



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name HP Color LaserJet CF310A Black Print Cartridge
Version # 02
Issue date 25-Oct-2013
Revision date 06-Nov-2013
Product use This product is a black toner preparation that is used in HP Color LaserJet Enterprise M855 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 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. 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
Carbon black	1333-86-4	<10
Titanium dioxide	13463-67-7	<1
Non-hazardous components	CAS #	Percent
Styrene acrylate copolymer	Trade Secret	<85
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.

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.
Fire fighting equipment/instructions	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

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

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

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	PEL	3.5 mg/m3	
Titanium dioxide (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Amorphous silica (CAS 7631-86-9)	TWA	6 mg/m3	
Carbon black (CAS 1333-86-4)	TWA	0.1 mg/m3	

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

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m3	

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

Components	Type	Value	Form
Titanium dioxide (CAS 13463-67-7)	TWA	10 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

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

Components	Species	Test Results
Amorphous silica (CAS 7631-86-9)		
Acute		
<i>Oral</i>		
LD50	Mouse	> 15000 mg/kg

Components	Species	Test Results
Carbon black (CAS 1333-86-4)	Rat	> 22500 mg/kg
Acute <i>Oral</i> LD50	Rat	> 8000 mg/kg
Sensitization	Not classified as a sensitizer according to EU Directive 67/548/EEC and as amended, and OSHA HCS (US).	
Chronic effects	No information available.	
Carcinogenicity	<p>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.</p> <p>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.</p> <p>None of the other ingredients in this preparation are classified as carcinogens according to ACGIH, EU, IARC, MAK, NTP or OSHA.</p>	
ACGIH Carcinogens	<p>CARBON BLACK, INHALABLE FRACTION (CAS 1333-86-4) A3 Confirmed animal carcinogen with unknown relevance to humans.</p> <p>TITANIUM DIOXIDE (CAS 13463-67-7) A4 Not classifiable as a human carcinogen.</p>	
IARC Monographs. Overall Evaluation of Carcinogenicity	<p>Amorphous silica (CAS 7631-86-9) 3 Not classifiable as to carcinogenicity to humans.</p> <p>Carbon black (CAS 1333-86-4) 2B Possibly carcinogenic to humans.</p> <p>Titanium dioxide (CAS 13463-67-7) 2B Possibly carcinogenic to humans.</p>	
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
CF310A		
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/NDL), Australia, Japan, Philippines, South Korea, New Zealand, and China.

State regulations

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

CARBON BLACK (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE [\leq 10 MICROMETERS]) (CAS 1333-86-4) Listed: February 21, 2003 Carcinogenic.

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

US - New Jersey RTK - Substances: Listed substance

Carbon black (CAS 1333-86-4) Listed.

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

US. Massachusetts RTK - Substance List

Amorphous silica (CAS 7631-86-9)

Carbon black (CAS 1333-86-4)

Titanium dioxide (CAS 13463-67-7)

US. Pennsylvania RTK - Hazardous Substances

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

US. Rhode Island RTK

Carbon black (CAS 1333-86-4)

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	25-Oct-2013
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