

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

Product name: Samsung ML3310 - Toner Cartridge Replacement  
Part number: ML3310

**1.2 IDENTIFIED USES AND USES ADVISED AGAINST**

For use in: Laser Toner

**1.3 SUPPLIER DETAILS**

Supplier: Clovertech  
Rua do Galhano, No 11  
Varziela, Árvore  
4480-089 Vila do Conde  
Portugal  
Phone number: +351252640230  
Fax: +351252640230  
E-mail: msds@clovertech.eu  
Contact Hours: 9:00AM - 17:00PM EU

**1.4 EMERGENCY TELEPHONE NUMBERS**

Supplier: +351252640230  
Emergency Hours: 9:00AM - 17:00PM EU  
European Emergency: +351252640230

\* 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: Product is stable, non-flammable. If used as intended, the product does not present an acute or chronic health problem. This health hazard assessment is based on information that is available on the properties of its components.

**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 %	EC Number	Reach (pre/registration) Number	Index number	OSHA PEL	ACGIH TLV	EU Classification
Carbon Black	1333-86-4	2-8%		05-2114136296-49-0000			3.5mg/m <sup>3</sup>	
Magnetite	Confidential	7-15%					5mg/m <sup>3</sup> (TWA)	
Metal Oxide	Confidential	1-3%						
Metal-Complex Dye	42405-40-3	1-2%						Xn, R22N, R50-53
Polypropylene wax	Confidential	1-5%						
Saturated Polyester Resin	Confidential	70-85%						
Treated Silica	Confidential	1-3%					10.0mg/m <sup>3</sup> (TWA)	

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

**COMPOSITION COMMENTS**

The Data Shown is in accordance with the latest EC 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: Remove to fresh air. If effects occur, consult medical personnel
- Eye contact: Flush eyes immediately with plenty of water for at least 15 minutes.
- Skin contact: Flush with plenty of water. Use soap.
- Ingestion: No adverse effects anticipated by this route of exposure incidental to proper handling.

**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**

Move to fresh air

## 5. FIRE-FIGHTING MEASURES

### 5.1 EXTINGUISHING MEDIA

Recommended Extinguishing Media: Water, dry chemical, carbon dioxide or foam type axinguishers.  
Extinguishing Media Not to be Used: None.

### 5.2 SPECIAL HAZARD

Unusual Fire/Explosion Hazards: Toner material, like most organic material in powder form, is capable of creating a dust explosion when in very high quantities (much above a toner crtg), pulverized and in the presence of an ignition.  
Extinguishing Media Not to be Used: None

### 5.3 ADVICE FOR FIRE FIGHTERS

Avoid inhalation of smoke. Wear protective clotng an 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

Minimize the release of particulates. Do not use a vacuum cleaner unless motor is rated dust tight.

#### 6.1.2 ADDITIONAL FIRST AID INFORMATION

Avoid breathing dust.

#### 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: After lightly spraying with water to prevent development of dust, spill should be swept up or wiped up .Then residuals can be removed with soap and cold water. If it is not possible to scrub the floor with water, cover the floor with suitable sheets of paper. These used sheets should be wrapped up in spills and transferred to a suitable container for disposal. Garments may be washed or dry cleaned, after removal of loose toner, always without the presence of heat to avoid permanent stains.

## 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

N/A

## 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 2). 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:	Solid. [Toner Cartridge]
Color:	Black
Odor:	Slight odour
Odor threshold:	N/A
Melting point:	>100°C
Flash point:	N/A
Explosion limits:	N/A
Relative density:	1.2-1.4
Auto-ignition temperature:	N/A

**9.2 OTHER INFORMATION**

N/A

**10. CHEMICAL STABILITY AND REACTIVITY****10.1 Reactivity:**

<b>Reactivity Hazards:</b>	None
<b>Data on Mixture Substances:</b>	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**

<b>Mixtures:</b>	Toner contains non known toxicological materials.
<b>Acute Toxicity:</b>	N/A
<b>Skin Corrosion/Irritation:</b>	Tests on toners containing similar materials indicate no evidence of acute dermal toxicity; non-irritating and non-sensitizing in human patch test.
<b>Serious Eye Damage:</b>	Tests on toners containing similar materials indicate non irritating to rabbit eye mucosa.
<b>Sensitization:</b>	Tests on toners containing similar materials indicate no evidence of acute inhalation toxicity.
<b>Mutagenicity:</b>	Toner is negative (no mutagenic) in the Ames assay
<b>Carcinogenicity:</b>	Carbon black is reclassified as a group 2B by IARC, but inhalation tests using a typical toner showed no association between toner and animal tumours.
<b>Reproductive Toxicity:</b>	N/A
<b>STOT - Single Exposure:</b>	N/A
<b>STOT - Multiple Exposure:</b>	N/A
<b>Ingestion:</b>	Tests on toners containing similar materials indicate no evidence of acute oral toxicity.
<b>Hazard Class Information:</b>	N/A
<b>Mixture on Market Data:</b>	N/A
<b>Symptoms:</b>	N/A
<b>Delayed/Immediate Effects:</b>	N/A
<b>Test Data on Mixture:</b>	N/A
<b>Not Meeting Classification:</b>	N/A
<b>Routes of Exposure:</b>	N/A
<b>Interactive Effects:</b>	N/A
<b>Absence of Specific Data:</b>	N/A
<b>Mixture vs Substance Data:</b>	N/A

**12. ECOLOGICAL INFORMATION**

12.1 <b>Eco toxicity:</b>	Based on available data, not harmful to aquatic life.
12.2 <b>Degradability:</b>	Not readily biodegradable.
12.3 <b>Bioaccumulation Potential:</b>	Bioaccumulation is insignificant.
12.4 <b>Mobility in Soil:</b>	Partially soluble in water.
12.5 <b>PBT &amp; vPvB Assessment:</b>	N/A
12.6 <b>Other Adverse Effects:</b>	Presents little or no hazard to the environment.

**13. DISPOSAL CONSIDERATIONS****Disposal Information:**

This product is not regarded as hazardous waste as defined by EU directive 91/689/EEC  
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 EU 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 <b>UN Number:</b>	None allocated
14.2 <b>UN Shipping Name:</b>	N/A
14.3 <b>Hazard Class:</b>	N/A
14.4 <b>Packing Group:</b>	N/A
14.5 <b>Environmental Hazards:</b>	N/A
14.6 <b>User Precautions:</b>	N/A
14.7 <b>Bulk Transport:</b>	N/A

**GENERAL:**

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

**15. REGULATORY INFORMATION****EU Regulatory Information:**

**EPA Regulatory Information:** None at this time

**CERCLA Reportable Quantity:** None

**Superfund Information:****Hazard Categories:**

**Immediate:** None

**Delayed:** None

**Fire:** None

**Pressure:** None

**Reactivity:** None

**Section 302 - Extremely Hazardous:** Not listed

**Section 311 - Hazardous:** Not listed

**State Regulations:****Other Regulatory Information:**

**16. OTHER INFORMATION**

This SDS sheet has been made in compliance with EU directive: N/A

<b>General Comments:</b>	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
<b>Creation Date of this SDS:</b>	18.10.2013
<b>Data Sources:</b>	N/A
<b>Classification Methods:</b>	Not available
<b>CLP Classification:</b>	None
<b>Labeling Phrases:</b>	None
<b>Relevant R Phrases:</b>	N/A
<b>Relevant S Phrases:</b>	N/A
<b>Worker Training:</b>	N/A



**Key to Abbreviations and Acronyms used in this sheet:**

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

**Ref:**

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