1. IDENTIFICATION OF THE SUBSTANCE PREPARATION AND COMPANY UNDERTAKING

1.1 PRODUCT IDENTIFIER

Product name: Extended Yield Toner Cartridge for HP CF281A (HP 81A)

Part number: HPCF281AUX

1.2 IDENTIFIED USES AND USES ADVISED AGAINST

For use in: Laser Printers

1.3 SUPPLIER DETAILS

Supplier: Clover Imaging Group
4200 Columbus Street
Ottawa, IL 61350
United States
Phone number: 815-431-8100
Fax: 815-461-8583

Contact Hours: 08:00AM-05:00PM CST

1.4 EMERGENCY TELEPHONE NUMBERS

Supplier: 815-431-8100

* This document provides safety-related information about ink/toner, in various forms, for use in copiers/printers etc.

2. HAZARDS IDENTIFICATION

2.1 INFORMATION and CLASSIFICATION

Overview: GHS classification of the mixture: Not classified as hazardous. Other hazards which do not result in classification: Physical hazards - This mixture, like most organic powders, can cause a dust explosion if particles form thick clouds; Carcinogenicity - None of the substances in this mixture is classified for carcinogenicity by IARC or OSHA. Other information: This mixture is not classified as hazardous according to OSHA Hazard Communication Standard 29 CFR 1910.1200; This mixture complies with the requirements of the RoHS Directive 2011/65/EU and its amendment directives.

2.2 LABEL ELEMENTS

Applicable Pictograms:

Danger Indications: Warning - Combustible Dust - May form combustible dust concentrations in air.

Risk Phrases: N/A

Safety Phrases: N/A

2.3 OTHER HAZARDS

PBT or vPvB: N/A

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS number	Weight %	OSHA PEL	ACGIH TLV	Other
Styrene Acrylate Copolymer	TRADE SECRET	40-60			TSCA listed/exempted: Yes
Iron Oxide	1317-61-9	35-55	10 mg/m3	5 mg/m3	TSCA listed/exempted: Yes
Amorphous Silica	7631-86-9	<5	20 mppcf* or 80/% SiO2 mg/m3 (* million particles per cubic foot)	Not established	TSCA listed/exempted: Yes
Wax	TRADE SECRET	1-10			TSCA listed/exempted: Yes
			TWA: 15 mg/m3 (Total dust), 5 mg/m3 (Respirable fraction)	TWA: 10 mg/m3 (Inhalable particulate), 3 mg/m3 (Respirable particulate)	Mixture as particulate not otherwise classified. Refer to Section 8 for information on exposure limits and Section 11 for toxicological information.

The Full Text for all R-Phrases are Displayed in Section 16

COMPOSITION COMMENTS

The Data Shown is in accordance with the latest Directives.

This section provides composition information for the specified substance/mixture.

4. FIRST-AID MEASURES

4.1 **FIRST AID MEASURES**

4.1.1 **FIRST AID INSTRUCTIONS BY RELEVANT ROUTES OF EXPOSURE**

Inhalation:	Provide fresh air immediately. If symptoms occur, seek medical advice.
Eye contact:	Do not rub eyes. Immediately rinse with plenty of clean running water until particles are washed out. If irritation persists, seek medical advice.
Skin contact:	Wash out particles with plenty of water and soap. If irritation develops, seek medical advice.
Ingestion:	Clean mouth out with water. Drink several glasses of water. If sickness develops, seek medical advice.

4.1.2 **ADDITIONAL FIRST AID INFORMATION**

Additional first aid information:	N/A
Immediate Medical Attention Required:	Immediate medical attention may be required in the unlikely event of extreme inhalation, eye contact or unusual reaction due to physical idiosyncrasy of the person.

4.2 **SYMPTOMS AND EFFECTS**

Acute Symptoms from Exposure:	Eye contact: Irritation may occur by mechanical abrasion. Skin contact: Minimal skin irritation may occur. Inhalation: Slight irritation of respiratory tract may occur with exposure to large amount of toner dust. Ingestion: Ingestion is an unlikely route of entry under normal conditions of use.
Delayed Symptoms from Exposure:	N/A

4.3 **IMMEDIATE SPECIAL TREATMENT OR EQUIPMENT REQUIRED**

N/A

5. FIRE-FIGHTING MEASURES

5.1 **EXTINGUISHING MEDIA**

Recommended Extinguishing Media: Water, foam, dry chemical.

Extinguishing Media Not to be Used: None known.

5.2 **SPECIAL HAZARD**

Unusual Fire/Explosion Hazards: Toner, like most organic powders, is capable of creating a dust explosion when particles form thick clouds. Carbon monoxide and carbon dioxide are hazardous resulting gases.

Extinguishing Media Not to be Used: N/A

5.3 **ADVICE FOR FIRE FIGHTERS**

Avoid inhalation of smoke. Wear protective clothing and wear self-contained breathing apparatus

6. ACCIDENTAL RELEASE MEASURES

6.1 **PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**

6.1.1 **PRECAUTIONS FOR NON-EMERGENCY PERSONNEL**

Avoid dust formation. Do not breathe dust.

6.1.2 **ADDITIONAL FIRST AID INFORMATION**

N/A

6.1.3 **PERSONAL PROTECTION**

Wear personal protective equipment as described in Section 8.

6.2 **ENVIRONMENTAL PRECAUTIONS**

Regulatory Information: Keep product out of sewers and watercourses.

6.3 **METHODS AND MATERIAL FOR CONTAINMENT AND CLEANUP**

Spill or Leak Cleanup Procedures: Eliminate sources of ignition and flammables. Shelter the released material (powder) from wind to avoid dust formation and scattering. Vacuum or sweep the material into a sealed container. If a vacuum cleaner is used, it must be dust explosion-proof. Dispose of the material in accordance with Federal/state/local requirements.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Recommendations for Handling:	No special precautions when used as intended. Keep containers closed. If toner, avoid creating dust. Keep away from ignition sources.
Advice on General Hygiene:	Never eat, drink or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the restroom, or applying cosmetics.

7.2 CONDITIONS FOR SAFE STORAGE

Avoid high temperatures, >100°F/32°C

7.3 SPECIFIC END USES

Printing devices

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release in order to maintain airborne concentrations of the product below OSHA PELs (See Section 3).
Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

8.2 EXPOSURE CONTROLS

Respiratory protection:

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134 and 1910.137) and, if necessary, wear a NIOSH approved respirator. Select respirator based on its suitability to provide adequate worker protection for given work conditions, levels of airborne contamination, and sufficient levels of oxygen.

Eye/Face Protection:

Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Hand/Skin Protection:

For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. WARNING! Air purifying respirators do not protect worker in oxygen deficient atmospheres.

Additional Protection:

N/A

Protective Clothing and Equipment:

Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear splash-proof chemical goggles and face shield when working with liquid, unless full face piece respiratory protection is worn.

Safety Stations:

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment:

Separate contaminated work clothes from street clothes. Launder before reuse. Remove material from your shoes and clean personal protective equipment. Never take home contaminated clothing.

Comments:

Never eat, drink or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the restroom, or applying cosmetics.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 **DETAIL INFORMATION**

Physical state:	APPEARANCE: Fine black powder.
Color:	Black
Odor:	None or slight plastic odor
Odor threshold:	N/A
Boiling point:	N/A
Melting point:	N/A
Flash point:	N/A
Explosion limits:	N/A
Relative density:	1.5-2.5
Auto-ignition temperature:	N/A

9.2 **OTHER INFORMATION**

FLAMMABILITY: Not flammable by burning rate DOT/UN test N.1 (similar product). SOLUBILITY: Negligible in water. Partially soluble in some organic solvents such as Toluene and Tetrahydrofuran.

10. CHEMICAL STABILITY AND REACTIVITY

10.1 **Reactivity:**

Reactivity Hazards:	None
Data on Mixture Substances:	None

10.2 **Chemical Stability:** The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.

10.3 **Hazardous Polymerization:** Stable under conditions of normal use.

10.4 **Conditions to Avoid:** Keep away from heat, flame, sparks and other ignition sources.

10.5 **Incompatible Materials:** Strong oxidizing materials

10.6 **Hazardous Decomposition:** Will not occur.

11. INFORMATION ON TOXICOLOGICAL EFFECT

Mixtures:	According to our test results of this or similar mixture, and the information provided by the suppliers about the substances contained in this mixture, seriously damaging effect is not expected when this mixture is treated in accordance with standard industrial practices and Federal/state/local requirements. Refer to Section 2 for potential health effects and Section 4 for first aid measures.
Acute Toxicity:	N/A
Skin Corrosion/Irritation:	N/A
Serious Eye Damage:	N/A
Inhalation:	N/A
Sensitization:	Respiratory: No test data available. None of the substances in this mixture is classified as a respiratory sensitizer.
Mutagenicity:	Ames test (Salmonella typhimurium, Escherichia coli) negative. (a similar product)
Carcinogenicity:	N/A
Reproductive Toxicity:	No test data available. None of the substances in this mixture is classified for reproductive toxicity.
STOT - Single Exposure:	N/A
STOT - Multiple Exposure:	No test data available. Inhalation tests of a toner for two years showed no significant carcinogenicity. (Reference 1 - Test Data) In rats, chronic exposure to toner concentrations 4 mg/m3 and over lead to an accumulation of particles in the lung as well as to persistent inflammatory processes and slight to moderate fibrotic changes in the lungs of rats. In hamsters, these effects were only observed at significantly higher concentrations (> 20 mg/m3). The particle accumulation in the lung tissue of the experimental animals is attributed to a damage and overload of the lung clearance mechanisms and is called “lung overloading”. This is not an effect specific to toner dust but is generally observed when high concentrations of other, slightly soluble dusts are inhaled. The lowest-observable-effect-level (LOEL) was 4 mg/m3 and the no-observable-effect-level (NOEL) was 1 mg/m3 in rats. The NOEL was greater than 6 mg/m3 in hamsters. (Reference 2 - Test Data) Toner concentration under the normal use of this product is estimated to be less than 1 mg/m3.
Ingestion:	N/A
Hazard Class Information:	N/A
Mixture on Market Data:	N/A
Symptoms:	N/A
Delayed/Immediate Effects:	N/A
Test Data on Mixture:	(Reference 1) “Negative Effect of Long-term Inhalation of Toner on Formation of 8-Hydroxydeoxyguanosine in DNA in the Lungs of Rats in Vivo”, Yasuo Morimoto, et. Al., Inhalation Toxicology, Vol. 17 (13) p.749-753 (2005). (Reference 2) Studies by Muhle, Bellmann, Creutzenberg et al. “Lung clearance and retention of toner, utilizing a tracer technique during chronic inhalation exposure in rats.” Fundam. Appl. Toxicol 17 (1991) p.300-313. “Lung clearance and retention of toner, TiO2, and crystalline Silica, utilizing a tracer technique during chronic inhalation exposure in Syrian golden hamsters.” Inhal. Toxicol. 10 (1998) p.731-751. “Subchronic inhalation study of toner in rats.” Inhal. Toxicol. 2 (1990) p.341-360. “Pulmonary response to toner upon chronic inhalation exposure in rats.” Fundam. Appl. Toxicol. 17 (1991) p.280-299. “Pulmonary response to toner, TiO2 and crystalline Silica upon chronic inhalation exposure in Syrian golden hamsters.” Inhal. Toxicol. 10 (1998) p.699-729.
Not Meeting Classification:	N/A
Routes of Exposure:	N/A
Interactive Effects:	N/A
Absence of Specific Data:	N/A
Mixture vs Substance Data:	N/A

12. ECOLOGICAL INFORMATION

12.1 **Eco toxicity:** According to our test results of this or similar mixture, and the information provided by the suppliers about the substances contained in this mixture, this mixture is not expected to be harmful to ecology. Acute toxicity to aquatic organisms (a similar product): 72-hour IC50 (for algae, Pseudokirchneriella subcapitata, OECD 201) > 1,000 mg/L, NOEC 1,000 mg/L; 48-hour EC50 (for Daphnia magna, OECD 202) > 1,000 mg/L, NOEC 1,000 mg/L; 96-hour LC50 (for fish, Rainbow trout, OECD 203) > 1,000 mg/L, NOEC 1,000 mg/L.

12.2 **Degradability:** N/A

12.3 **Bioaccumulation Potential:** N/A

12.4 **Mobility in Soil:** N/A

12.5 **PBT & vPvB Assessment:** N/A

12.6 **Other Adverse Effects:** None known.

13. DISPOSAL CONSIDERATIONS

Disposal Information:
Dispose of product in accordance with local authority regulations.
Empty container retains product residue.

Physical/Chemical Properties that affect Treatment:
Symbol: This product is not classified as dangerous
Risk Phrases: This product is not classified according to the federal, state and local environmental regulations.

Waste Treatment Information:
If toner, 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.

Personal Protection Required:
N/A

14. TRANSPORT INFORMATION

14.1 **ID Number:** None. Not a regulated material under the United States DOT, IMDG, ADR, RID, or ICAO/IATA.

14.2 **Shipping Name:** None. Not a regulated material under the United States DOT, IMDG, ADR, RID, or ICAO/IATA.

14.3 **Hazard Class:** None. Not a regulated material under the United States DOT, IMDG, ADR, RID, or ICAO/IATA.

14.4 **Packing Group:** N/A

14.5 **Environmental Hazards:** Not a marine pollutant according to the IMDG Code. Not environmentally hazardous according to the UN Model Regulations, ADR, RID or ADN.

14.6 **User Precautions:** Do not open or break a container during transportation unless absolutely needed.

14.7 **Bulk Transport:** N/A

15. REGULATORY INFORMATION

15.1 **Regulatory Information:** TSCA: All the substances in this mixture are listed or exempted in accordance with TSCA.

EPA Regulatory Information: N/A

CERCLA Reportable Quantity: Not applicable to this mixture.

15.2 **Superfund Information:**

Hazard Categories:

Immediate: N/A

Delayed: N/A

Fire: N/A

Pressure: N/A

Reactivity: N/A

Section 302 - Extremely Hazardous: Not applicable to this mixture.

Section 311 - Hazardous: Immediate health hazard: No (All the ingredients of this product are bound within the mixture.) Chronic health hazard: No (All the ingredients of this product are bound within the mixture.) Sudden release of pressure hazard: No. Reactive hazard: No.

15.3 **State Regulations:** California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): This product does not contain any chemicals listed by the State of California.

15.4 **Other Regulatory Information:** This mixture complies with the requirements of the RoHS Directive 2011/65/EU and its amendment directives. Please refer to any other Federal/state/local measures that may be relevant.

16. OTHER INFORMATION

General Comments: This information is based on our current knowledge. It should not therefore be construed as guaranteeing specific properties of the products as described or their suitability for a particular application

Creation Date of this SDS: 07/29/2020

Key to Abbreviations and Acronyms used in this sheet:

ACGIH = American Conference of Governmental Industrial Hygienists	NIOSH = National Institute for Occupational Safety and Health
CERCLA = Comprehensive Environmental Response Compensation and Liability Act	OSHA = Occupational Health and Safety Administration
CLP = Classification, Labeling, and Packaging	PEL = Permissible Exposure Limit
DSD = Dangerous Substances Directive	SCBA = Self Contained Breathing Apparatus
EPA = Environmental Protection Agency	STOT = Specific Target Organ Toxicity
GHS = Globally Harmonized System	TLV = Threshold Limit Value
N/A = Not Applicable	UK = United Kingdom
NFPA = National Fire Protection Association	UN = United Nations

Ref: