

1. IDENTIFICATION OF THE SUBSTANCE PREPARATION AND COMPANY UNDERTAKING**1.1 PRODUCT IDENTIFIER**

Product name: High Yield Toner Cartridge for Dell S2830
Part number: DELL2830X

1.2 IDENTIFIED USES AND USES ADVISED AGAINST

For use in: Toner for electrophotographic apparatus

1.3 SUPPLIER DETAILS

Supplier: Clover Technologies 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: N/A

* This document provides safety-related information about toner contained in print cartridge for use in laser printer

2. HAZARDS IDENTIFICATION**2.1 INFORMATION and CLASSIFICATION**

Overview: Black fine powder with little or no odor. Risk of dust-explosion if finely dispersed in air with an ignition source. OSHA Regulatory Status: Classification under GHS, Not classified; GHS Label Elements, None. Potential Health Effects: No significant hazards known. See SECTION 11 for details. Potential Environmental Effects: The ingredient "Zinc(II) Complex Salt" is classified as "Aquatic Acute 1" and "Aquatic Chronic 1" (very toxic to aquatic life) and "Organic Zr complex" as "Aquatic Acute 2" and "Aquatic chronic 2" (toxic to aquatic life) by GHS. This mixture, however, has shown enough test data to be classified out of these hazards. See SECTION 12 for details.

2.2 LABEL ELEMENTS

Applicable Pictograms:



Danger Indications: N/A

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 |
|---------------------------|--------------|----------|---|---|--|
| Saturated Polyester Resin | TRADE SECRET | 70-85 | | | |
| Magnetite | 1317-61-9 | 7-15 | TWA: 15 mg/m3 (Inhalable fraction), 5 mg/m3 (Respirable fraction) | TWA: 5 mg/m3 (as iron) | STEL: Not established. |
| Carbon Black | 1333-86-4 | 2-8 | 3.5 mg/m3 | 3.5 mg/m3 | STEL: Not established. |
| Wax | TRADE SECRET | 1-5 | | | |
| Silica | TRADE SECRET | 1-3 | 6 mg/m3 | 10 mg/m3 (Total dust), 3 mg/m3 (Respirable fraction) | STEL: Not established. |
| Zinc(II) complex salt* | 42405-40-3 | 0.25-1.5 | | | * Zinc, (bis[3,5-di(tert-butyl)-2-hydroxybenzoato-O1,O2],(T-4) |
| | | | TWA: 15 mg/m3 (Inhalable fraction), 5 mg/m3 (Respirable fraction) | TWA: 10 mg/m3 (Total dust), 3 mg/m3 (Respirable fraction) | STEL: Not established. |

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 toner powder contained in specially designed container inside of the print cartridge.

4. FIRST-AID MEASURES

4.1 FIRST AID MEASURES

4.1.1 FIRST AID INSTRUCTIONS BY RELEVANT ROUTES OF EXPOSURE

- Inhalation: Move to fresh air and gargle with water. If accompanied with breathing difficulty, take first aid measures such as artificial respiration and call a physician immediately.
- Eye contact: Do not rub. Flush with large amount of water until particles are removed. Seek medical advice.
- Skin contact: Wash with soap and water.
- Ingestion: Rinse mouth. Seek medical advice.

4.1.2 ADDITIONAL FIRST AID INFORMATION

- Additional first aid information: N/A
- Immediate Medical Attention Required: N/A

4.2 SYMPTOMS AND EFFECTS

- Acute Symptoms from Exposure: N/A
- 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 spray or fog, CO₂, dry chemicals
Extinguishing Media Not to be Used: Strong water current may cause powder to disperse and form explosive dust-air mixture.

5.2 SPECIAL HAZARD

Unusual Fire/Explosion Hazards: Fine powder may form explosive dust-air mixture if finely dispersed in air. Fume and smoke may include toxic substances such as aromatic compounds.
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 breathing dust. Dust-proof masks should be worn when working.

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: Keep in air-tight container. Sweep the spilled powder slowly. Clean the remainder with wet cloth, wet paper, or vacuum cleaner. Vacuum cleaner must be equipped with dust proof filter and must be explosion-proof.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Recommendations for Handling: No special precautions when used as intended. Keep containers closed, 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: Black powder |
| Color: | Black |
| Odor: | Slight odor. |
| Odor threshold: | N/A |
| Boiling point: | N/A |
| Melting point: | App. 140°C (Flow temperature) |
| Flash point: | N/A |
| Explosion limits: | N/A |
| Relative density: | 1.2-1.4 |
| Auto-ignition temperature: | N/A |

9.2 OTHER INFORMATION

FLAMMABILITY: Not flammable (according to GHS classification). SOLUBILITY: Insoluble to water, partially soluble to Toluene and Xylene. DECOMPOSITION TEMPERATURE: >200°C. EXPLOSIVE PROPERTIES: Can form explosive dust-air mixtures when finely dispersed in air. PARTICLE SIZE: app. 8.0µm (D50).

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 polymerisation 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 oxidising materials |
| 10.6 Hazardous Decomposition: | Will not occur. |

11. INFORMATION ON TOXICOLOGICAL EFFECT

| | |
|------------------------------------|---|
| Mixtures: | *data from toner with similar composition. **according to GHS classifications. |
| Acute Toxicity: | Inhalation: LC50 ; inh-rat>1.45 mg/L/4 hours*, not harmful. (maximum achievable concentration). Ingestion: LD50 > 2000 mg/kg*, not harmful. |
| Skin Corrosion/Irritation: | Not classified as irritant* ** |
| Serious Eye Damage: | Not classified as irritant* ** |
| Inhalation: | N/A |
| Sensitization: | Not classified as a sensitizer* ** |
| Mutagenicity: | Ames test negative* |
| Carcinogenicity: | Carbon Black, contained in this toner, is classified as "group 2B" (possibly carcinogenic to humans) by IARC. However, long-term inhalation tests on rats using a toner preparation containing Carbon Black did not show any carcinogenic effects. |
| Reproductive Toxicity: | N/A |
| STOT - Single Exposure: | N/A |
| STOT - Multiple Exposure: | In a study of rats exposed to a toner containing Carbon Black, a mild degree of lung fibrosis was observed in groups exposed to the high concentration (16 mg/m3) and mid-concentration (4 mg/m3), but no pulmonary change was reported in the group exposed to the low concentration (1 mg/m3). In normal conditions of use (in electro-photographic apparatus), the maximum concentration of toner released is significantly lower than 1 mg/m3, and will have no chronic effects to human health. In cases where this product is used in bulk for purpose such as filling, cleaning, etc. of the apparatus, exposure should be controlled with care according to Sections 7 and 8. |
| 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: | N/A |
| 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

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|--|--|
| 12.1 Eco toxicity: | Fish(Oryzias latipes): LC50(96hr) > 100 mg/L (WAF)*. Crustaceans(Daphnia magna): EC50(48hr) > 100 mg/L (WAF)*. Algae(Pseudokirchneriella subcapitata): ErL50(0-72h)>100 mg/L, NOELR=100 mg/L (WAF)*. |
| 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: | N/A |

13. DISPOSAL CONSIDERATIONS**Disposal Information:**

Dispose as a solid waste 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:

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 |
| 14.2 Shipping Name: | None |
| 14.3 Hazard Class: | None |
| 14.4 Packing Group: | None |
| 14.5 Environmental Hazards: | Not classified as environmentally hazardous under UN Model Regulations and marine pollutant under IMDG Code. |
| 14.6 User Precautions: | Handling, such as exposure to water, rolling, falling, or giving shock to the container may result in breakage of the inner bag and result in scattering of the mixture. Avoid direct sunlight and hot places. (See also: Section 7) |
| 14.7 Bulk Transport: | N/A |

15. REGULATORY INFORMATION

- 15.1 **Regulatory Information:** TSCA: All ingredients are on the inventory or exempt from listing. "Organic Zr complex" is subject to SNUR in 40 CFR 721.10089, but use as toner is not distinguished as the Significant New Use "Release to water."

EPA Regulatory Information: N/A

CERCLA Reportable Quantity: N/A

- 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: N/A

Section 311 - Hazardous: N/A

- 15.3 **State Regulations:** California Proposition 65: "Carbon Black", included in this toner, is listed but only airborne, unbound particles of respirable size are subject to the regulation. Thus Carbon Black



bound inside toner is not subject to the Proposition.

15.4 **Other Regulatory Information:** N/A

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: 02/28/2018



SAFETY DATA SHEET

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 |
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