dioxide (CAS 13463-67-7) Listed.

**US. Rhode Island RTK**

Titanium dioxide (CAS 13463-67-7)

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**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** 08-Nov-2013

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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  |