



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Identification of the preparation HP Color LaserJet CE322A Yellow Print Cartridge

Product use This product is a yellow toner preparation that is used in HP LaserJet Pro CM1415,CP1525 series printers.

Version # 01

Revision date 09-Nov-2011

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 and 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 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.

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

| Components | CAS # | Percent |
|----------------------------|--------------|---------|
| Styrene acrylate copolymer | Trade Secret | < 85 |
| Wax | Trade Secret | < 10 |
| Pigment | Trade Secret | < 5 |

| | | |
|------------------|------------|-----|
| Amorphous silica | 7631-86-9 | < 3 |
| Titanium dioxide | 13463-67-7 | < 1 |

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

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|--|---|
| 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 | |
| Protective equipment and precautions for 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

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|----------------------------------|---|
| 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

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| 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 | Type | Value |
|-------------------------------|------|---------------|
| Titanium dioxide (13463-67-7) | TWA | 10.0000 mg/m3 |

U.S. - OSHA

| Components | Type | Value | Form |
|-------------------------------|------|---------------|-------------|
| Titanium dioxide (13463-67-7) | PEL | 15.0000 mg/m3 | Total dust. |

| Components | Type | Value | Form |
|------------|------|---------------|-------------|
| | TWA | 10.0000 mg/m3 | Total dust. |

| U.S. - Tennessee | | | |
|-------------------------------|------|---------------|-------------|
| Components | Type | Value | Form |
| Titanium dioxide (13463-67-7) | TWA | 10.0000 mg/m3 | Total dust. |

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

Engineering controls Use in a well ventilated area.

Personal protective equipment

General No personal respiratory protective equipment required under normal conditions of use.

9. Physical & Chemical Properties

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|---|---|
| Appearance | Fine powder |
| Color | Yellow |
| 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

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|-------------------------------|---|
| 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 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.

ACGIH Carcinogens

Titanium dioxide (CAS 13463-67-7) A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Amorphous silica (CAS 7631-86-9) 3 Not classifiable as to carcinogenicity to humans.

Titanium dioxide (CAS 13463-67-7) 2B Possibly carcinogenic to humans.

IARC Monographs: Evidence of carcinogenicity in humans

Titanium dioxide (CAS 13463-67-7) 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)

Amorphous silica (CAS 7631-86-9) Eyes
Respiratory system

Titanium dioxide (CAS 13463-67-7) 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.

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)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

State regulations

US - Pennsylvania RTK - Hazardous Substances: Listed substance

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

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

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Manufacturer information Hewlett-Packard Company
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 |